A model for integrating disaster risk reduction in national multi-sectoral planning in South Africa

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I, Musiwalo Moses Khangale, hereby declare that: **"A model for integrating disaster risk reduction in national multi-sectoral planning in South Africa"** is my own work, that all sources used or quoted have been indicated and properly acknowledged by means of complete references, and that this thesis was not previously submitted by me or any other person for degree purposes at this or any other university.

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ACKNOWLEDGEMENTS

ABSTRACT

Disasters due to natural and anthropogenic hazards have continued to claim millions of lives, affect billions of people, and cause trillions in economic losses. These disasters which are exacerbated by climate change are increasing in frequency and intensity and have become one of the major threats to sustainable development. There is convincing evidence that developing countries like those on the African continent are bearing the brunt of the suffering and devastation caused by disasters. There is now international acknowledgement that efforts to reduce disaster risks must be systematically integrated into policies, plans and programmes of various departments and ministries in each country. This integration requires analysis of how potential hazard events could affect the performance of policies, programmes and projects and of the impact of those policies, programmes and projects, in turn, on vulnerability to natural and anthropogenic hazards.

This study addresses the integration of disaster risk reduction in the planning processes and initiatives of various departments or ministries. The central argument in this study is that disaster risk reduction is a multi-disciplinary and multi-sectoral activity which falls under the programmes of diverse institutions hence it must be integrated into planning processes of these organisations for it to be effective and efficient. Within this context, the main objective of this study is to develop a model for integrating disaster risk reduction in national multi-sectoral planning in South Africa. To achieve this objective, the study employed theoretical as well as empirical dimensions. With regard to its theoretical dimension, the study conducted a literature review on the theories of organisation and strategic planning. The regulatory and institutional frameworks supporting disaster risk reduction in South Africa was also discussed. While the study examined the development and evolution of multi-sectoral planning in South Africa, it also provided a comparative analysis of international models for integrating disaster risk reduction in national multi-sectoral planning from Brazil, Russia, India and China (BRIC) with a view to identify good practices and lessons that could be incorporated in the envisaged model for South Africa.

To complement the theoretical dimension, the study undertook the empirical research by means of qualitative methods. The empirical research involved, firstly, the

collection of data through focus group interview sessions. Secondly, semi-structured face-to-face interviews were also utilised to collect data from identified respondents. Thus, a total of 28 participants from key national departments and agencies including departments such as Health, Transport, National Treasury, Cooperative Governance, Agriculture, Forestry and Fisheries, Social Development, Planning, Monitoring and Evaluation, South African Police Services, Rural Development and Land Reform participated in the study. Representatives of the South African Weather Services, National Disaster Management Centre, African Centre for Disaster Studies, Disaster Management Institute of Southern Africa, and the Gauteng Provincial Disaster Management centre also participated in the study.

The findings of the study revealed that integrating disaster risk reduction in national multi-sectoral planning initiatives can contribute significantly in reducing disaster risks in South Africa. Respondents further provided various strategies or mechanisms for integrating disaster risk reduction in national multi-sectoral planning. Consequently, the thesis provides the reader with an outline of a model for integrating disaster risk reduction in national multi-sectoral planning in South Africa. Successful implementation of the model hinges on five enablers including legal and institutional frameworks, establishment of dedicated focal points for disaster risk reduction, strengthening of the National Disaster Management Centre's capacity, active participation of all key national sector departments and non-state organisations and lastly, the importance of reflecting disaster risk reduction issues in the broader national development plan.

Key Words:

Disaster risk reduction; model; disaster(s); disaster risk management; integration; national; multi-sectoral planning; South Africa.

OPSOMMING / UITTREKSEL

Rampe wat plaasvind as gevolg van natuurlike en antropogeniese gevare is steeds verantwoordelik vir die verlies van miljoene lewens, het 'n effek op biljoene mense en kan tot 'n ekonomiese verlies van tot triljoene en meer lei. Hierdie rampe wat deur klimaatsverandering vererger word, neem toe in frekwensie en intensiteit en het een van die grootste bedreigings geword vir volhoubare ontwikkeling. Daar bestaan oortuigende bewyse dat ontwikkelende lande, soos die lande op die Afrika kontinent, die gevolge moet dra van die impak en verwoesting wat deur rampe veroorsaak word. Tans ontluik internasionale erkennig dat alle pogings om ramp-risikos te verminder, op 'n sistematiese wyse geïtegreer moet word met beleide, planne en programme van al die onderskeie departemente en ministeries in lande. So 'n integrasie vereis 'n analise om te bepaal hoe die potensieël, gevaarlike gebeure die uitvoering van 'n land se beleide, programme en projekte kan affekteer. Die impak wat daardie beleide, programme en projekte op die kwesbaarheid van die omgewing en mense vir natuurlike en antropogeniese gevare het, moet op hul beurt ook bepaal word.

Hierdie studie spreek die integrasie van ramp-risiko vermindering aan deur te fokus op die beplanningsprosesse en inisiatiewe van die verskillende departemente en ministeries van Suid-Afrika. Die sentrale argument in die studie behels dat ramp-risiko vermindering 'n multi-dissiplinêre en multi-sektorale aktiwiteit is. Dit resorteer dus onder die programme vir diverse instellings en moet geïntegreer word met die beplanningsprosesse van hierdie organisasies ten einde werklik effektief en doeltreffend te wees. Binne hierdie konteks, is die hoofdoelwit van die studie om 'n model te ontwikkel vir die integrering van ramp-risiko vermindering tydens die nasionale, multi-sektorale beplanning vir Suid-Afrika. Ten einde hierdie doelwit te bereik, het die studie teoretiese en empiriese dimensies toegepas. Die teoretiese dimensie het hoofsaaklik 'n literatuurstudie behels rakende die teorieë oor organisasie en strategiese beplanning. Die regulerende en institusionele raamwerke wat ramp-risiko vermindering in Suid Afrika reguleer, is ook bespreek. Terwyl die studie die ontwikkeling en evolusie van die multi-sektorale beplanning van Suid-Afrika ondersoek het, is 'n vergelykende analise van die internasionale modelle vir

ramp-risiko vermindering vir die nasionale multi-sektorale beplanning van lande soos Brasilië, Rusland, Indië en China (BRIC) ondersoek ten einde die beste praktyke te identifiseer en die lesse wat geleer is, te inkorporeer met die vooropgestelde model wat vir Suid Afrika ontwikkel word.

Ten einde die teoretiese dimensie te komplimenteer, is empiriese navorsing gedoen deur die toepassing van kwalitatiewe navorsingsmetodes. Die empiriese navorsing het behels dat data-insameling deur fokusgroep onderhoudsessies uitgevoer is. Tweedens, is semi-gestruktureerde, aangesig-tot-aangesig onderhoude gebruik om inligting te bekom van geïdentifiseerde respondente. Dus was daar 'n totaal van 28 deelnemers, insluitend sleutelpersone van nasionale departemente en agentskappe. Die volgende departmente is ook ingesluit, naamlik Gesondheid, Vervoer, Sosiale Ontwikkeling Beplanning, Monitering en Hervorming, Nasionale Tesourie, Korporatiewe Bestuur, Landbou- Bosbou en Visserye, die Suid-Afrikaanse Polisie Diens, asook Landelike Ontwikkeling en Grondhervorming. Verteenwoordigers van die Suid-Afrikaanse Weerdiens, Nasionale Rampbestuur Sentrum, Afrika Sentrum vir Rampstudies, Rampbestuur Instituut van Suidelike Afrika, en die Gautengse Provinsiale Rampbestuur Sentrum het ook aan die studie deelgeneem.

Die studie se bevindinge onthul dat die integregring van ramp-risiko vermindering vir nasionaal multi-sektorale beplanningsinisiatiewe wel 'n betekenisvolle bydra tot die vermindering van ramp-risikos in Suid-Afrika kan lewer. Respondente het ook verskeie strategieë of meganismes voorgestel vir die integrering van ramp-risiko vermindering vir die nasionale multi-sektorale beplanning. Gevolglik bied die verhandeling 'n raamwerk vir die ontwikkeling van 'n model om ramp-risiko vermindering te integreer met die nasionaal, multi-sektorale beplanning in Suid-Afrika. Die suksesvolle implementering van die model sentreer rondom die in werk stelling van vyf sleutel aspect wat insluit, wetlike en institusionele raamwerke, die totstandkoming van doelgerigte fokuspunte vir ramp-risiko vermindering, die versterking van die kapasiteit van die Nasionale Rampbestuur Sentrum, aktiewe deelname van alle nasionale departementele sektore en nie-regeringsorganisasies, en laastens, die belangrikheid om oor ramp-risiko vermindering kwessies te reflekteer binne die breër nasionale ontwikkelingsplan.

Sleutelwoorde

Ramp-risiko vermingering; model; ramp(e); ramp-risiko bestuur, integrasie, nasionaal, multi-sektorale beplanning, Suid-Afrika.

ACRONYMS

ACDS	African Centre for Disaster Studies
APP	Annual Performance Plan
ARC	Agricultural Research Council
AU	African Union
BRIC	Brazil, Russia, India and China
CBRN	Chemical, Biological, Radiological and Nuclear
CCS	Cabinet Committee on Security
CEO	Chief Executive Officer
CNCDR	China National Commission for Disaster Reduction
COGTA	Cooperative Governance and Traditional Affairs
COT	Classical Organisation Theory
CRED	Centre for Research on the Epidemiology of Disasters
DAFF	Department of Agriculture, Forestry and Fisheries
DFID	Department for International Development
DG	Director-General
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EC	Executive Council
EMERCOM	Emergencies and Elimination of Consequences of Natural Disasters of Russia
EPARIS	Integrated Prevention and Response of Russia
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
FOSAD	Forum of South African Directors-General

GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Risk Reduction
GNU	Government of National Unity
GST	General Systems Theory
HFA	Hyogo Framework for Action
HOD	Head of Department
ICDM	Intergovernmental Committee on Disaster Management
IDNDR	International Decade for Natural Disaster Reduction
IDP	Integrated Development Plans
IFRC	International Federation of Red Cross and Red Crescent Societies
IMC	Inter-Ministerial Committee
IPCC	International Panel on Climate Change
ISO	International Standard Organisation
ITP	Integrated Transport Plan
KPA	Key Performance Area
MDGs	Millennium Development Goals
MEC	Member of Executive Council
MNI	Ministry of National Integration
MOC	Ministry of Cities
MOT	Modern Organisation Theory
MOU	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
NCMC	National Crisis Management Committee
NCOP	National Council of Provinces
NDMA	National Disaster Management Authority

NDMAF	National Disaster Management Advisory Forum
NDMC	National Disaster Management Centre
NDP	National Development Plan
NDMP	National Disaster Management Plan
NEC	National Executive Committee
NPC	National Planning Commission
NPF	National Planning Framework
NPPC	National Policy of Protection and Civil Defence
NSCD	National Secretariat of Civil Defence
NSDP	National Spatial Development Perspective
PAC	Public Accounts Committee
PCAS	Policy Coordination Advisory Services
PDMC	Provincial Disaster Management Centre
PFMA	Public Finance Management Act
PGDS	Provincial Growth Development Strategy
PRC	Presidential Review Commission
PRC	People's Republic of China
RDP	Reconstruction and Development Programme
RF	Russian Federation
RSES	Single State System of Preventing and Eliminating Emergency Situations of Russia
SADC	Southern African Development Community
SAWS	South African Weather Services
SDBIP	Service Delivery Budget Implementation Plan
SINDEC	National System of Civil Defence of Brazil
SMART	Specific, Measurable, Achievable, Relevant and Time-bound

SONA	State of the Nation Address
SOPA	State of the Province Address
SWOT	Strength Weakness Opportunities and Threats
UCT	University of Cape Town
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations International Strategy for Disaster Reduction
WWF	World Wide Fund for Nature
WMO	World Meteorological Organisation
WPTPS	White Paper on Transformation of the Public Service

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CHAPTER 1
OVERVIEW OF THE STUDY

1.1   INTRODUCTION

The United Nations (UN) General Assembly adopted the 2030 'Agenda for Sustainable Development' during August 2015 (UN, 2015). The 2030 Agenda for Sustainable Development recognises and reaffirms the urgent need to reduce the risk of disasters (UNISDR, 2015a). There are 25 targets related to Disaster Risk Reduction (DRR) in 10 of the 17 Sustainable Development Goals (SDGs), thus firmly establishing DRR as a core development strategy (UNISDR, 2015a). Against this background, the Sendai Framework for Disaster Risk Reduction 2015-2030 (UNISDR, 2015:17b) asserts that in order to strengthen disaster risk governance to manage disaster risks, it is important (at national and local levels) to mainstream and integrate DRR within and across all sectors.

This Chapter focuses on the scope and purpose of the study. It introduces and gives an analysis of the various foundational components of the research study. It presents a thorough discussion and justification of the research problem through extensive academic and theoretical investigations as the global agenda on DRR coupled with South Africa's focus on DRR specifically stimulated interest in this research topic.

In Chapter 1, the aims and objectives of the research are stated which correlate with the purpose of the study. As such, it serves as a vehicle for the attainment of the research outcomes which are: 1) The development of a model for integrating DRR in national, multi-sectoral planning in South Africa; 2) Performance indicators to be utilised for monitoring the implementation of the model in South Africa and beyond. It also denotes the suitability and relevance of the model as validated through the detailed research methodology process adopted in the study.

Based on the significance of Chapter 1, the research findings contributed to the development of a model for integrating DRR in national multi-sectoral planning in South Africa. It furthermore promoted effective, systematic and coordinated integration of measures to reduce disaster risks in planning initiatives of national sector departments in South Africa.

This Chapter is structured in the following order: It sets off with an introduction of the main issues necessitating the study, then the problem is identified and stated and, at the same time, the need to integrate DRR in national multi-sectoral planning is identified. The Chapter then outlines a number of research questions as well as study aims and objectives to address the study problem. A brief description of the central theoretical statements follows which forms the foundation of the study. The research methodology that was applied in this study, together with the analysis of existing literature and the empirical evidence is outlined. Prior to the conclusions, the Chapter draws attention to the study's contribution and gives an outline of the further structuring of the thesis Chapters.

1.2   ORIENTATION AND PROBLEM STATEMENT

Lafferty and Meadowcroft (2003:1) observe that over the past decade the idiom of sustainable development progressively frames international debates on environment and development policy-making. Catapulted to prominence by the report of the Brundtland Commission in 1987, world leaders formally endorsed sustainable development as a policy objective at the Rio Earth Summit five years later. At present on a routinely basis, political leaders and public administrators worldwide justify policies, projects and initiatives in terms of its contribution to realising sustainable development. However, as noted in the UNISDR (2009a:v), development efforts are increasingly at risk as there are many factors challenging progress to improve social welfare and economic stability in developing countries. These factors include, amongst others, a faltering global economy, food and energy insecurity, conflict, global climate change, declining ecosystems, extreme poverty and the threat of pandemics.

There is now international acknowledgement that efforts to reduce disaster risks must be systematically integrated into policies, plans and programmes for sustainable development and poverty reduction. These should also be supported through bilateral, regional and international cooperation, including partnerships (Cameron *et al*., 2012:2; Coppola, 2007:7; UNISDR, 2002:21; UNISDR, 2005:3; UNISDR, 2009b:11). Kellett and Sparks (2012:5) also support this argument when they observe that risk reduction is recognised as a long-term national investment that needs to be mainstreamed through a country's ministries and activities. "Often

perceived as 'acts of God', natural catastrophes have frequently been overlooked in policy planning. On an aggregate level, the consequence of this limited planning is a serious challenge to socio-economic development as scarce funds are diverted from longer-term development objectives to short-term emergency relief and reconstruction needs" (Freeman *et al*., 2002:8).

The integration of disaster reduction strategies with development policies should happen before a disaster occurs, thereby addressing a broad range of social, economic and environmental problems as well (UNISDR, 2002:14). This requires the participation of all relevant sectors in a society such as environment, finance, industry, transport, construction, agriculture, education and health (UNISDR, 2002:14). According to Coppola (2007:17), the cost of disasters worldwide is increasing at an alarming rate. There is convincing evidence that the number and seriousness of disasters are increasing, and that poor countries and poor communities are disproportionately affected (DFID, 2004:7). According to the UNDP (cited by Becker, 2012:226), the terrible impacts of disasters are not evenly distributed in the world as developing countries are bearing the brunt of the suffering and devastation. The statistics of Munich and Re (2001) as cited by Freeman *et al*. (2002:9), indicate that during the past decade, the economic costs of rainstorms, floods, volcanoes, droughts and other extreme events have increased about 14-fold from those disasters that occurred during the decade of 1950. In line with this observation, Twigg (2004:9) notes that developing countries are hit hardest by natural disasters. Olowu (2010:304) contends that for developing countries like those that frame the African continent, the weakness of state infrastructures, absence of appropriate legal and policy frameworks and sometimes inadequate resources particularly render these countries more vulnerable to the intense consequences of large-scale disasters.

It is furthermore evident that Africa is the only continent that shows an increase in the regional share of reported disasters in the world total over the past decade (AU, 2004:1). In 2008, there were 96 disasters recorded whereof 44 were floods, and 9 droughts that affected 16.3 million people. This resulted in economic losses estimated at circa I billion dollars (UNISDR, 2009b:8). As disaster risks impact multi-sectoral development activities (such as education, health, environment, governance, employment and livelihoods), these risks also influence development gains. In turn, it

CHAPTER 1: OVERVIEW OF THE STUDY

negatively affects positive progress to achieve the Millennium Development Goals (UNISDR, 2010:26).

Climatological disasters were an important contributor to this increase, as severe droughts had hit Africa, leading to over 14 million victims (CRED International Disaster Database, 2009:16). Global climate change will significantly affect the frequency and intensity of hazard occurrence in Sub-Saharan Africa. It will also produce new vulnerabilities and aggravate existing ones as decreases in the availability of water and agricultural yields coupled with a lack of suitable land for pasture, threaten the viability of livelihoods (IPCC, 2007:50; UNISDR, 2009b:8).

According to the World Wide Fund for Nature (WWF) (SADC, 2008:49), there are indications of climate change in Southern Africa. Records from SADC countries reveal that temperatures have risen by more than 0.5 degree Celsius over the past 100 years, and the 1990s were the warmest and driest ever. There are also fears that a rise in the sea level can affect the region with the warming very likely to be greater than the global annual mean warming (SADC, 2008:49). Engelbrecht (2008:126) shares a similar view and suggests that in response to anthropogenic forcing, Southern Africa will experience a generally drier climate and more extreme rainfall events during summer. The drier, subtropical regions are projected to warm more than the moister tropics. This result is consistent with the strong observed temperature trends over subtropical South Africa (Kruger & Shongwe, 2004). This gives evidence of change that is already occurring (South Africa, 2010a:7). Climate change is already a measurable reality and along with other developing countries, South Africa is especially vulnerable to its impact (South Africa, 2012a:5).

South Africa will have to adapt to the impacts of climate change by managing its climate and weather-related risks, reducing its vulnerability and increasing the resilience of society and the economy to the adverse effects of climate change and variability (South Africa, 2012a:10). The Climate and Development Knowledge Network (2012:12) maintains that a closer integration of disaster risk management and climate change adaptation, along with the incorporation of both of these into local, sub-national, national and international development policies and practices, could provide benefits on all scales.

In addition, the advent of HIV-AIDS also exacerbates the vulnerability of Africans to natural hazards (UNISDR, 2004a:29; Van Niekerk *et al*., 2002:31). According to De Waal (cited by Wisner *et al*. 2004:69), "in southern Africa, the impact of HIV-AIDS has meant that some rural areas have lost many of their younger adults. The productivity of agriculture has suffered, as has the ability of households to engage in a variety of activities traditionally associated with coping with hazards such as drought". Apart from reduced agricultural productivity, resilience will also be affected by direct health impacts from water-borne diseases and malnutrition and indirect impacts for parents who must tend to sick children and the elderly (UNISDR, 2009a:110). Similarly, Barnett and Whiteside (2006:10) observed that southern Africa remains the worst affected sub-region with South Africa having the highest number of people living with HIV in the world.

This is consistent with Havlick (cited by Wisner *et al*., 2004:70) that notes, urbanisation also increases vulnerability to disaster risks in South Africa, which then results in land pressure because migrants from outside move into already overcrowded cities. Thus, the new arrivals have little alternative other than to occupy unsafe land, construct unsafe habitations or work in unsafe environments. According to Pinera and Reed (2007:401), the rapid expansion of urban centres in developing countries has created large areas of poverty in which people are highly vulnerable to disasters. At an international level, the UN also made notable efforts over the last two decades through the International Strategy for Disaster Reduction (ISDR) that seeks to integrate DRR into the broader context of sustainable development and related environmental considerations (UNISDR, 2002:11).

Flowing from the above discourse, the Hyogo Framework for Action (HFA), (UNISDR, 2005:1) notes that disaster loss is on the rise with grave consequences for the survival, dignity and livelihood of individuals, particularly the poor, and hard-won development gains. The HFA states as its expected outcome: "The substantial reduction of disaster losses in lives and in the social, economic and environmental assets of communities and countries" (UNISDR, 2011a:13). The Sendai Framework for DRR 2015-2030, which is the successor instrument to the HFA, is the new global instrument to manage disaster risk and was adopted at the Third UN World Conference on DRR in March 2015 (UNISDR, 2015b). The Sendai Framework for

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DRR moves from the premise that effective disaster risk management contributes to sustainable development (UNISDR, 2015b:9).

The Sendai Framework further recognises that DRR practices need to be multi-hazard and multi-sectoral, inclusive and accessible in order to be efficient and effective (UNISDR, 2015b:10). The expected outcome and goal of the Sendai Framework over the next 15 years is:

"The substantial reduction of disaster risk and losses in lives, livelihoods, and health and in economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries." Furthermore, the Sendai Framework introduces seven global targets to assess global progress toward the expected outcome. While these global targets serve as guidance for developing national and local strategies and plans of action, they also contribute to strengthening accountability in disaster risk management (UNISDR, 2015b:11).

"Disasters should be seen as a governance issue. It is generally agreed that national governments should be the main actors in risk reduction. They have a duty to ensure the safety of their citizens. Only governments are likely to have the resources and capacity to undertake large-scale multi-disciplinary initiatives, and a mandate to direct or coordinate the work of others. Governments also create the policy and legislative frameworks within which risk reduction can be accomplished" (Twigg, 2004:64).

It is in this context that the White Paper on Disaster Management (South Africa, 1999a:12) highlighted that the primary responsibility for disaster management in South Africa rests with the government as outlined in terms of section 41 (1) (b) of the Constitution of the Republic. In the Republic, Government is constituted as national, provincial and local spheres of government which are distinctive, interdependent and interrelated (South Africa, 1996a:37). Section 25 of the Disaster Management Act No. 57 of 2002 (South Africa, 2002:30) states that "national organs of state must prepare disaster management plans setting out notably, the way in which the concept and principles of disaster management are to be applied in its functional area, and particulars of its disaster management strategies. The disaster management plan of a national organ of state must form an integral part of its

planning". The National Disaster Management Framework (Framework) further outlines the roles and responsibilities of national organs of state as follows:

"Based on the principle of auxiliary (using existing structures and resources), disaster risk management responsibilities must be integrated into the routine activities of the various sectors and disciplines within the relevant organs of state and their substructures" (South Africa, 2005:23).

With regard to planning, Paterson (2009:12) makes the point that in South Africa, the bedrock of planning since 1994 has remained the five-year term Medium Term Strategic Framework (MTSF), and the three-year term Medium Term Expenditure Framework (MTEF). The MTSF is a statement of intent, identifying the development challenges that South Africa faces and outlining the medium-term strategy to improve the life conditions of South Africans. Then, for the enhanced contribution of the country's people, the statement is also for the cause of building a better world (South Africa, 2009a:3). The MTSF is meant to guide planning and resource allocation across all spheres of government. Thus, both national and provincial departments need to develop their five-year strategic plans and budget requirements taking into account the medium-term imperatives (South Africa, 2009a:3).

Literature also shows that planning in government has to take into account the reality of different cycles (South Africa, 2001:1). In July 2001, Cabinet approved a National Planning Framework (NPF) for implementation across the three spheres of government. The NPF is a tool of government to bring about and guide integrated planning across departments and all spheres of government as well as outlines the detailed Planning Cycle (South Africa, 2001:2). The Planning Cycle represents a continuous process of planning, implementation and review which relates to the medium-term priorities and immediate programmes as they flow one into another, sequentially (South Africa, 2001:6).

With regard to national multi-sectoral planning, in addition to the MTSF, departmental activities must be founded in the legislative mandates that each sectoral department is directly responsible to implement, manage and oversee (South Africa, 2010b:1). Sector departments responsible for concurrent functions are also expected to develop a set of strategic outcome oriented goals and objectives for performance in

their sectors. This should be done in consultation with provincial Members of Executive Councils (MECs) (South Africa, 2010b:5). MINMECs, meaning sector-based forums that bring together Ministers at national level with the equivalent MECs at provincial level, are key institutions for achieving collective decisions on policy and sectoral planning amongst other issues (Kahn *et al*., 2011:76) In 2001, the Policy Coordination Advisory Services (PCAS) was established in the Presidency. PCAS plays a key role in multi-sectoral planning as it facilitates integrated policy formulation by, inter alia, monitoring policy proposals from line ministries, evaluating them to see whether or not they accord with government priorities and, when necessary, proposing corrective measures (Edigheji, 2007:17-18).

The National Treasury (South Africa, 2010b:11) also sets out the framework for strategic plans and annual performance plans applicable to all national and provincial departments, constitutional institutions and public entities. In terms of this framework, the focus of Strategic Plans must be on issues that are strategically important, linked to and flowing from various plans developed within institutions to fulfil their mandates, especially Performance Agreements between the President and Ministers and Service Delivery Agreements entered into in terms of the broad strategic outcomes. In 2010, the South African government introduced the outcomes approach to planning as change was not occurring as swiftly and effectively as required (South Africa, 2010c:9). In this instance, the outcomes approach was designed to ensure that government is focused on achieving the expected and actual improvements in the life of all South Africans (South Africa, 2010c:9).

In line with changes in government's approach to planning, monitoring and evaluation, other short, medium and long term planning initiatives that will aim at translating the governing party's election mandate into reality will either supplement or replace the MTSF in future (South Africa, 2010b:23). It is in this context that a new structure, National Planning Commission (NPC) was established to oversee the development of a long-term national plan. The NPC consists of independent experts and strategic thinkers in the National Planning Ministry. The NPC has, since its establishment, developed a Green Paper in 2009 which identified the need for better long-term planning to inform shorter term plans, resource allocation, trade-offs and the sequencing of policies (South Africa, 2009b:4). A plan has to take into account environmental factors such as the global economy, climate change, demographic

trends and regional peace and stability. Also to be included are long-term, cross-cutting issues such as food, energy and water security would also have to be factored in (South Africa, 2009b:4). In June 2011, the NPC presented a Diagnostic Report illustrating South Africa's achievements and shortcomings since 1994. After this Report followed the Draft National Development Plan which was presented in November 2011.

It is against this backdrop that the need for a model to integrate DRR in multi-sectoral planning for South Africa became apparent and critical. It is anticipated that such a model will assist national departments to integrate DRR in their sectoral planning initiatives, thereby reducing disaster risks in the country. Through this model, understanding of disaster risk in South Africa and the alignment of DRR strategies will also be enhanced. Against this background, the problem that was investigated through this research was the development of a model for integrating DRR in multi-sectoral planning in South Africa in terms of the current legislative frameworks and other international guiding instruments.

DRR, as a multi-disciplinary and multi-sectoral endeavour, falls under the programmes of diverse institutions. Hence, DRR policies need to be comprehensive, integrated and balanced across sectors. Effective design and implementation of DRR involve institutional collaboration between various stakeholder interests and require clear assignment of roles, assumption of responsibilities, and coordination of activities (UNISDR, 2004b:20). Currently no model exists to monitor and guide the integration of DRR in national multi-sectoral planning, internationally and in South Africa (AU, 2004; UNDP, 2004:15; Van Niekerk, 2005). A model for integrating DRR in national multi-sectoral planning will enhance South Africa's ability to reduce disaster risk (South Africa, 2002; South Africa, 2005).

1.3   KEY RESEARCH QUESTIONS

The study was guided by the following key questions:

- How do the theories of Organisation and Strategic Planning inform national multi-sectoral planning in South Africa?

- What are the existing legal instruments and frameworks governing DRR in the South African Government?

- How did multi-sectoral planning develop in the South African Government?

- What are the international models for integrating DRR with national multi-sectoral planning?

- What indicators/performance criteria or parameters should be incorporated in the envisaged model for integrating DRR in national multi-sectoral planning in South Africa?

Answers to these questions were provided through both theoretical study of the literature and empirical perspectives of practitioners in the fields of DRR. In line with these research questions, the next section outlines the aims and objectives of the study.

1.4   RESEARCH AIMS AND OBJECTIVES

The literature consulted shows that there are few studies, if any, that focus on the integration of DRR in national multi-sectoral planning. Moreover, there are hardly any models developed to guide and monitor the integration of DRR in national multi-sectoral planning internationally and in South Africa. Behind these research gaps, this study aims to provide a model for integrating DRR in national multi-sectoral planning which will enhance South Africa's ability to reduce disaster risk. In line with these aims, the objectives of the study are:

- To define, assess, examine and critically analyse the theories of Organisation and Strategic Planning and how they inform national multi-sectoral planning.

- Investigate and analyse existing legal instruments and frameworks governing DRR in South Africa.

- Investigate and analyse how national multi-sectoral planning developed in South Africa.

- Explore and examine international models for integrating DRR with national multi-sectoral planning.

- Explore and describe the indicators/performance criteria/parameters to be incorporated into a model for integrating DRR in national multi-sectoral planning in South Africa.

While this study cannot claim that the achievement of these objectives will result in the reduction of disasters nor addresses the challenges that arise due to the lack of integration of DRR in national multi-sectoral planning, achievement of these objectives holds a great potential for South Africa to improve and enhance its systems of managing disaster risks in an integrated manner. These objectives were achieved within the context of the theoretical statement outlined below.

1.5   CENTRAL THEORETICAL STATEMENTS

As its theoretical frame of reference, this study was grounded on two theories, namely Organisation theory (Daft *et al*. 2010:14; Gortner *et al*. 1987:5-7; Henry, 2004:58-76; Rosenbloom and Kracvhuk, 2002:147-176; Roux *et al*. 1997:15) and Strategic Planning theory (Daft, 2006:236-263; Lewis *et al*. 2004:115-176; Robbins & DeCenzo., 2008:70-96; Tewdwr-Jones cited by Paterson, 2009:12; Young, 2003:4). These theories were chosen for the fact that on the one hand, planning and organising are public management functions. On the other, it is critical that the theoretical considerations underlining the development of multi-sectoral planning in South Africa through departmentalisation must be clarified and that the motivating principles of this process are understood. Organisation theory which as Gortner *et al*. (1987:6) argue, makes an important and useful contribution to the study of government and public management and will be useful in outlining these theoretical considerations and principles. It specifically gives a view to determining how government and public management can be applied in South Africa to inform a model for integrating DRR in multi-sectoral planning in line with the objectives of the study.

To complement this theory, strategic planning theory was applied in the study to provide a theoretical framework that underpins multi-sectoral planning in the South African context. Recently, according to Thornhill (2012:160), there has been an emphasis on strategic planning, which consists of four parts comprising mission setting; determining targets to be achieved in pursuing the mission; selecting

strategies to reach the targets; and translating the strategic plan into an operational plan or programme. Similarly, Hellriegel *et al*. (2004:71) argue that the overall purpose of strategic planning is to deal effectively with environmental opportunities and threats as they relate to the organisation's strength and weaknesses. At its best, strategic planning requires broad-scale, yet effective information gathering, clarification of the mission to be pursued and issues to be addressed along the way, development and exploration of strategic alternatives, and an emphasis on the future implications of present decisions (Brynson, 2004:6).

The following theoretical statements informed the study:

- DRR is a multi-thematic and multi-sectoral process hence mainstreaming it in development involves its integration across sectors. Effective design and implementation of DRR involves institutional collaboration between various sectoral interests and requires clear assignment of roles, assumption of responsibilities, and coordination of activities. Factoring disaster risk considerations into national planning and public investment decisions can radically scale up risk reduction (South Africa, 2005:23-24; Twigg, 2004:25; UCT, 1999:23; UNFCCC, 2008:8; UNISDR, 2009a:151-153; UNISDR, 2011a:41).

- Since the late 1990s, there has been increasing recognition of the need to integrate DRR into development – that is, to consider and address risks emanating from natural hazards in the medium-term strategic frameworks and institutional structures, in country and sectoral strategies and policies and in the design of individual projects in hazard-prone countries. This integration requires analysis, both of how potential hazard events could affect the performance of policies, programmes and projects and of the impact of those policies, programmes and projects, in turn on vulnerability to natural hazards" (Benson & Twigg, 2007:5; Pelling, 2007:18-22; UNFCCC, 2008:5).

- Even though it has been widely recognised in the literature that DRR inherently involves national multi-sectoral action, and coherence between actions in several sectors, several scholars and researchers have highlighted that the lack of a comprehensive model to guide the integration of DRR in these national multi-sectoral planning initiatives contributes to the inability to

achieve effective integration (Climate and Development Knowledge Network, 2012:2; UNISDR, 2002:14; UNISDR, 2010:5; UNISDR, 2011a:56-58; Van Niekerk, 2005).

- There is wide consensus amongst scientists that for DRR to be effective, it needs to be integrated into sustainable development initiatives and programmes (DFID, 2004:4; Dlamini, 2011:112; South Africa, 1999a:24; UCT, 1999:57; UNISDR, 2008:3; Zou & Yuan, 2010:30).

- DRR efforts are medium to long-term multi-sectoral efforts focused on vulnerability reduction and must thus be incorporated into on-going Integrated Development Plans projects, processes, programmes and structures (South Africa, 2005:105).

1.6   RESEARCH METHODOLOGY

The study assumed the format of an exploratory study using qualitative methods to take a deep look into complexities, relationships, and processes; as well as to identify important variables that are necessary for the effective integration of DRR in national multi-sectoral planning (Marshall & Rossman, 2011:69). The study is also descriptive in nature as it makes careful observations and detailed documentation of phenomenas of interest (Bhattacherjee, 2012:6). Qualitative methods in the form of literature study, documents, semi-structured interviews as well as focus group interviews were applied (Marshall & Rossman, 2011:92; Masadeh, 2012:63; Morgan, 1996; Onwuegbuzie *et al*., 2009:1). Qualitative research examines the patterns of meaning that emerge from data that were gathered. These patterns are often presented in the participant's own words (Lunenburg & Irby, 2008:89). A discussion on the elements of the research methodology follows in the next section.

1.6.1   Literature study

According to Creswell (2009:25), a literature review provides a framework for establishing the importance of the study and provides a benchmark for comparing the results with other findings. Majam and Theron (2006:604) maintain that a literature review should explain to the reader the theoretical context of the problem being examined. In this study, and in order to provide a better understanding of the nature and meaning of the identified problem, available literature on international, regional

and national issues regarding DRR and its integration into national multi-sectoral planning was used as the foundation for the theoretical frame of reference for this study. As such academic books, peer-reviewed journal articles, research reports, dissertations, government publications, and international multilateral reports, were all consulted in order to understand DRR patterns and trends globally. Also, the listed documents were explored to determine how DRR is integrated in national multi-sectoral planning. Existing data, empirical findings and national and international policy and legislative frameworks within the field of DRR were also consulted.

1.6.2 Empirical investigation

The research implemented the format of an exploratory study using qualitative methods with a view to discover or understand important issues, processes and relationships (Cooper and Schindler, 2001:140; Leedy and Ormrod, 2005:102) in the development of a model for integrating DRR in national multi-sectoral planning in South Africa. The next section presents the research design, sampling methods and the strategies that were applied, data-collection methods and tools employed, as well as the data-analysis strategies used. Furthermore, issues of validity and triangulation of the study are described. The ensuing section describes the data collection tools that were used, too.

1.6.2.1 Research design

In the context of qualitative research, research design refers to the tools, techniques, or procedures that are applied to gather evidence (Harding, 1987 cited in Caelli *et al*., 2003:6). This view is supported by Creswell and Clark, 2011 cited in Nemakonde (2016:13) who maintain that research design outlines the procedure for collecting, analysing and interpreting together with reporting data in research studies. (Creswell & Clark, 2011:53).

1.6.2.2 Sampling

Marshall (1996:522) maintains that the primary objective of all qualitative sampling approaches is to draw a representative sample from the population so that the results of studying the sample can be generalised back to the population. Bearing this in

mind, De Vos *et al*. (2005:328) argue that in qualitative studies, non-probability sampling methods are utilised and, in particular, theoretical or purposive sampling techniques are used rather than random sampling. Purposive or judgemental sampling (De Vos *et al*. 2005; Marshall, 1996:523; Welman *et al*. 2005:204) was utilised in this study. This enabled the researcher to rely on his expert judgement and practical knowledge of the research area in selecting units that are representative or typical of the population. Marshall (1996:523) adds that in this type of sampling, the researcher actively selects the most useful sample to answer the research question.

With this in mind, in this study, preference was given to key informants who on account of their position, operational knowledge and experience, have adequate information about DRR and its integration in planning initiatives and activities of various government departments. The use of purposive sampling resonates with the arguments of Lunenburg and Irby (2008:176-177) who postulate that qualitative research utilises sampling techniques that produce samples that are predominantly small and non-random. The reason for this is to keep with its emphasis on the in-depth description of participants' perspectives and context. Lunenburg and Irby (2008:177) maintain that for qualitative research, one should purposively select respondents who meet criteria that will provide a sample that is likely to yield the type of information that is needed to achieve the purpose of research.

With regard to the size of the sample, Rosenthal (2016:511) proposes that while quantitative researchers are concerned about obtaining a generalisable sample, the context of focus groups or interviews is not on generalisability as the primary objective, but the aim is rather to develop an understanding of the meaning behind behaviours. It is with this in mind that Marshall (1996:523) posits that an appropriate sample size for a qualitative study is one that answers the research question adequately. In this case, 19 officials (from practitioner to senior managers) involved in DRR from national departments, agencies and organisations were selected and participated by way of six focus group interviews. The number of focus groups was informed by Morgan (1996:144) who maintains that as a common rule of thumb, most projects utilises four to six focus groups. Krueger, 1994 (cited in Masadeh, 2012:65) argues that focus group research should comprise a minimum of three groups.

Furthermore, another nine senior officials from national departments and organisations involved in disaster risk management were selected and interviewed through semi-structured, face-to-face interviews. Thus, a total of 28 respondents from 12 key national departments and agencies including departments such as Health, Transport, National Treasury, Cooperative Governance, Agriculture, Forestry and Fisheries, Social Development, Planning, Monitoring and Evaluation, South African Police Services, Rural Development and Land Reform participated in the study through focus group interviews and semi-structured, face-to-face interviews. Representatives of the South African Weather Services, National Disaster Management Centre, African Centre for Disaster Studies, Disaster Management Institute of Southern Africa, and the Gauteng Provincial Disaster Management centre also participated in the study.

1.6.2.3   Data collection

Firstly, focus group interviews were used as a method to obtain information and viewpoints necessary to develop a model for integrating DRR in national multi-sectoral planning in South Africa. Morgan (1996:130) defines focus groups as a research technique that collects data through group interaction on a topic that the researcher has determined. De Vos *et al.* (2005:300-301) add that focus groups must be used when you want ideas to emerge from the group and when multiple viewpoints or responses are needed on a particular issue. In this study, organisations were selected to participate primarily based on the following reasons:

i.   Organisational day-to-day activities overlap with other core DRR activities such as early warning and disaster risk assessments;

ii.   Research organisations which from time to time are requested to conduct research related to DRR;

iii.   Organisations representing interests of DRR practitioners across the country;

iv.   Organisations that provide training on DRR and conduct DRR on a full-time basis;

v.   Organisations responsible for providing support and oversight on departmental planning activities including issues related to strategic planning;

vi.   Organisations / national departments that have established disaster risk management focal points; and

vii. Organisations that play an important role in the management of disaster risks (see Chapters 4 and 5).

A Research Data Collection Directive (**Annexure A**) was provided in advance to all respondents who were selected to participate in this study. The purpose of the focus group and semi-structured, face-to-face interviews were to:

i.   Determine the respondent's understanding of what DRR entails;

ii.   Test if respondents regard DRR as a function that must be integrated in national multi-sectoral planning;

iii. Obtain inputs from participants on how they believe DRR integration into national multi-sectoral planning should occur;

iv.   Assess and analyse existing frameworks and institutional arrangements supporting DRR in the country;

v.   Examine legislative instruments, policies and institutional arrangements that drive multi-sectoral planning by national departments;

vi.   Identify the role of the National Disaster Management Centre in supporting integration of DRR in national multi-sectoral planning;

vii. Identify if developing a model for integrating DRR in national multi-sectoral planning is important as well as exploring the key aspects that must be addressed by the envisaged model;

viii. Determine key performance indicators that must be incorporated in the envisaged model for integrating DRR in national multi-sectoral planning in South Africa;

ix.   Explore the legal frameworks and institutional arrangements required to ensure effective implementation of the envisaged model;

x.   Identify the roles and responsibilities of research and academic organisations, international and national development organisations in the implementation of a model for integrating DRR in national multi-sectoral planning; and

xi.   Determine if respondents regard DRR as a function that must be reflected in long-term strategic planning instruments such as South Africa 's National Development Plan (NDP) and to identify key DRR aspects that must be reflected in the NDP.

All data obtained from the literature study, comparative analysis, focus groups and semi-structured, face-to-face interviews was taken into consideration and conclusions and recommendations (see Chapter 9) were drawn based on the findings.

1.6.2.4   *Data analysis*

The process of data analysis involves making sense out of textual and image data (Creswell, 2009:25). According to De Vos *et al.* (2005:311), the aim of analysis in the context of focus groups is to look for trends and patterns that reappear within a single focus group or among various focus groups. This study applied qualitative data analysis methods with the aim to develop a model for integrating DRR in national multi-sectoral planning in South Africa. Specifically, data was analysed using a qualitative descriptive approach and thematic analysis (see Chapter 8). The conceptual framework of the thematic analysis for both focus group and face-to-face interviews was mainly built upon the theoretical positions of Braun and Clarke (2006). Braun and Clarke (2006:6) define thematic analysis as a method for identifying, analysing and reporting patterns (themes) within data. Franzosi (2004:550) builds on this by defining thematic analysis as a method where the coding scheme is based on categories designed to capture the dominant themes present in a text. Stated differently, thematic analysis involves searching across a data set which may include a number of interviews, or focus groups, or a range of texts to find repeated patterns of meaning (Braun & Clarke, 2006:15; Glesne, 2011:187; Jugder, 2016).

1.6.2.5   *Validation and triangulation*

According to Creswell (cited by De Vos *et al*., 2005:361), the concept of triangulation is based on the assumption that any bias inherent in a particular data source, investigator and method would be neutralised when used in conjunction with other data sources, investigators and methods. Triangulation is an important element of qualitative research and while it increases confidence in the results, it also enhances interpretability (Arksey and Knight, 1999:25). In this study, the use of both focus group interviews and semi-structured, face-to-face interviews enabled the researcher to triangulate (Arksey and Knight, 1999:25) and obtain data from a wide range of different and multiple sources. The diversity of methods enhanced the reliability and validity of the research findings. In addition, different participants participated in the study as was outlined in the preceding section.

1.7   CONTRIBUTION OF THE STUDY

The orientation and problem statement above alluded to the non-existence and importance of a model for integrating DRR in national multi-sectoral planning in South Africa. Disaster management scholars have identified the importance of integrating DRR in national multi-sectoral planning in South Africa in recent years. For example Dlamini (2011:112-118) and Van Niekerk (2005:238-254) make the point that DRR must be integrated into sectoral plans, incorporated into existing government planning cycles and integrated into sectors such as agriculture, health, and housing to be effective. The development of a model for integrating DRR in multi-sectoral planning will contribute significantly in guiding such integration across sectors. This study will therefore contribute considerably to the body of knowledge currently in existence in South Africa and internationally on the subject matter. The study will also provide the impetus towards further research, investigation and thinking in the integration of DRR in multi-sectoral planning in South Africa and elsewhere in the world.

1.8   CHAPTERS OF THE THESIS

The study was carried out through nine logically linked chapters founded on the problem statement read with the objectives underscoring the study. These chapters are summarised hereunder.

Chapter 1: Overview of the study

The chapter orientated the reader into the study by introducing the problem statement and giving an overview of the study. It also presented the research questions, aims and objectives as well as the research methodology adopted in this study. The Chapter identified the need to integrate DRR strategies in national multi-sectoral planning in South Africa. The theoretical statements upon which the study is grounded were also outlined.

Chapter 2:   Overview of organisation theory

This Chapter sets the theoretical foundation of the study by examining organisation theory, its philosophical constructs, major schools of thought that evolved through different eras, as well as a reflection of contributions made by identified scholars, researchers or practitioners involved in this field of study. Furthermore, it critically scrutinises the basic tenets of the three schools of thought that has emerged as dominant paradigms in the evolution of organisation theory. The Chapter identifies the important role that organisations play in society by revealing that they (organisations) exist to (a) bring together resources to achieve desired goals and outcomes; (b) produce goods and services efficiently; (c) facilitate innovation; and (d) adapt to and influence a changing environment. As such, acquiring knowledge and understanding on how organisations operate will assist in framing the role of different organisations in integrating DRR in national multi-sectoral planning in South Africa. Moreover, the effective implementation of a model for integrating DRR requires a number of diverse organisations to be successful and impactful.

Chapter 3:   Overview of strategic planning theory

Chapter 3 focuses the discussion on how the theory of strategic planning informs national multi-sectoral planning. In essence, this Chapter examines and explores

how organisations can use strategic planning to survive in a rapidly changing environment and remain relevant to their stakeholders. Acquiring an understanding how organisations undertake strategic planning will assist in framing how national sector departments must integrate DRR in their strategic planning initiatives to reduce disaster risks. Chapter 3 presents an in-depth discussion of the strategic planning process and a model for undertaking strategic planning (the Bryson model also known as strategy change cycle) which is designed to assists organisations to meet their mandates, fulfil their mission and create public value.

Chapter 4:   The South African disaster risk profile

Chapter 4 presents an overview of South Africa's disaster risk profile with a view to provide context to DRR practices and discourses within the country's environment. The Chapter also presents an in-depth discussion of South Africa's disaster risk profile covering the key hazards facing the country, factors that increases the country's vulnerability to these hazards as well as the impacts thereof. In this Chapter it is evident that like in most developing countries, urbanisation and climate change are amongst the key drivers of disaster risks in the country. From this Chapter, it is also evident that a number of government entities are responsible to address the country's disaster risks and for the implementation of DRR initiatives.

Chapter 5:   DRR in the South African context

This Chapter aims to provide an understanding of DRR in South Africa with a view to address the research objective to investigate and analyse existing legal instruments and frameworks that governs DRR in the country. The Chapter outlines key legislative instruments that form the basis of disaster risk management in the country. It also examines the national institutional and governance arrangements for the function in the country with a view to determine the roles and responsibilities of these structures in the implementation of a model to integrate DRR in national multi-sectoral planning in South Africa.

Chapter 6: The development of multi-sectoral planning in the South African government

Building on preceding Chapters, Chapter 6 provides an understanding of how multi-sectoral planning developed within the South African environment. It addresses the research objective to investigate and analyse how national multi-sectoral planning developed in South Africa. The Chapter gives an overview of the theoretical and practical foundations for the classification of government activities. The State plays a primary role in the implementation of DRR and in view of this, a discussion of the South African State system is provided. Thereafter follows a discussion of the origin and evolution of the government departments within the South African environment. Chapter 6 concludes by exploring the legislative framework, planning instruments and planning cycle processes that support multi-sectoral planning in South Africa. A discussion of these frameworks is vital and imperative to understand and identify entry points which could be used to integrate DRR.

Chapter 7: The international DRR: a comparative analysis of models for integrating DRR in national multi-sectoral planning

This chapter addresses the research objective of exploring and examining international models for integrating DRR with national multi-sectoral planning. In view of the research objective, this Chapter is arranged in five broad sections. The Chapter opens by analysing key international instruments that have guided the uniform implementation of DRR over the last two decades. Secondly, a discussion follows of the various models or strategies that Brazil, Russia, India and China (BRIC) use to integrate DRR in national multi-sectoral planning. Challenges and opportunities for integrating DRR in national multi-sectoral planning in each of the BRIC countries is presented with a summative discussion of the findings and then the conclusions.

Chapter 8: A proposed model for integrating DRR in national multi-sectoral planning for South Africa: empirical findings

The development of a model for integrating DRR in national multi-sectoral planning in South Africa involved both theoretical and empirical perspectives. This Chapter

focuses on presenting and discussing the empirical findings. It starts with a brief outline of the methodology that was utilised for data collection and data analysis. It then provides a report on the focus group interviews and semi-structured, face-to-face interviews. In essence, it provides the reader with insight into the methodology that was followed to develop the conclusions.

Chapter 9: Conclusions and recommendations: a model for integrating DRR in national multi-sectoral planning for South Africa

Chapter 9 (the final Chapter) contains a synthetic analysis of the theoretical and empirical perspectives of the thesis which formed the basis for a model for integrating DRR in national multi-sectoral planning in South Africa. This Chapter not only provides evidence that the objectives of the study have been achieved, but also contains a new comprehensive model for integrating DRR in national multi-sectoral planning in South Africa. It also outlines the performance indicators necessary for the successful implementation of the model. The Chapter clarifies the contribution of the study to the body of knowledge on DRR and provides certain recommendations on areas for further research.

1.9   CONCLUSION

Chapter 1 provided an overview of the study and identified the need and rationale for the integration of DRR in national multi-sectoral planning. In addition, the Chapter provided an orientation to the study, thus clearly delineating the problem statement and the study questions. To address the identified problem and the research questions, a number of research objectives were formulated to guide the study. The central theoretical statements on which the study is grounded were highlighted, and the research methods applied in the study were outlined. The Chapter concluded with a brief summary of the thesis chapter outline to make it easier for the reader to follow the study.

Having outlined the problem statement and justified the need for integration of DRR in national multi-sectoral planning, the next Chapter aims to examine organisation theory, its philosophical constructs, major schools of thought that evolved through different eras, as well as a reflection of contributions made by identified scholars,

researchers or practitioners involved in this field of study. Chapter 2 thus contributes to the first objective of this study which is to define, assess, examine and critically analyse the theories of Organisation and Strategic Planning (to be addressed in Chapter 3) and how they inform national multi-sectoral planning.

CHAPTER 2:

OVERVIEW OF ORGANISATION THEORY

"An 'organisation' is a group of people who jointly work to achieve at least one common goal. A 'theory' is a proposition or set of propositions that seeks to explain or predict something. The something in the case of organisation theory is how groups and individuals behave in differing organisational arrangements. It is not an exaggeration to say that the world is ruled by the underlying premises of organisation theory. This has been true ever since humankind first organised itself for hunting, war, and even family life. Indeed, the newest thing about organisation theory is the study of it" (Shafritz *et al*., 2011:223).

2.1   INTRODUCTION

Human beings are intent on drawing themselves into a web of collectivised patterns. "Modern human beings have learned to accommodate themselves to a world increasingly organised. The trend toward ever more explicit and consciously drawn relationships is profound and sweeping; it is marked by depth no less than by extension". This comment by Seidenberg in 1951 as Scott (1961:7) observes, summarises the pervasive influence of organisation in many forms of human activity.

The importance of organisations in modern life has indeed been well documented and researched (Desouza, 2009:32-33; Robbins, 1987:7; Scott & Davis, 2007:1). As Seidenberg commented above, the pervasive nature of organisation necessitates that humanity must study theories that are useful in providing insights and understanding as to how organisations functions, how they are structured and processes involved in day-to-day organisational functioning. In this regard, organisation theory as Jones (2000:8) observe is the relevant theory for the study of how organisations function and how they affect and are affected by the environment in which they operate.

In view of the above, this Chapter aims to examine organisation theory, its philosophical constructs, major schools of thought that evolved through different eras, as well as a reflection of contributions of certain identified scholars, researchers or practitioners involved in this field of study. The Chapter also critically scrutinises the basic tenets of the three schools of thought that emerged as dominant paradigms

during the evolution of the organisation theory. In order to achieve the objective as outlined above, the Chapter starts off with a detailed interpretation and analysis of what organisations are about, why they exist as well as the importance of studying organisation theory. Secondly, the origin of organisation theory is traced to its historical roots through to the contemporary era. Thirdly, the major components of organisation theory have attention followed by the impact that selected theories had on the development of organisation theory. Having outlined the evolution of organisation theory and the major components of the field, the impact of selected theories on this field of study is given further attention.

2.2 THE IMPORTANCE OF ORGANISATIONS IN SOCIETY

Organisations play a leading role in our modern world (Hall, 2002:1; Mackenzie, 1998:289; Marcus & Van Dam, 2007:44; Morgan, 1990:1; Ott *et al*., 2011:ix; Scott & Davis, 2007:1). Organisations were present in older civilisations - Chinese, Greek, Indian, to name but a few – but only in modern industrialised societies do we find large numbers of organisations performing virtually every task a society needs in order to function (Scott & Davis, 2007:2). While organisations formed part of society during the ancient period, Bedeian and Zammuto (1991:6) and Scott and Davis (2007:2) indicate that to the ancient organisational assignments of soldiering, public administration, and tax collection have been added such varied tasks as discovery (research organisations); child and adult socialisation (schools and universities); re-socialisation (mental hospitals and prisons); and production and distribution of goods (industrial firms, wholesale and retail establishments). As Bedeian and Zammuto (1991:6) point out, these and other organisations influence virtually every aspect of human existence. Perrow underscores the above (1991 as quoted by Hall, 2002:1) and argues that:

> *"We have become a 'society of organisations,' they (organisations) surround us and we are born in them and usually die in them. Our life space in between is filled with them. They are just about impossible to escape. Organisations are as inevitable as death and taxes. They have absorbed society".*

Perrow's view on the centrality of organisations in human life is shared by Etzioni (cited by Morgan, 1990:1) who takes the discussion further and argues that most

people will die in an organisation, and when the time arrives for the burial, the largest organisation of all – the State – must grant official permission. In essence, Etzioni's argument demonstrates that organisations fundamentally pervade all aspects of human life from beginning to end. Crucial to this study is the definition and discussion of the term organisation which is used throughout this thesis, to ensure clarity and the correct application thereof. However, according to Jaffee (2001:1), it will be extremely difficult to arrive at a single definition of organisation which will include all components or satisfy all the different perspectives. It is however helpful to briefly examine several definitions of the term 'organisation' as defined by various organisation theory scholars. These definitions are presented below:

According to Hall (cited by Jaffee, 2001:5) an organisation is a "collectivity with a relatively identifiable boundary, a normative order (rules), ranks of authority (hierarchy), communications system, and membership coordinating systems (procedures); this collectivity exists, on a relatively continuous basis in an environment, and engages in activities that are usually related to a set of goals; the activities have outcomes for organisational members, the organisation itself, and for society".

Scott and Davis (2007:29) conceive organisations as "collectivities that exhibit a relatively high degree of formalisation. The cooperation among participants is 'conscious' and 'deliberate'; the structure of relations is made explicit. A structure is formalised to the extent that the rules governing behaviour are precisely and explicitly formulated and to the extent that roles and role relations are prescribed independently of the personal attributes and relations of individuals occupying positions in the structure". Fox and Meyer (1996:90) define an organisation as an "open, dynamic and complex system of co-operation that co-ordinates the actions of its members to enhance individual effort aimed at goal accomplishment. Elements of an organisation include the human element, physical environment, work units, resources, boundaries and consumers". Daft *et al*. (2010:10) say that organisations are "(1) social entities that (2) are goal-directed, (3) are designed as deliberately structured and coordinated activity systems, and (4) are linked to the external environment". Selznick (1948:25) maintains that an "organisation is a system of consciously coordinated activities or forces of two or more persons". Gibson *et al*.

CHAPTER 2: OVERVIEW OF ORGANISATION THEORY

(1994:5) assert that an organisation is "a coordinated unit consisting of at least two people who function to achieve a common goal or set of goals".

Osborn *et al*. (1980:173) define an organisation as "collections of individuals seeking common goals". Hicks and Gullett (1975:3-4) and Thornhill (2012:166) argue that the correct point of departure for defining an organisation starts with the definition of organising. They (Hicks and Gullett) define organising as the process by which the structure of an organisation is created and maintained. This includes the determination of the specific activities that are necessary to accomplish the objectives of the organisation, the grouping of those activities according to some logical pattern, and assignment of these grouped activities to a responsible position or person. Having defined organising and recognising that it is one of the management function, Hicks and Gullett (1975:4) are of the view that organisation is perhaps a broader term referring to process of organising, the structure of an organisation, and the processes that occur within an organisation.

From the definitions presented above, it is thus clear that an organisation is in essence a social entity characterised by conscious and deliberate cooperation aimed at achieving an identified goal or set of goals in a manner that requires interaction with the environment. It is also clear that since an organisation is comprised of more than one individual, structures are required to enable effective coordination of activities necessary for goal accomplishment. For purposes of this thesis, Hicks and Gullet's broad and comprehensive definition of organisation will be used as the basis for discussion. Having defined the concept 'organisation', it is important to briefly examine why organisations exist. According to Hall (2002:4), Robbins and Barnwell (2002:6), the answer is simple: to get things done – we have organisations to do things that individuals cannot do by themselves. Daft *et al*. (2010:14), Hodge and Anthony (1979:4-5) and Jones (2000:5-6) concur with Hall and add that organisations exist to do the following:

i.   Bring together resources to achieve desired goals and outcomes;

ii.   Produce goods and services efficiently;

iii.   Facilitate innovation;

iv.   Use modern manufacturing, service, and information technologies;

v.   Adapt to and influence a changing environment;

vi.   Create values for owners, customers and employees;

vii.   Accommodate on-going challenges of diversity, ethics and the motivation and coordination of employees;

viii.   Increase specialisation and the division of labour;

ix.   Use large-scale technology; and

x.   To exert power and control.

Scott (1961:7) shares a similar view on the reason for the existence of organisations and adds that organisations increases stability in human relationships. This is done by reducing uncertainty regarding the nature of the system's structure and the human roles inherent to it. According to Scott (1961:7), corollary to this point, organisation enhances the predictability of human action because it limits the number of behavioural alternatives available to an individual. By comparing the views of Daft *et al*. (2010:14) and Hodge and Anthony (1979:4-5) with that of Scott (1961:7), it is clear that an organisation primarily exist to pool individual resources and effort to achieve clearly defined goals or a set of goals which can best be achieved by collective effort.

The brief discussion of what an organisation is and why it exists, is necessary to provide a basis for understanding the organisation theory which is the focus of this Chapter. This discussion has also revealed clear definition of roles and responsibilities is essential for effective and optimal functioning of the organisation. It has also emerged that the establishment of structures within an organisation is important to enable effective coordination of activities necessary for goal accomplishment. The importance of establishing institutional structures to coordinate effective integration of DRR in national multi-sectoral planning as discussed in Chapters 5, 7, 8 and 9 of this study is underpinned by these theoretical principles and considerations. Flowing from this, it is important to concisely define and discuss organisation theory to ensure clarity and the correct interpretation thereof in ensuing sections of this Chapter.

2.3   DEFINITION OF ORGANISATION THEORY

Central to this study is the definition of organisation theory. Pugh (1984:9) says that organisation theory can be defined as "the study of the structure, functioning and performance of organisations and the behaviour of groups and individuals within them". Pugh (1984:9) adds that organisation theory is the body of thinking and writing which addresses itself to the problem of how to organise.

Robbins (1987:6) and Robbins and Barnwell (2002:8) maintain that "organisation theory is the study of the structure and design of organisations- the discipline that studies the structure and design of organisations. Organisation theory refers to both the descriptive and prescriptive aspects of the discipline. It describes how organisations are actually structured and offers suggestions on how they can be constructed to improve their effectiveness".

Hodge and Anthony (1979:5) are of the opinion that in order to continue to refine and improve organisational activity, it is necessary for management to develop an explanation of how organisations form, function, and survive. This explanation is termed an organisational theory. Starbuck (2003:143) postulates that "organisation theory is a collection of general propositions about organisations". Fox and Meyer (1996:91) are of the opinion that "organisation theory is an amalgam of sociology, business administration, public administration, and psychology that focuses on the study of organisations, their structure, and their behaviour".

From the aforementioned definitions, it is clear that organisation theory is that field of study which concerns itself with how organisations can be structured or designed. Secondly, it refers to how processes in organisations can be designed to improve organisational effectiveness. When considering and comparing the definitions that were stated, it becomes evident that a thorough understanding of organisation theory is fundamental for management at all levels if they (management) are to achieve organisational goals and ensure organisational survival and effectiveness. Having defined what organisation theory is about the following section aims to address the importance of studying organisation theory.

2.4   THE IMPORTANCE OF STUDYING ORGANISATIONAL THEORY

According to Kast and Rosenzweig (1972:462), the study of organisations is an applied science because the resulting knowledge is relevant to problem solving in on-going institutions. Hatch (2006:4) concurs with this view and highlights several applications of organisation theory as outlined in the Table 2.1 below:

Table 2.1:   Applications of Organisation Theory

Strategy/ finance	Useful on how to organise to achieve organisational goals, how to achieve results by structuring activities and designing organisational processes.
Marketing	Thorough understanding of what an organisation is and how it operates is useful for marketers in aligning the organisation and its brand strategy.
Information technology	Information flow through the organisation affects work processes and outcomes and knowledge of organisation theory can help Information Technology specialists identify, understand and serve organisational needs better.
Operations	Organisation theory not only supports the technical aspects of operations and system integration, but explains their socio-cultural aspects as well.
Human resources	Human resources has widespread ramifications in any organisation and the knowledge provided by organisation theory can provide content for the function.
Communication	Corporate communication specialists must understand the interpretive processes of organisational stakeholders and need to address the many ways in which different parts of the organisation interact with each other and the environment.

Source: Hatch (2006)

It is evident from Table 2.1 that the utility of organisation theory to organisational functioning cuts across multiple focus areas. It is also clear that thorough understanding of the field can assist management in ensuring that organisations are able to execute various managerial functions necessary for the organisation to achieve its goals on a day-to-day basis. Chapters 4, 5, 7, 8 and 9 of this study accentuate that DRR within the South African environment is a multi-sectoral and multi-disciplinary function which is driven by diverse organisations. To this end, knowledge of organisation theory is useful to understand structure, functioning and performance of organisations. As an applied science, organisation theory which

offers suggestions on how organisations can be constructed to enhance their effectiveness is important for DRR practitioners particularly in South Africa where the regulatory framework for the function (see chapter 5) provides for the establishment of diverse structures and forums to effectively coordinate disaster risk management activities in the country.

In the next section, a brief discussion of selected theories are presented, all of which had a significant influence on the development of the organisation theory.

2.5   ORGANISATION THEORY AND SELECTED SCHOOLS OF THOUGHT

The development of organisation theory had been influenced by various theories that dealt with different aspects related to organisations. Theories such as the contingency theory, (Daft *et al*., 2010:686; Gibson *et al*., 1994:7; Hatch, 2006:41; Scott & Davis, 2007:103), resource dependence theory, (Bedeian & Zammuto, 1991:334-335; Hillman *et al*., 2009:1404; Pfeffer & Salanick, 1978:1; Sheppard, 1995:33), population ecology theory, (Bedeian & Zammuto, 1991:340-341; Daft *et al*., 2010:195; Hall, 2002:261; Hatch, 2006:83; Robbins & Barnwell, 2002:253), chaos theory, (Daft *et al*., 2010:29; Farazmand, 2003:362; Priesmeyer, 1992:5; Smith, 2001:266-267; Thietart & Forgues, 1995:19;) and game theory, (Rapoport & Horvath, 1959:87-91; Varoufakis, 2008:1256) have enriched the field of organisation theory. Although a comprehensive discussion of these theories would illustrate the influence on organisation theory, this study does not require a thorough and critical analysis of all these theories, hence no detail discussion will be given.

The following section traces the historical development of organisation theory from its roots in the industrial revolution period. It shows the progression of the field from its engineering and industrial foundations, human resource perspective up to the contemporary focus on the systems perspective to the study of organisation with the purpose of indicating the inherently interdisciplinary nature of organisation theory. As Robbins (1987:472), Robbins and Barnwell (2002:24-25) and Roux *et al*. (1997:17-18) point out, the current state of organisation theory is the result of an evolutionary process. From this point of view, the ensuing section aims to provide an overview of

the dominant schools or paradigms, the philosophical points of departures that these schools of thoughts are built on.

2.6   EVOLUTION OF ORGANISATION THEORY

Ott *et al.* (2011:31) in their seminal publication, *Classic Readings in Organisation Theory*, argued that no single date can be pinpointed as the beginning of serious thinking about how organisations work and how they should be structured and managed. Ott *et al.* (2011:31) maintain that writings about management and organisations can be traced back as the known origins of commerce and that a lot can be learned from the early organisations of the Muslims, Hebrews, Greeks, and Romans. Two ancient examples as outlined in Frank (1971:1), Marcus and Van Dam (2007:8), Ott *et al.* (2011:31) and Robbins (1987:474) of ancient wisdom on organisation management that can be used to provide an indication of organisation theory's deep roots in earlier eras are briefly presented to provide a grounding for further exploration.

An early example is from the Book of Exodus (in the Christian Bible), Chapter 18 verse 17- 22, in which Jethro, Moses's father in law, chastises Moses for failing to establish an organisation through which he could delegate his responsibility for the administration of justice. In Exodus 18: 25, Moses accepts Jethro's advice and "chose able men out of all Israel, and made them heads over the people, rulers of thousands, rulers of hundreds, rulers of fifties, and rulers of tens" while he continued to judge the 'hard cases', while his rulers judged "every small matter" themselves. Though the biblical language is a bit antiquated, the message is: managers need to delegate authority in large organisations, and only the unusual or exceptional decisions should flow back up the hierarchy for resolution (Robbins, 1987:474).

The second ancient example involves a discussion held between Socrates and Nichomachides during which Socrates anticipates the arguments for "generic management" and "principles of management" as he explains to Nichomachides that a leader who "knows what he needs, and is able to provide it, can be a good president, whether he have the direction of a chorus, a family, a city, or an army (Xenophon, 1869). In this conversation, Socrates lists and discusses the duties of all good presidents of public and private institutions and emphasises the similarities and

argued that managing a household; for the conduct of private affairs differs from public concerns only in magnitude as they are similar in other respects (Hughes, 1998:150; Xenophon, 1869:430-431).

Although most organisation theory scholarship e.g. Hodge and Anthony (1991:19), Lundstedt (1972:328), Robbins (1987:474) and Starbuck (2003:143), agree that the ancients understood many premises of the organisation theory, the beginnings of the factory system in Great Britain in the 18th century is viewed as the birthplace of complex economic organisations and, consequently, of the field of organisation theory (Hodge & Anthony, 1991:19; Marcus & Van Dam, 2007:13; Ott *et al.*, 2011:31; Shafritz *et al.*, 2011:223). According to Kassem (1977:12) and Scott (1961:7), the evolution of organisation theory can be categorised into three major schools of thought namely the classical, neo-classical and the modern. Kassem (1977:12) is of the opinion that the dominant currents in organisational thinking since the beginning of this century have taken the form of thesis (classical organisation theory), antithesis (neo classical/ human relations theory), and synthesis (modern organisation theory/ open-system theory).

The basic tenets and assumptions of each school of thought and contributions of major writers/ scholars in each school in the historical evolution of organisation theory are discussed in the following section.

2.6.1   Classical organisation theory

Classical Organisation Theory (COT) as its name implies, was the first theory of its kind, is considered traditional, and continues to be the base upon which other schools of organisation theory built its arguments (Ott *et al.*, 2011:31; Shafritz *et al.*, 2011:224). An understanding of COT is essential for its historical interest, and more importantly because subsequent analyses and theories presume the knowledge of it (Ott *et al.*, 2011:31). According to Merkle (cited by Ott *et al.*, 2011:32), the classical school dominated the organisation theory until the 1930s and remains highly influential today.

2.6.1.1   Fundamental tenets of COT

The basic tenets and assumptions of the classical doctrine which were rooted in the industrial revolution of the 1700s and the professions of mechanical and industrial engineering as well as economics have never been abandoned but were rather expanded upon, refined, adapted, and made more sophisticated (Hodge & Anthony, 1979:27-29; Hodge & Anthony, 1991:20; Kassem, 1977:12; Lundgren, 1974:35-37; Morgan, 1989: 41; Ott *et al*., 2011:32; Scott, 1961:7; Shafritz *et al*., 2011:224). These fundamental tenets are discussed in the next section.

2.6.1.1.1   Division of labour

The concept of division of labour is at the very heart of the classical thinking about organisations (Hodge & Anthony, 1991:21; McAuley *et al*., 2007:59-60). According to Scott (1961:9), the division of labour is without doubt the cornerstone among the four elements. From the four elements, the other elements flow as corollaries. Hodge and Anthony (1979:27) share a similar observation when they (Hodge & Anthony) note that the proper division of labour is the most important economic concept ever devised. In the words of Smith (1776:41), "the greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgement with which it is anywhere directed, or applied, seem to have been the effects of the division of labour".

Gulick (1937:83) concurs with this observation and goes further to argue that wherever many men are working together, the best results are secured when there is a division of work among these men. Gulick (1937:83) recognises that work division is the foundation of organisation and identifies the following as reasons for division of work because:

i.   People differ in nature, capacity and skill, and gain greatly in dexterity by specialisation;

ii.   The same person cannot be at two places at the same time; and

iii.   The range of knowledge and skill is so great that a person cannot within his life-span know more than a small fraction of it.

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Although organisation theory scholarship agrees that division of labour is the bedrock of organisation, there are limitations that division of labour cannot address. Gulick (1937:84) outlines three limitations to the division of labour. Firstly, the subdividing of work does not result in improvement, unless that further subdivision results in setting up a task which requires less than the full-time of one man. The second limitation arises from technology and custom at a given time and place. Gulick (1937:84) offers the example of building construction undertakings where he noted that it is extraordinarily difficult to re-divide certain aspects of electrical and plumbing work and combine them in a more effective way, because of jurisdictional conflicts of craft unions. The third limitation entails that the subdivision of work must not pass beyond physical division into organic division where it might seem more efficient to have the front half of the cow in the pasture grazing and the rear half in the barb being milked all of the time as this will result in failure (Gulick, 1937:84).

2.6.1.1.2   *Scalar and functional processes*

The second pillar of the classical doctrine is the scalar and functional processes which refer to vertical and horizontal growth respectively (Fayol, 1949:27; Gibson *et al*., 1994:539; Hodge & Anthony, 1979:27; Scott, 1961:9). The scalar process refers to the growth of the chain of command, the delegation of authority and responsibility, unity of command and the obligation to report. The functional process entails the division of the organisation into specialised parts and the re-grouping of the parts into compatible units (Scott, 1961:9). Figure 2.1 illustrates how Fayol (1949:27) explain the negative effect of the scalar chain on decision making, especially on large organisations such as governmental agencies.

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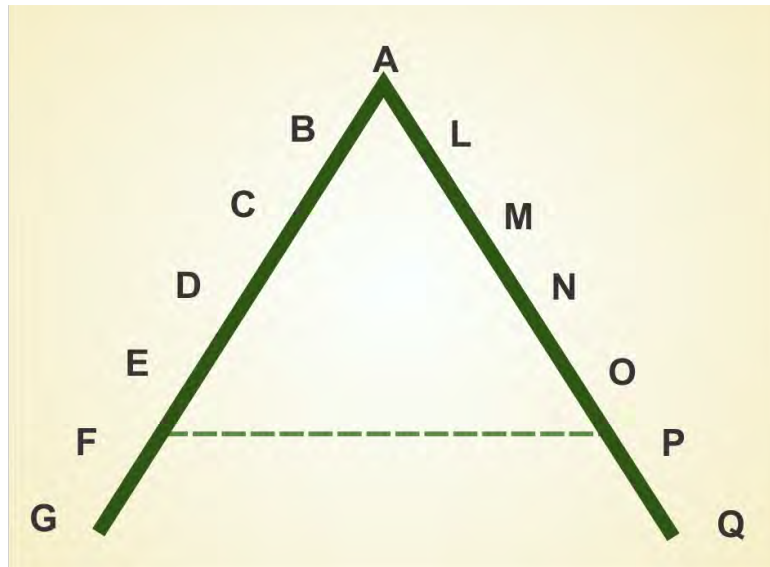
Figure 2.1: Example of scalar chain (adapted from Fayol, 1949)

As evident from Figure 2.1, and in line with the scalar chain principle, Fayol (1949:27-28) argues that if section F has to be put into contact with section P, in a business whose scalar chain is represented by the double ladder G-A-Q, by following the line of authority, the ladder must be climbed from F to A and then descended from A to P, stopping at each rung, then ascended again from P to A, and descended once more from A to F, in order to get back to the starting point. This path is dictated both by the need for some transmission and by the principle of unity of command. However, it is not always the swiftest and has the potential to undermine quick decision making in the organisation. Fayol (1949:27) is of the view that the use of a "gang plank" which entails F going directly to P but keeping both supervisors which in this case is E and O is simple and swift. This allows F and P to deal at one sitting, and in a few hours, with the issue at hand which via the scalar chain would pass through 20 transmissions, inconveniences many people, involve masses of paper, lose weeks or months to get to a conclusion which could have been obtained via direct contact between F and P (Fayol, 1949:27).

It is thus clear from the discussion above that rigid adherence to the scalar chain principle in organisations may result in unintended consequences and inefficiencies which may undermine the ability of the organisation to achieve its goals. It is also clear that organisations must have mechanisms in place to facilitate engagements

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between various sections in a manner that does not completely disregard the scalar chain principle but enable swift interaction between various units necessary for the organisation to achieve set objectives. Fayol (1949:28) observes that it would be a fault to depart needlessly from the line of authority, but would be an even greater mistake to keep to the line of authority when it could be to the harm of business.

2.6.1.1.3   *Structure*

The third pillar of this doctrine is the structure which is the logical relationships of functions in an organisation, arranged to accomplish the objectives of the company efficiently (Hall, 2002:48; Hodge & Anthony, 1979:28; Scott, 1961:9). Osborn (1980:274) echoes a similar view and states that the organisation's structure is its anatomy which prescribes formal roles and relationships for people and groups within the system. Gibson *et al*. (1994:9) underscore this point by arguing that structure is a blueprint that indicates how people and jobs are grouped together in an organisation and is usually illustrated by an organisation chart. According to Daft and Steers (1986:361), the purpose of the organisation chart is to provide employees with information about their place in the organisation, their tasks and responsibilities, and their formal reporting relationships.

The essence of structure is a hierarchical pattern of authority and responsibility relationships aimed at providing coordination to the work of the organisation (Hodge & Anthony, 1979:28). As said by Hall (2002:48), organisational structures serve three basic functions which are outlined below, namely:

i.   Structures are intended to produce organisational outputs and achieve organisational goals, in other words be effective;

ii.   Structures are designed to minimise, or at least regulate, the influence of individual variations on the organisation. Structures are imposed to ensure that individuals conform to organisational requirements and not vice versa; and

iii.   Structures are the settings in which power is exercised, decisions are made, and organisational activities are carried out.

In line with Hodge and Anthony (1991:21), COT centred its focus on the line and staff organisation structure. The line structure is concerned with accomplishing the basic work with which the organisation is concerned. On the other hand, the staff structure is about functions that facilitate or expedite the performance of this basic work.

2.6.1.1.4   Span of control

The last pillar of the COT school deals with the span of control. Span of control is the number of employees who report to a single manager or supervisor (Daft *et al*., 2010:288-289; Fox & Meyer, 1995:121; Frank, 1971:29; Gibson *et al*., 1994:488; Hodge & Anthony, 1991:21; Jones, 2000:70; Scott, 1961:10). Gulick (1937:86) argues that the limit of control is partly a matter of the limit of knowledge, time and energy. Hence, the executive of any enterprise can personally direct only a few persons. Frank (1971:29) concurs with Gulick and continues to identify a number of practical factors (list not exhaustive) operating independently of each other that affect span of control, namely the:

i.   Competence of both the superior and the subordinates;

ii.   Degree of interaction between the units or personnel being supervised;

iii.   Extent to which the supervisor must carry out non-managerial responsibilities and the demands on his time from other people and units;

iv.   Similarity or dissimilarity of the activities being supervised;

v.   Incidence of new problems in his unit;

vi.   Extent of standardised procedure, and

vii.   Degree of physical dispersion.

Flowing from the discussion above, it is clear that these four pillars are intertwined and fundamental to understanding and appreciating the thinking that reinforces classical thinking about organisations. As Hodge and Anthony (1991:21) point out, the four pillars are of central importance to the organisation theory as virtually every facet of the theory can be traced to one or more of them. Within this analytical

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framework, it is evident that knowledge of these four fundamental tenets is essential for DRR policy makers and practitioners involved in establishing and monitoring performance of various organisations involved in DRR in the country.

Various more scholars, management theorists, and other practitioners made significant contributions to the development of the organisation theory as discussed in the ensuing sections.

2.6.1.2   *The influence of Adam Smith's factory system on organisation theory*

The evolution of any theory must be viewed in context. The beliefs of early management theorists about how organisations worked or should work were a direct reflection of the societal values of their times (Shafritz *et al*., 2011:224). COT developed during the era when workers were not viewed as individuals but as the interchangeable parts in an industrial machine whose parts were made of flesh only when it was impractical to make them of steel (Ott *et al*., 2011:33; Shafritz *et al*., 2011:224). The advent of power-driven machinery and hence the modern factory system spawned our current concepts of economic organisations and organisation for production (Ott *et al*., 2011:33; Shafritz *et al*., 2011:224). Power-driven equipment was expensive and production workers could not purchase and use their own equipment as they once had their tools. Hence the memorable phrase for being fired, "get the sack", stems from the earliest days of the industrial revolution, when a dismissed worker literally was given a sack in which to gather up his tools (Ott *et al*., 2011:33; Shafritz *et al*., 2011:224).

Under the factory system (workers without their own tools, and often special skills, had to gather for work in factories) organisations, it was thought, should work like machines using people, capital and machines as their parts (Ott *et al*., 2011:33; Shafritz *et al*., 2011:224). Thus, the first theories of organisations were concerned primarily with the anatomy, or structure, of formal organisations. This was then the environment and mode of thinking that shaped and influenced the tenets of COT. Among the many contributors to this school, Smith must be considered as one of the most influential. Smith (a Scottish economist), in his famous book published in 1776, *An inquiry into the Nature and Causes of the Wealth of Nations* devotes its first chapter, "Of the Division of Labour", in which he described the techniques of pin

manufacturing as an illustration of how the division of labour can produce economic efficiency at work (Crowther & Green, 2004:9; Hatch, 2006:27; Ott *et al*., 2011:33; Shafritz *et al*., 2011:224).

In essence, *The Wealth of Nations* argued for the division of labour as a means of increasing industrial efficiency (Crowther & Green, 2004:9). Smith (1776:41-42) noted that ten individuals, each doing a specialised task, could produce about 48 000 pins a day among them. Smith was of the view that if the ten individuals were working independently and separately they would be lucky to make 200 or even ten pins between them in one day. Smith concluded then what most working managers now accept as common sense: that division of labour can bring about significant efficiencies (Robbins & Barnwell, 2002:37). Smith's book revolutionalised thinking about economics and organisations was published in 1776. Hence 1776 is traditionally considered the starting point of the organisation theory as an applied science and academic discipline (Ott *et al*., 2011:34; Shafritz *et al*., 2011:227).

It is clear from this discussion of Smith's contribution to organisation theory that he was more concerned about increasing efficiency through clear division of labour and specialisation. Smith's argument on division of labour also amplifies the point made in the preceding sections that the reason that organisations exist are they can execute work which individuals cannot do when it is done one by one for themselves. It thus becomes important that each individual's work in an organisation must be clearly defined to increase efficiency and reduce duplication of effort and resources.

2.6.1.3 Daniel McCallum's general principles of organisation

Another major contributor to the COT school is McCallum, the visionary general superintendent of the New York and Erie Railroad. In 1856, McCallum elucidated general principles of an organisation that "may be regarded as settled and necessary" (Ott *et al*., 2011:34). Although McCallum was highly influential as a practitioner, he was not an academic. The only coherent statement of his general principles is evident from an annual report (known as the Superintendent's Report) for the New York and Erie Railroad in March 1856 (Ott *et al*., 2011:34). According to Ott *et al*. (2011:34), McCallum created the first modern organisation chart. The

following are a few general principles of organisation which McCallum has identified in the Superintendent Report:

i. A proper division of responsibilities;

ii. Sufficient power conferred to enable the same to be fully carried out, that such responsibilities may be real in their character;

iii. The means of knowing whether such responsibilities are faithfully executed;

iv. Great promptness in the report of all derelictions of duty, that evils may be at once corrected;

v. Such information, to be obtained through a system of daily reports and checks that will not embarrass principal officers, nor lessen their influence with their subordinates; and

vi. The adoption of a system, as a whole, which will not only enable the General Superintendent to detect errors immediately, but will also point out the delinquent.

From the above general principles, it is clear that McCallum considered regular feedback on the performance of the job at hand by the subordinate to his or her manager, a fundamental element of management consequently, his emphasis on promptness when reporting derelictions of duty. His approach recognises the importance of scheduled reports and checks to ensure that managers are kept abreast of progress in the execution of work. He was also concerned about establishing mechanisms for early detection of errors in a way that will single out the delinquent. In essence, McCallum's view of a manager was of someone who is meticulous and is directly involved in the execution of work by his or her subordinates. Chapters 5, 7 and 8 address organisational aspects related to establishment and optimal functioning of DRR organisations. Some of the challenges (see Chapters 5 and 8) raised by those that participated in this study are linked to the improper placement of the disaster risk management function across all spheres of the South African government which undermines cross-sectoral coordination. This is closely linked to one of McCallum's principle which stipulates that sufficient powers

must be conferred to enable an organisation and its management to effectively implement its own programmes.

2.6.1.4 Henry Towne's contribution to organisation theory

The professional paper that management historians considered to be the first call for scientific management was entitled "The Engineer as an Economist" and was presented by Towne at the 1886 meeting of the American Society of Mechanical Engineers (ASME) (Bedeian & Zammuto, 1991:609; Ott *et al.*, 2011:34; Shafritz *et al.*, 2011:229). In this paper, Towne argues best results are ensured if an organisation of productive labour is directed and controlled by persons with good executive ability, practical familiarity of with the mechanical / engineering or the goods produced and the processes employed, as well as practical knowledge of how to observe, record, analyse and compare essential facts in relation to wages, supplies, expense account, and all else that enters into or affects the economy of production and the cost of the product (Towne, 1886:428).

In essence, Towne argues that management as a field of study was equal in importance to engineering (Bedeian & Zammuto, 1991:609). Towne's point of departure was therefore that there is a need to integrate technical skills with what he called "the management of works" for the organisation to achieve its objectives. Although it is difficult to find many people who have both the technical and managerial skills to take up management positions in organisations, contemporary organisations can benefit from Towne's thinking of appointing people with a combination of technical and managerial qualities or skills.

2.6.1.5 The influence of Frederick Taylor's scientific management principles on organisation theory

While Towne's paper is recognised as the beginning of the search for a science of management, the birth of scientific management is generally credited to Frederick W. Taylor (1856-1915) (Bedeian & Zammuto, 1991:609). Frederick Taylor (widely regarded as the father of scientific management) also made a sterling contribution to the work of the COT (DeCenzo, 2008:25; Hodge & Anthony, 1979:29; Robbins & Coultar, 1996:39). Robbins and Coultar, (1996:39) underscore this point and argue

that among the many contributors to COT, the name of Frederick Taylor must be counted as one of the most important. Hicks and Gullett (1975:178) echo a similar view and argue that the person who did most to develop scientific management was Frederick Taylor: a mechanical engineer who held significant managerial posts in the steel and metal-working industries. Taylor pioneered the development of time and motion studies, originally under the name "Taylorism," or the "Taylor system" premised on the notion that there was "one best way" for accomplishing any given task, and sought to increase output by using scientific methods to discover the fastest, most efficient, and least fatiguing production methods (Crowther & Green, 2004:10; Ott *et al*., 2011:34).

His system was scientific in that it called for managers to employ research and experimentation to find the correct standards, principles and processes that would allow them to pay high wages while simultaneously lowering production costs (Hatch, 2006:32). Gibson (1966:235) states that the objective of Taylor and his followers was to reduce the contributions of each workman to the smallest and, most specialised unit of work possible and to eliminate any uncertainty about the expected outcome. In one of Taylor's classic papers entitled "The Principles of Scientific Management", Taylor (1916:65) argues that "by far the most important fact which faces the industries of our country, the industries, in fact, of the civilised world, is that not only the average worker, but nineteen out of twenty workmen throughout the civilised world firmly believe that it is for their best interests to go slow instead of fast. They firmly believe that it is for their interest to give as little work in return for the money that they get as is practical." He attributes this to two reasons, namely the effect of labour-saving devices and the development of soldiering.

Taylor (1916:65-66) used a staple business "the cotton industry" of Manchester, England to provide an excellent example of the effects of labour-saving devices. In the 1840s, 5000 weavers of Manchester opposed the introduction of a power loom set to replace the old hand loom in the cotton industry. The weavers saw the power loom as a threat to their jobs as it was capable of producing three times more than the old hand loom. Therefore, they (weavers) broke into the establishments into which these machines were being introduced and damaged the machines in order to stop the introduction. Notwithstanding this resistance, the power loom was introduced

and the output of each person in the cotton industry increased by tenfold and the numbers of weavers grew from five thousand to 265 000 (Taylor, 1916:65-66).

With regard to the concept of soldiering, Taylor identified two types of soldiering as natural and systematic. While natural soldiering was due simply to man's tendency to take it easy, not to overexert himself and keep from becoming fatigued, systematic soldiering is more complex and is designed to keep the supervisor ignorant of how much work could be done so that the expectation of work performance is not raised (Hickson & Gullett, 1975:182). Taylor viewed the latter type of soldiering as the most pernicious (Jaffee, 2001:55). To illustrate his point of soldiering, Taylor (1916:66-67) used an example of a pen producing industry wherein workmen agreed with their foreman to increase output per day (increase wage per manufactured pen) for an increased wage. Success was achieved until someone in the board of directors asked to see the payroll and discovered that the company was paying half more than other similar companies and in no uncertain terms announced that the foreman must stop ruining the labour market. The foreman, depressed, went back to his workmen and informed them that the price of the pen had to be cut down with the consequence that wages will also be lower all on instruction of the board of directors with the viewpoint that the current process and prices ruin the labour market. The workmen, of necessity accept the cut, but sees to it that they never make enough pens to get another cut (Taylor, 1916:66).

2.6.1.5.1   *Taylor's principles of scientific management*

According to Taylor (1916:67), the development of scientific management methods was the first step that was taken in an earnest endeavour to remedy the evils of soldiering. Taylor (1916:69-71) identifies the following as duties of management also called principles of scientific management:

i.   The deliberate gathering together of the great mass of traditional knowledge which, in the past, has been in the heads of the workmen, recording it, tabulating it, reducing it in most cases to rules, laws, and in many cases to mathematical formulae, which, with these new laws, are applied to the cooperation of the management to the work of the workmen;

ii. The scientific selection of the workman, and then his progressive development. Under scientific management, it is the duty of management to deliberately study the workmen under them in the most careful, thorough and painstaking way. It is the duty of management to set out deliberately to train the workmen in their employ to be able to do a better and still better class of work than ever before, and to pay them higher wages than ever before;

iii. Obtaining the cooperation of workers to ensure full application of scientific principles- they are many plums offered to those who come under scientific management and this includes better treatment, more kindly treatment, more consideration for their wishes and an opportunity for them to express their wants freely; and

iv. The principle of the division of work- under this principle, the work of the establishment is divided into two large parts for both the workmen and management. Management do a whole division of the work formerly done by the workmen. It is this real cooperation, this genuine division of work between the two sides, more than any other element which accounts for the fact that there will never be strikes under scientific management.

While Taylor's principles were regarded as fundamental for organisations, Daft *et al*. (2010:27) critique these principles as closed systems thinking. According to Daft *et al*. (2010:27), Taylor overlooked how employees develop a sense of identity and meaning outside the workplace. Hatch (2006:33) is of the view that critics saw Taylor's system not so much as a means to make organisation more efficient, but rather as a rationale justifying the powers managers enjoy. While there is criticism of Taylor's contribution to organisation theory, it is clear from the discussion above that his contribution remains fundamental to understanding organisation and how it functions. As Newman and Guy (1998:291) point out, the doctrine of scientific management remains alive and well despite its pitfalls, which include employee exploitation, alienation, and dehumanisation.

Taylor introduced scientific measurement of work to counter the effects of soldiering which was widespread during his time. It is also clear that with scientific measurement of work, Taylor sought to eliminate uncertainty about expected

outcomes. Amongst the four duties of management that Taylor identified, he put emphasis on the scientific selection of workers and the progressive development which is the duty of management. It is thus clear that Taylor recognised that for scientific management to work, workers must have adequate skills and that management must put strategies in place to induce the workers to cooperate. The application of the scientific principles can assist contemporary organisations in recruitment, training and development as well as strategies to optimise cooperation by all workers in pursuit of organisational goals. It is also evident that the application of these principles specifically those related to recruitment and progressive training and development can enhance significantly enhance the National Disaster Management Centre's DRR capacity building activities and initiatives (see Chapter 8).

2.6.1.6 Henri Fayol's general principles of management and its impact on organisation theory

Though the ideas of Adam Smith, Frederick Winslow Taylor, and others are proof to be dominant influences on the design and management of organisations, it was Henri Fayol, a French executive engineer, who developed the first comprehensive theory of management (Ott *et al.*, 2011:35; Robbins & Barnwell, 2002:41; Shafritz *et al.*, 2011:231). Although Taylor and Fayol were writing at the same time, their focuses were significantly different as the former focused on improving the efficiency of factory work while the latter was more concerned with the problems of management (Bedeian & Zammuto, 1991:611; Hodge & Anthony, 1979:30; Robbins & Barnwell, 2002:41; Robbins & DeCenzo, 2008:26). Lune (2010:43) and Morrill (2008:17-18) concur with this view and argued that if Taylor offered a rationalist theory of work, Fayol provided the best-known rationalist theory of management. Notwithstanding the fact that Fayol had six principles – technical (production of goods), commercial (buying, selling and exchange activities), financial (raising and using capital), security (protection of property and people), accounting, and managerial (coordination, control, organisation, planning, and command of people). Fayol's primary interest and emphasis was on his final principle focusing on managerial activities (Ott *et al.*, 2011:35; Shafritz *et al.*, 2011:231).

Fayol (1916:48) identified the following principles of management; division of work; authority and responsibility; discipline; unity of command; unity of direction; subordination of individual interest to the general interest; remuneration of personnel; centralisation; scalar chain (line of authority) order; equity; stability of tenure of personnel; initiative, and *esprit de corps*. Fayol held these principles to be universal i.e., they could be applied in any type of organisation and this was perhaps, the first notion of *universality* introduced into the literature of management and organisation theory (Fayol, 1916:19). According to Fayol (1916:19), the managerial function finds its only outlet through the members of the organisation (body corporate). These principles have formed the foundation for many aspects of modern management practice and organisation design.

Thus it is evident that Fayol made a pioneering contribution to organisation theory through his principles of management. As Bedeian and Zammuto (1991:611) postulate, the ideas of Fayol have had a lasting impact on the development of organisation theory as a science. Although Fayol developed these principles in the beginning of the 19th century, most of these principles still remain relevant and find resonance with most modern-day organisations. The principle of stability of tenure of personnel which moves from the premise that an employee requires adequate time to get used to the work before mastering it is important as instability of tenure may negatively affect service delivery. For example, the high turnover of senior management personnel in the South African public service is a case in point. In April 2013, Minister Trevor Manuel (Minister responsible for National Planning Commission in the Presidency) lamented this high turnover especially at senior management and technical level when he noted that an average department has about four Director–Generals in ten years which results in senior managers pursuing short-term agendas rather than focussing on building institutions and capacity (South Africa, 2013a:2).

While Fayol argued for the universality of these principles, he also recognised that their application should be flexible. He argued that these principles are possible to adapt to every need and that it is a matter of knowing how to make use of them, which is a difficult art requiring intelligence, experience, decision and proportion (Fayol, 1949:19).

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2.6.1.7   *The influence of Max Weber on organisation theory*

In contrast with the fervent advocates of scientific management, Max Weber was a brilliant analytical sociologist who happened to study bureaucratic organisations (Daft *et al*., 2010:36; Kieser, 1994:609; Ott *et al*., 2011:36; Robbins & Barnwell, 2002: 42). According to Crowther and Green (2004:19), Weber was a sociologist who thought that it was necessary to attempt to provide a theoretical basis to the social sciences by studying modern industrial society and the increasing importance of large organisations in society. As Lune (2010:20) points out, Max Weber (1864-1920) bestrides the world of organisational studies like a colossus: his economics writings alone would qualify him as one of the most important theorists of the field, while his political sociology was unparalleled in its day and remains a model of grand theory backed by detailed observations.

"The father of organisation theory", Weber's concentration was largely on bureaucracy as the "ideal" form of organisation, which was built around rational decision making (Hodge & Anthony, 1979:24-25). This point is underscored by Stern and Barley (1996:146) who observed that macro-organisational theorists routinely trace their mandate for studying organisations to the writings of Max Weber. Weber wanted to understand the ways in which industrialisation affected society, especially through its effects on authority structures (Hatch, 2006:30). It is important to define bureaucracy which in the words of Shafritz *et al*. (2011:235) "has always been one of the central concerns of organisation theory". Bureaucracy is the totality of government offices or *bureaus* (a French word meaning "office") that constitute the permanent government of a state-that is, those public functions that continue irrespective of changes in political leadership (Ott *et al*., 2011:36; Shafritz *et al*., 2011:235).

Writing in the early part of the 19th century, Weber developed a structural model that, he argued, was the most efficient means by which organisations can achieve their ends (Robbins & Barnwell, 2002:41). Weber (1947:15) indicates that there are three pure types of legitimate authorities and the validity of their claims to legitimacy may be based on:

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i. Rational grounds: Based on a belief in the 'legality' of patterns of normative rules and the right of those elevated to authority under such rules to issue commands (legal authority);

ii. Traditional grounds: Based on an established belief in the sanctity of immemorial traditions and the legitimacy of the status of those exercising authority under them (traditional authority); or finally

iii. Charismatic grounds: Based on devotion to the specific and exceptional sanctity, heroism or exemplary character of an individual person of the normative patterns or order revealed or ordained by him (charismatic authority).

2.6.1.7.1   *Characteristics of Weber's ideal type bureaucracy*

According to Weber (1947:20-21), a bureaucratic organisation consists of individual officials who are appointed and function according to the following criteria:

i. They are personally free and subject to authority only with respect to their impersonal official obligations;

ii. They are organised in a clearly defined hierarchy of offices;

iii. Each office has a clearly defined sphere of competence in the legal sense;

iv. The office is filled by a free contractual relationship. Thus, in principle, there is free selection;

v. Candidates are selected on the basis of technical qualifications. In the most rational case, this is tested by examination or guaranteed by diplomas certifying technical training, or both. They are *appointed* not elected;

vi. They are remunerated by fixed salaries in money, for the most part with a right to pensions. The salary scale is primarily graded according to rank in the hierarchy: but in addition to this criterion, the responsibility of the position and the requirements of the incumbent's social status may be taken into account;

vii. The office is treated as the sole, or at least the primary, occupation of the incumbent;

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viii.   It constitutes a career. There is a system of 'promotion' according to seniority or to achievement or both. Promotion is dependent on the judgement of superiors;

ix.   The official works entirely separated from ownership of the means of administration and without appropriation of his position; and finally,

x.   He or she is subject to strict and systematic discipline and control in the conduct of the office.

Weber (1947:21) argued that this type of organisation is in principle applicable with equal facility to a wide variety of different fields whether profit-making business or in charitable organisations, or in any number of other types of private enterprises serving ideal or material ends. Although the term "bureaucracy" is often used in a disparaging manner, Weber saw bureaucracy as the ultimate form of rational organisation for any large enterprise (Crowther & Green, 2004:19). Weber made an excellent contribution to the field of organisation theory. As Ott *et al*. (2011:36-37) observed, his analysis of bureaucracy, first published in 1922, remains the single most influential statement and the point of departure for all further analyses on organisation theory. Weber believed that his model could remove the ambiguity, inefficiencies, and patronage that characterised most organisations at that time (Robbins & DeCenzo, 2008:27).

While there is consensus amongst most scholars as indicated above, bureaucracy also had its downside which has to some extent resulted in it receiving more than its share of unfavourable publicity. Bedeian and Zammuto (1991:614-615) outlines the disadvantages of bureaucracy in the table below:

Table 2.2:   Disadvantages of bureaucracy

Bureaucratic rigidity	Extreme devotion to rules and other controls may lead to situations in which past decisions are blindly repeated without an appreciation of changed conditions. This can result in managers being compensated for doing what they are told – not for thinking.
Emphasis on subunit goals	While delegation of authority to lower levels may increase organisation effectiveness, it may also encourage an emphasis on subunit rather than overall organisational goals, thereby prompting subunit conflict and decreased effectiveness.
Working to rules	Meaning that what is not covered by the rules is by definition not an employee's responsibility – unless care is taken, such a situation may result in a vicious circle of bureaucracy wherein employees push for even more controls in order to further restrict management's power.

Source: Bedeian & Zammuto (1991)

Notwithstanding the criticism directed at Weber and his bureaucratic model, Weber played a significant role in the development of organisation theory. Weber was concerned about authority, structure and rational decision making and how this impact organisational effectiveness. Weber holds the view that standard rules and procedures will enhance organisational effectiveness. In line with this Daft *et al*. (2010:363) argue that organisational activities are performed in a predictable, routine manner. While Weber's principle of promotion based on the judgement of superiors may create opportunities for subjectivity as there may be no objective criteria upon which such decisions are made, his principle of selecting candidates on the basis of technical qualifications was essential in eliminating favouritism and nepotism. Daft *et al*. (2010:362) underscore this point when they argue that an important virtue of bureaucracy as Weber believed was its removal of personal patronage and discrimination as formalised recruitment and selection procedures increase the likelihood that employees are hired on the basis of their competence, not their skin colour, gender or personal connections.

This discourse shows that bureaucratic characteristics and principles that Weber advocates, largely revolves around standardisation of processes and systems and the separation of the position from the position holder as well as appointment of officials based on technical competence. These are fundamental for effective organisational functioning. Bureaucratic characteristics have many advantages and have generally worked well in advancing the industrial age (Daft *et al*., 2010:367).

2.6.1.8   Luther Gulick's notes on the theory of organisation

An analysis of writings and literature on COT will not be complete without a reflection on the contribution made by Luther Gulick (a Professor of Municipal Science and Administration at Columbia University) to this school of thought. According to Gulick (2011:83), the theory of organisation has to do with the structure of coordination imposed upon the work-division units of an enterprise. Gulick (2011:85) moves from the premise that if subdivision of work is inescapable, coordination becomes mandatory and goes further to outline two primary ways of achieving coordination based on experience as:

i.   By organisation, that is, by interrelating the subdivisions of work by allotting them to men who are placed in a structure of authority, so that the work may be coordinated by orders of superiors to subordinates, reaching from the top to the bottom of the entire enterprise; and

ii.   By the dominance of an idea, that is, the development of intelligent singleness of purpose in the minds and wills of those who are working together as a group, so that each worker will of his own accord fit his task into the whole with skill and enthusiasm.

In the words of Gulick (2011:85) "these two principles of coordination are not mutually exclusive, in fact, no enterprise is really effective without the extensive utilisation of both". Gulick also introduced the famous mnemonic, POSDCORB, which stood for the seven major functions of executive management- planning, organising, staffing, directing, coordinating, reporting and budgeting (Hatch, 2006:35; Ott *et al*., 2011:37; Shafritz *et al*., 2011:234). Gulick (2011:90) defines POSDCORB activities as follows:

i.   **P**lanning, that is working out in broad outline the things that need to be done and the methods for doing them to accomplish the purpose set for the enterprise;

ii.   **O**rganising, that is the establishment of the formal structure of authority through which work subdivisions are arranged, defined and coordinated for the defined objective;

iii.   **S**taffing, that is the whole personnel function of bringing in and training the staff and maintaining favourable conditions of work;

iv.   **D**irecting, that is the continuous task of making decisions and embodying them in specific and general orders and instructions and serving as the leader of the enterprise;

v.   **C**oordinating, that is the all-important duty of interrelating the various parts of the work;

vi.   **R**eporting, that is keeping those to whom the executive is responsible informed as to what is going on, which thus includes keeping himself and his subordinates informed through records, research, and inspection; and

vii.   **B**udgeting, with all that goes with budgeting in the form of fiscal planning, accounting and control.

Gulick's principles of administration also included unity of command and span of control (Ott *et al*., 2011:37). Gulick (2011:87) argued that from the earliest times it has been recognised that nothing but confusion arises under multiple command. According to Gulick (2011:87), the principle of "unity of command" may be stated as follows: A workman subject to orders from several superiors will be confused, inefficient, and irresponsible while a workman subject to orders from but one superior may be methodical, efficient, and responsible. As it has been indicated in preceding sections, span of control deals with the number of subordinates a supervisor can effectively supervise.

Gulick contributed significantly in the study of organisation theory through his analysis of management functions. Focussing efforts to analyse organisations only to management was regarded as narrow and increasingly challenged by the more humanistic approaches to management as illustrated below. While Gulick recognised the importance of division of labour, he was of the view that such division inevitably requires coordination for the organisation to achieve its goals. The seven major functions of executive management grouped under the popular mnemonic 'POSDCORB' encapsulates the core activities that must be undertaken by management in organisations. Chapters 5, 7 and 8 emphasise that the primary

mandate of disaster risk management centres is to coordinate multi-sectoral and multi-disciplinary initiatives that seek to reduce disaster risk. To this end, disaster risk management discourse and practice can benefit from Gulick's theory of organisation which places coordination at the heart of organisational activities. Moreover, his seven key functions of executive management provides a solid theoretical framework for the core duties of the national disaster management centre as discussed in both Chapters 6 and 8.

2.6.1.9   Criticism of Classical Organisation Theory

The mechanistic nature of COT has been criticised by most scholars. As Lundgren (1974:39) points out, the major faults of the COT lie in what it fails to say, in its lack of specificity, and its inability to handle the unanticipated consequences of having people in an organisation, who do not always act predictably, particularly in an organisation more voluntary in nature than church or army. Hodge and Anthony (1991:22) concur with this view and postulate that COT was a micro view based on task performance that held the human element virtually constant. While COT introduced several fundamental principles that underpins organisational theory to this day, scholars like Robbins and Barnwell (2002:42) have criticised it for treating the organisation as having machine-like properties. According to Kassem (1977:14), another attack on COT came from organisation theory scholars who were concerned with organisational goals. This school believes that goals are neither given nor are they singular but rather that they are multiple and often times conflicting (Kassem, 1977:14).

Roux *et al*. (1997:24) are of the view that if recent literature is taken into account, it becomes evident that authors tend to criticise COT negatively which is justifiable if the assumptions of classical authors are applied to contemporary institutions as such. However, if COT is analysed in terms of the times during which it was written, it becomes evident that positive results have been obtained in those cases where practical applications were made (Roux *et al*., 1997:24). Roux *et al*. (1997:24-25) identified the following points found to be specifically mentioned by recent authors who negatively criticise the COT:

i. The assumptions of COT contain *conflicting principles* and could therefore not always be empirically verified. In other words, the administrative and managerial theories were not tested under scientific conditions;

ii. *Faulty assumptions* are arrived at in respect of workers within an institution. With regard to structure, COT tend to ignore those factors which determine individual conduct, as well as those factors which form the motivational basis for individuals. In addition, COT tend to degrade the individual to a dependent, passive role player in institutions as a result of the undue emphasis on money, as well as on the maintenance of a formal structure as an incentive;

iii. Assumptions in respect of the task of organisational units are *unsatisfactory.* In other words, classical authors define the task and objective of institutions without taking into account the possible influence of environmental variables on such objectives;

iv. Too much emphasis is placed on *discipline* and *control.* Classical authors repeatedly attempt to force employees in these institutions to show their willingness by practising rigid discipline and control. This discipline was supported by rules and regulations.

In lamenting the preoccupation of the COT with the anatomy of the formal organisation, Scott (1961:9) and Hodge and Anthony (1991:21) noted that this school neglected the problems stemming from human interactions including the interplay of individual personality, informal groups, intra-organisational conflict, and the decision making processes in the formal structure. Hodge and Anthony (1991:22) share a similar view in their critique of this doctrine in that the focus was quite micro based on task performance that held the human element virtually constant. This point is underscored by Crowther and Green (2004:35) who argued that preceding rational and scientific approaches of COT which tended to assume that people all behaved in the same way and that organisations could therefore be programmed to the single best way of organising were problematic.

From the discussion above, it is clear that the development of organisation theory as a field of study was largely influenced fields such as engineering and sociology. In addition, it is also clear that the approach advocated by COT was rather mechanistic

and rests on the premise that organisations could function as closed entity without significant influence from its external environment. As Gibson (1966:238) and Robbins (1987:473) postulate, the early approaches to organisation theory conceived of organisations as mechanical devices to achieve goals. As Hodge and Anthony (1991:20) point out, COT was more micro than macro in that attention was centred on the organisation itself rather than on the relationship of the organisation to its environment. It also emerged that although most of the contributors to this school were theorists, significant contributions were also made by practitioners who drew their understanding of how organisations function from their own experience in managing organisations.

Notwithstanding the limitations of COT as outlined above, this school has laid the foundations upon which the field of organisation theory is built to this day. This view is supported by Roux *et al*. (1997:25) who argue that while COT has been criticised, it should be kept in mind that it (COT) provided an acceptable academic basis in many respects which contributed to the creation of a new approach to organisation theory during the second and third decades of this century (1900-1999). Scholars such as Hodge and Anthony (1991:22) regarded this as a narrow view of how organisations function and this resulted in the emergence of perspectives that were concerned about the role of human in organisations. This school was largely known as the Behavioural / Human Relations School [Neo Classical School] and is closely associated with the work of American organisational psychologists (such as Mayo, Roethlisberger and Dickson, and McGregor) as discussed below.

2.6.2   Neo-classical Organisation Theory

The term Neoclassical in the context of organisation theory is generally used to describe theoretical perspectives that revise and/ or is critical of COT- particularly for minimising issues related to the humanness of organisational members, the coordination needs among administrative units, the operation of internal-external organisational relations, and the processes used in decision making (Ott *et al*., 2011:92; Scott, 1961:10; Shafritz *et al., 2011:238). Writers and scholars of this doctrine gained reputation as organisation theorists by attacking the classical writers from the end of World War Two (WWII) through the 1950s (Ott *et al*., 2011:92). In spite of their frequent and vigorous attacks upon the classicalists, the neo

classicalists did not develop a body of theory that could adequately replace the COT (Ott *et al*., 2011:92).

According to Hodge and Anthony (1979:35), Lune (2010:58), Ott *et al*. (2011:92), Scott (1961:10) and Shafritz *et al*. (2011:238), the neoclassical school attempted to save COT by introducing modifications based upon research findings in the behavioural sciences. Commonly identified with the human relations movement, this school of thought takes the postulates of the COT, regarding the pillars of organisations as givens but further regard these postulates as modified by people, acting independently or within the context of the informal organisation (Scott, 1961:10). This view is echoed by Kieser (1994:611) who argued that the human relations school legitimised itself by pointing to the limited efficacy of technocratic and bureaucratic control mechanisms. In addition, the neoclassical approach includes a systematic treatment of the informal organisation, showing its influence on the formal structure (Scott, 1961:10).

2.6.2.1 *The influence of the Hawthorne experiments on organisation theory*

The neoclassical perspective was important for two reasons- firstly, this school initiated the theoretical movement away from the overly simplistic mechanistic view of COT and secondly, in the process of challenging the COT, the neoclassicalists raised issues and initiated theories that became central to the foundations of most of the schools that have followed (Shafritz *et al*., 2011:238). According to Crowther and Green (2004:35), the main theorist in the human relations school was Elton Mayo (1880-1949). The inspiration of the neoclassical school were the Hawthorne studies conducted by Fritz Roethlisberger and his colleagues at the Western Electric in the Hawthorne plant in Chicago with a series of experiments on illumination (Lune, 2010:54; Mayo, 1949:279; Roethlisberger, 2011:162; Scott, 1961:10). The purpose of the experiments was to find out the relation of the quality and quantity of illumination to the efficiency of industrial workers (Roethlisberger, 2011:162).

2.6.2.1.1 *Experiments in illumination*

In the first experiment, Mayo set up a control group and used for his research a group of women in the factory and found that however he varied the lighting, the

productivity of the women in both the research and the control group kept on rising (Pugh and Hickson 1996 cited by Crowther and Green, 2004:35). According to Lune (2010:54-55), the Hawthorne experiments allowed Mayo to first challenge, and then reject, the assumptions and principles of scientific management. As Roethlisberger (1941:163) points out, the illumination experiments provided a classic example of trying to deal with a human situation in nonhuman terms as these experiments had obtained no human data, they had been handling electric-light bulbs and plotting average output curves hence their results had no human significance.

2.6.2.1.2   *Relay assembly test room experiment*

The second experiment (known as the Relay Assembly Test Room) undertaken by Mayo's Industrial Research team under his direction involved a group of six women whose work was to assemble telephone relays who upon selection were subjected to various changes in their conditions of work, payment, rest pauses and refreshments (Crowther & Green, 2004:35). After undertaking a series of interviews with employees, Mayo came to the first important statement of his theory – that people's productivity was not determined by 'objective', scientific' factors, as had been claimed by Taylor but rather that it was emotional factors that were important to workers, such as communicating with them well, helping them become involved in the organisation and making them feel wanted and important (Pugh & Hickson 1996 cited by Crowther & Green, 2004:35).

2.6.2.1.3   *Bank Wiring Observation Room*

The third experiment done in a natural work situation (known as the 'Bank Wiring Observation Room') led by Roethlisberger and Dickson investigated the productivity of a number of male workers whose job it was to set up internal telephone exchanges in organisations. In this experiment, researchers investigated workers' productivity in a non-unionised and anti-union company, and found that there was an informal agreement among the workers as to what their productivity would be, and no financial incentives by the company would persuade them to deviate from their previously agreed standard. Roethlisberger and Dickson's explanation for the unwavering level of productivity was that a higher output was seen as a threat to jobs (Crowther & Green, 2004:35). From this came the second important precept of the

human relations school: the informal social workgroup was important in setting work norms and standards (Crowther & Green, 2004:35). These ideas have had and are still having an enormous influence on organisation theory and management practice as they have brought to the forefront the 'humanistic' aspects of work, the importance of workers' emotions and social groupings, and the importance of good communication between workers and management (Crowther & Green, 2004:37).

2.6.2.1.4   Findings of the Hawthorne experiments

The findings of the Hawthorne studies challenged the basic assumptions of earlier organisation theory, namely the social isolation of the worker and the primacy of economic incentives (Gibson, 1966:239). For these two assumptions, the human relations school substituted the view that man desires "first, a method of living in social relationship with other people, and, second, as part of this an economic function for and value to the group (Gibson, 1966:239). The Hawthorne studies also showed that things such as group interaction, participation, and effective communication have important effects upon morale and productivity (Hicks & Gullett, 1975:29). These conclusions led to a new emphasis on the human factor in the functioning of organisations and the attainment of their goals (Robbins & DeCenzo, 2008:30).

In reviewing the lessons learned from these experiments, Roethlisberger (1941:170) argued that the Western Electric researches seem like a beginning on the road back to sanity in employee relations because of the following:

i.   They offer a fruitful working hypothesis, a few simple and relatively clear ideas for the study and understanding of human situations in business;

ii.   They offer a simple method by means of which complex human problems in a business organisation can be explored and dealt with; and

iii. They throw light on the precondition for effective collaboration by indicating that collaboration is far more a matter of sentiment than a matter of logic and that workers are not isolated, unrelated individuals; they (workers) are social animals and should be treated as such.

The Hawthorne studies, however, have not been without critics as attacks have been made on procedures, analyses of the findings, and the conclusions drawn. According to Crowther and Green (2004:37), flaws that have been identified in Mayo's research revolves around poor research design, experiments not conducted rigorously with regard to the control group's conditions and output that in some cases depended on financial incentives. The second major criticism levelled against these experiments concerns the assumption of unitarist goals and interests between people at all levels within organisations which is disputed on moral grounds by radical theorists who are of the view that there are conflictual interests between management and the workforce (Crowther & Green, 2004:37-38).

Although the Hawthorne studies have been subjected to sometimes fierce criticism methodologically and ethically, they represented a crucial phase in the development of an empirically 'social scientific' approach to the understanding of organisational life (McAuley *et al*., 2007:122). These experiments also represent an important stage in the development of an organisation theory that is grounded in an understanding that action in organisations is based on the 'humanness of being'. This view is supported by Jaffee (2001:65) who argued that it is hard to imagine a single research project having as great an impact on a particular field as the Hawthorne experiments have had on organisation theory.

Flowing from the discussion above, it is clear that the Hawthorne experiments focussed on the contribution made by humans in organisations. As McAuley *et al*. (2007:117) points out, a key experience in the development of organisation theory as it is known today occurred during the period 1927-1932, when the experimental studies were conducted at the Hawthorne Works of the Western Electric Company in Chicago. As Ott *et al*. (2008:132) postulate, the Hawthorne experiments showed that complex, interactional variables make the difference in motivating people – things like attention paid to workers as individuals, workers' control over their own work, differences between individuals' needs, the willingness of managers to listen, group norms, and direct feedback.

2.6.2.2   Modifications of the pillars of the Classical Organisation Theory

In reviewing some of the neo-classicists' contributions to the organisation theory, Scott (1961:11) firstly looked at modifications of the pillars of COT. Secondly, Scott (1961:11) scrutinised the concept of informal organisation and identifies examples of the neo-classical approach that correspond with the pillars of formal organisation theory as follows:

i.   Division of labour: Very early in the history of industrial psychology, studies highlighted the effects of specialisation of work such as industrial fatigue and monotony. Later, attention shifted to the isolation of the worker, and his feeling of anonymity resulting from insignificant jobs which contributed negligibly to the final product;

ii.   Scalar and functional processes: The two aspects that dealt extensively with this, are the delegation of authority and responsibility, and the gaps in functional jurisdictions or the overlapping of functional jurisdictions;

iii.   Structure: The central theme for the neo-classicists is that human behaviour disrupts the best laid organisational plans, and thwarts the cleanness of the logical relationships founded in the structure; and

iv.   Span of control: Neo-classicists move from the premise that an executive's span of control is a function of human determinants and the reduction of span to a precise, universally applicable ratio would be meaningless. Some of the determinants of span are individual differences in managerial abilities, the type of people and functions supervised, and the extent of communication effectiveness.

2.6.2.3   The influence of the informal organisation on organisation theory

In the words of Scott (1961:12) "nothing more than the barest mention of the informal organisation is given in the most recent classical treaties on organisation theory and systematic discussion of this form of organisation has been left to the neo-classicists". The informal organisation refers to spontaneously formed groups of people who interact regularly for some identifiable purpose; distinct from formal

organisation (Fox & Meyer, 1996:63). According to Scott (1961:13), research has produced the following specific determinants underlying the appearance of informal organisations:

i. The *location* determinant simply states that in order to form into groups of any lasting nature, people have to have frequent face-to-face contact. Thus, the geography of physical location in a plant or office is an important factor in predicting who will be in what group;

ii. *Occupation* is the key factor determining the rise and composition of informal groups as there is a tendency for people performing similar jobs to group together;

iii. *Interests* are another determinant for informal group formation. Even though people might be in the same location, performing similar jobs, differences of interest among them explain why several small, instead of one large, informal organisations emerge; and

iv. *Special issues* often result in the formation of informal groups, but this determinant is set apart from the preceding three determinants as in this case, people who do not necessarily have similar interests, occupations, or locations may join together for a common cause. Once the issue is resolved, then the tendency is to revert to the more "natural" group forms.

Richard Scott and Peter Blau also contributed significantly to this school of thought when they assert that all organisations include both a formal and an informal element (Ott *et al*., 2011:198). According to them (Scott and Blau, 1962), in every organisation there arise informal organisations whose roots are embedded in the formal organisation itself and nurtured by the very formality of its arrangements. Ott *et al*. (2011:198) share a similar view when they argued that the informal organisation by its nature is rooted in the formal structure and supports its formal organisation by establishing norms for the operation of the organisation that cannot always be spelled out by rules and policies. Whereas the formal organisation is characterised by structure, organisational objectives, and relationships prescribed by management, the informal organisation tends to be loosely organised, flexible, and ill-defined. In

essence, informal organisation members have no defined or agreed-upon organisational goals (Hicks & Gullett, 1975:109).

The informal organisation refers to the emergent characteristics of the organisation that affect how the organisation operates and these include the organisation's culture, norms, and values; social networks inside and outside the organisation; power and politics; and the action of leaders (Scott & Davis, 2007:23). The term "informal organisation" does not refer to all types of emergent patterns of social life but only to those that evolve within the framework of a formally established organisation (Scott & Blau, 1962:209). According to Hicks and Gullett (1975:108-112), the informal organisation develops primarily to meet important human needs not being met by the formal organisation as outlined below:

i.   Satisfaction of social need;

ii.   Sense of belonging and identification;

iii.   Knowledge of approved behaviour;

iv.   Sympathetic ear;

v.   Assistance in meeting objectives;

vi.   Opportunities for influence and creativity;

vii.   Perpetuation of cultural values; and

viii. Communications and information.

In addition, Hicks and Gullett (1975:115-117) identify the significance of the informal organisation to the formal organisation as outlined below:

i.   Benefits of informal organisation;

ii.   Support of organisation goals;

iii.   Additional means of communications;

iv.   Means of social satisfaction; and

v.   Compensation for managers who lack in ability.

Although the informal organisation can contribute positively in the achievement of organisational goals, it also has drawbacks. Amongst some of the major difficulty that the informal organisation brings to the formal organisation is around the issue of rumours and resistance to change (Hicks & Gullett, 1975:117-118). The grapevine which is the informal organisation's means of communication is vulnerable for use in the spreading of information which is destructive, distorted, inaccurate, and incomplete – such items are called rumours and in general tend to be vivid in content, inaccurate representations of facts, emotional rather than logical in content (Hicks & Gullett, 1975:117). Resistance to change find expression in the perpetuation of cultural values in the sense that the informal organisation promotes those cultural values which it considers desirable. In essence, informal groups are bound by convention and custom, and those changes which appear to threaten their security will be opposed (Hicks & Gullett, 1975:118).

In view of the discussion presented above, it is clear that there are several factors that give rise to the existence of informal organisations in organisations. It is also clear that the informal organisation exists to meet important human needs that the (formal) organisation cannot meet. While the informal organisation can be harnessed to positively contribute to the achievement of organisational goals, it has been indicated that there are some significant drawbacks associated with the informal organisation. For example, while the former uses formal communication systems to communicate within the organisation, the latter uses the grapevine which although may be quick is vulnerable for use in the dissemination of distorted, destructive and inaccurate information in a manner that may sow disunity within the organisation. In view of this dysfunctional element of the informal organisation, Hicks and Gullett (1975:119) are of the view that in order to ensure that the formal and informal organisations exist compatibly, management must recognise and work with the informal organisation.

2.6.2.4   Herbert Simon's contribution to organisation theory

There are many theorists who contributed significantly to the neo-classical doctrine. According to Robbins (1987:482) and Shafritz *et al.* (2011:238), Herbert Simon was

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the most influential of the neoclassical organisation theorists. Simon was the first to seriously challenge the principles approach proposed by Fayol, Gulick and others (Shafritz *et al*., 2011:238). In his widely quoted 1946 Public Administration Review article "The Proverbs of Administration", Simon is devastating in his criticism of the classical approach to "general principles of management" as being inconsistent, conflicting, and inapplicable to many of the administrative situations facing managers (Ott *et al*., 2011:93). He argued persuasively that such "principles" as "span of control" and "unity of command" can, with equal logic, be applied in diametrically opposed ways to the same set of circumstances (Ott *et al*., 2011:93). Simon concluded that the so-called principles of administration are instead proverbs of administration and that many contradicted each other (Ott *et al*., 2011:93; Robbins, 1987:482).

Simon (1947:53) noted that while proverbs are useful in rationalising behaviour that has already taken place or justifying action that has already been decided upon, the situation is less happy when one seeks to use proverbs as the basis of scientific theory because a scientific theory should tell what is true but also what is false. According to Simon (1947:53), most propositions that make up the body of administrative theory today share, unfortunately, this defect of proverbs because for almost every principle one can find an equally plausible and acceptable contradictory principle. For example, with regard to the principle of specialisation, Simon (1947:54) argued that the simplicity of the principle of specialisation is a deceptive simplicity which conceals fundamental ambiguities as specialisation is not a condition of efficient administration but an inevitable characteristic of all group effort, however efficient or inefficient that effort may be. According to Shafritz *et al*. (2011:238), Simon wrote that organisation theory is in fact, the theory of the bounded rationality (the "bounds" that people put on their decisions) of human beings who satisfice (accept a satisfactory and sufficient amount of information on which to base a decision) because they do not have the intellectual capacity to maximise.

This view is supported by Foss (2003:245) who argued that Herbert Simon was the apostle of bounded rationality. As Bedeian and Zammuto (1991:524) point out, Simon advanced the view that organisational decisions, far from being completely rational, are bounded by the limited mental capacity and emotions of the individuals involved, as well as by environmental factors over which they may have no control.

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Simon was also a firm believer that decision making should be the focus of a new "administrative science" (Shafritz *et al.*, 2011:238).

According to Simon (1960:202), decision making comprises three principal phases: finding occasions for making a decision; finding possible courses of action, and choosing among courses of action. Simon went further to distinguish two polar types of decisions namely, programmed decisions and non-programmed decisions which are not really distinct types but part of a whole continuum (Simon, 1960:206). While decisions are programmed to the extent that they are repetitive and routine, to the extent that a definite procedure has been worked out for handling them so that they don't have to be treated *de novo* each time they occur, decisions are non-programmed to the extent that they are novel, unstructured and consequential and without cut-and-dried method for handling the problem because it hasn't arisen before, or because its precise nature and structure are elusive or complex, or because it is so important that it deserves a custom-tailored treatment (Simon, 1960:206).

While Simon emphasised the centrality of decision making in organisations, he was aware of the limits placed on decision making hence he identified four of the most common constraints as follows:

i.   Imperfect and incomplete information;

ii.   The complexity of the problem;

iii.   Human information-processing capacity; and

iv.   The time available for decision-making processes (Hatch, 1997:274) cited in (Denhardt *et al.*, 2009:197).

In view of the discussion above, it is clear that rigid adherence to principles of organisation has limitations as some principles contradict each other. It is also clear that while decision making forms a critical part of organisations, decision makers must recognise the bounds or limits that affect their decisions. It also emerged from the discussion that in essence, an organisation must have systems and processes in place to guide decision making in relation to routine and repetitive situations. In the

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same vein, it is also critical that organisations recognise that certain situations may be complex and as such may necessitate tailor-made decisions which may not necessarily be dealt with using a programmed decision making approach. From the discussion on factors that most commonly constrain decision making, it thus became clear that as decisions are made in organisations, management must reflect on how these factors affect decisions as well as mechanisms to reduce their negative impact on decision making. As indicated in preceding sections, organisations exist to achieve clearly defined goals or set of goals and requires that decisions are made on a day-to-day basis in pursuit of organisation goals. It is thus clear that without systems and processes for effective decisions making, the achievement of organisational goals will be greatly undermined.

2.6.2.5   Philip Selznick's foundations of the theory of organisation theory

One of the major themes of the neoclassical organisation theorists was that organisations did not and could not exist as self-contained islands isolated from their environment (Ott *et al*., 2011:93). Philip Selznick (sociologist) in his 1948 American Sociological Review article "Foundations of the Theory of Organisation" asserted that while it is possible to describe and design organisations in a purely rational manner, such efforts can never hope to cope with the non-rational aspects of organisational behaviour (Ott *et al*., 2011:94). In sharp contrast with the classical theorists, Selznick maintained that organisations were made up of individuals whose goals and aspirations might not necessarily coincide with the formal goals of the organisation- as opposed to consisting of just a number of positions for management control (Shafritz *et al*., 2011:238). Selznick (1948:120) argued that organisational behaviour remain indispensable to the continued existence of the system of coordination within an organisation and at the same time the source of friction, dilemma, doubt, and ruin.

According to Selznick (1948:120), organisation may be viewed from two standpoints (i.e. organisational system as an economy and as an adaptive social structure) which are analytically distinct but which are empirically united in the context of reciprocal consequences. Considered as an economy, organisation is a system of relationships which define the availability of scarce resources and which may be manipulated in terms of efficiency and effectiveness (Selznick, 1948:121). With regard to

organisations as cooperative systems, Selznick argued that the indivisibility of control and consent makes it necessary to view formal organisations as cooperative systems, widening the frame of reference of those concerned with the manipulation of organisational resources (Selznick, 1948:121).

Selznick (1948:121) also introduced the concept of delegation (as an organisational act, having to do with formal assignments to functions and powers) and observes that theoretically, delegation entails assignment of powers to roles or official positions whilst in fact, delegation necessarily involves concrete individuals who have interests and goals which do not always coincide with the goals of the formal system. A classic example is that of delegation to a subordinate who is also required to train his/ her own replacement. Gibson (1966:241-242) is of the view that while delegation has the positive effect of achieving organisational goals, it also has unintended consequences as it may result in departmentalisation and an increase in the bifurcation of interests among the subunits in the organisation.

Selznick (1948:126) is perhaps best known for his concept of "co-optation" which he defines as the process of absorbing new elements into the leadership or policy determining structure of an organisation as a means of averting threats to its stability or existence. According to Selznick (1948:127), formal authority may resort to co-optation under the following general conditions:

i.   When there exists a hiatus between consent and control, so that the legitimacy of the formal authority is called into question. Where control lacks an adequate measure of consent, it may revert to coercive measures or attempt somehow to win the consent of the governed and one means to achieve this is to co-opt elements (usually elements which in some way reflect the sentiment, or possess the confidence of the relevant mass or public) into the leadership or organisation in order to lend respectability or legitimacy to the organs of control thereby re-establishing the stability of formal authority; and

ii.   Co-optation may be a response to the pressure of specific centres of power. Under this condition, outside elements may be brought into the leadership or policy determining structure and be given a place as recognition of and concession to the resources they can independently command.

Flowing from the discourses above, it is clear that organisations must be able to recognise and reconcile the rational aspects and non-rational aspects of organisational behaviour. From the approach adopted by Selznick as outlined above, it is clear that managers in an organisation must recognise that at times, formal organisational goals and goals pursued by individuals within the organisation are antagonistic in nature. The net effect of this incompatibility of goals is that the ability of the organisation to achieve its goals can be undermined. It is also clear that since delegation of powers or functions involves individuals whose goals maybe inconsistent with formal organisational goals, it (delegation) must be approached with caution to minimise possible negative effects that maybe brought to the organisation due to the existence of such antagonism. In view of the antagonism and divergence of interests within an organisation, co-optation is used by those that holds power in an organisation to absorb and neutralise those elements that are challenging organisational authority and legitimacy thereby reducing organisational instability.

2.6.2.6   *Chester Barnard' theory of organisation and management*

According to Hodge and Anthony (1979:36), both Chester Barnard and Mary Parker Follett must be counted among the notables of the neoclassical or behavioural School. A contemporary and colleague of Mayo's, Chester Barnard, likewise championed the human approach to industrial management (Lune, 2010:65). Jaffee (2001:73) is of the view that Chester Barnard represents one of the most interesting, yet neglected, figures in the history of organisation theory. As Jaffee (2001:73) puts it, Barnard's contribution was unique since it combined practical experience in management and corporate affairs (President of New Jersey Bell Telephone Company) with a highly complex and sophisticated theory of organisation and human behaviour. Unlike Taylor and the scientific managers, who assumed away the human factor or reduced it to a mass of interchangeable parts, Barnard clearly saw the inherent conflict between the character of the individual and the rigidities of formal organisation (Jaffee, 2001:73)

According to Ott *et al*. (2011:93) in his famous book, *The Functions of the Executive,* Barnard sought to create a comprehensive theory of behaviour in organisations that was centred on the need for people in organisations to cooperate – to enlist others to

help accomplish tasks that individuals could not accomplish alone. As Jaffee (2001:74) points out, Barnard noted that organisations are constructed for particular purposes, but they employ individuals who may have widely divergent objectives and desires. Barnard (1938:97) argued that an essential element of organisations is the willingness of persons to contribute their individual efforts to the cooperative system. Barnard (1938:97) goes further to argue that in fact, the individual is always the basic strategic factor in organisation and regardless of his history or his obligations, he must be induced to cooperate, or there can be no cooperation.

Barnard (1938:98) postulates that the subject of incentives is fundamental in formal organisations and in conscious efforts to organise and categorised incentives into two, objective incentives (the method of incentives) and subjective incentives (the method of persuasion). Barnard (1938:98) further distinguish two classes of incentives: first those that are specific and can be specifically offered to an individual; and second, those that are general, not personal, that cannot be specifically offered. The specific inducements that may be offered are of several classes, for example:

i.   Material inducements: money, things, compensation for service, reward for contribution;

ii.   Personal non-material opportunities: opportunities for distinction, prestige;

iii. Desirable physical conditions; and

iv.   Ideal benefactions: pride of workmanship, sense of adequacy; altruistic service for family or others;

The General incentives that may be offered are categorised in several classes:

i.   Associated attractiveness, namely social compatibility;

ii.   Adaptations of conditions to habitual methods and attitudes;

iii. Opportunity for enlarged participation; and

iv.   Condition of communion, namely the solidarity, social integration, and social security,

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In view of the discussion above, it is clear that cooperation in organisations is not natural but rather an induced phenomenon that requires management's conscious and deliberate action. As Scott and Mitchell (1987:41) point out, Barnard argues that the willingness to cooperate is not an automatic response in organisations and management need to engage it in a conscious manner. At the heart of Barnard's argument is the recognition that the individual plays a central role in organisations and that all measures, including incentives, must be considered to induce the individual to cooperate. It is also clear that incentives are not only defined in monetary terms but that other forms of incentives can be used to encourage further collaboration. As Jaffee (2001:75) argues, Barnard recognised that people can still exercise discretion and choose not to collaborate.

2.6.2.7   *Marry Parker Follett's contribution to organisation theory*

While Barnard emphasised the importance of cooperation in organisations, Follett was concerned with how order should be given in an organisation. A political scientist, Follett was profoundly interested in the individual in the group and society – she described how, through democratic governance, we can fulfil our potential and in the process strengthen and develop the groups to which we belong (Graham *et al*., 1995:vii; Hatch, 2006:33). In 1926, Follett published a pioneering treatise on the situational or contingency approach to leadership, "*The Giving of Orders,*" in which she discusses how orders should be given in any organisation (Ott *et al*., 2011:151). Follett declared that to some men, the matter of giving orders seems a very simple affair; they expect to issue their own orders and have them obeyed without question (Follett, 1926:1).

Follett (1926:1) noted that shrewd common sense has shown business executives that the issuing of orders is surrounded by many difficulties, that in fact to demand an unquestioning obedience to orders not approved, not perhaps even understood, is bad business policy. According to Follett (1926:1), psychology shows that, not only that you cannot get people to do things most satisfactorily by ordering them or exhorting them; but also that even reasoning with them, even convincing them intellectually, may not be enough. Follett was of the view that arbitrary command

ignores one of the most fundamental facts of human nature, namely, the wish to govern one's own life (Urwick, 1949:20).

In addition, Follett (1926:2), maintains that the circumstances under which orders are given, may make all the difference in the world as to the response which you can get and an example is that a boy may respond differently to the same suggestion made by the teacher in the schoolroom and made by the teacher when they (the boy and the teacher) are taking a walk in the park. In essence, Follett argued for a participatory leadership style, whereby employees and employers cooperate to assess the situation and decide what should be done at that moment in that situation (Ott *et al*., 2011:151). This manner of giving orders facilitates better attitudes within an organisation because nobody is necessarily under another person but rather, all take their cues from the situation (Ott *et al*., 2011:151).

Follett identified the three disadvantages of issuing arbitrary orders or directions as firstly, the loss of possible contributions from those directed and secondly that such directions are apt to cause friction between workers and foremen. The third disadvantage which re regards as very serious concerns the fact that a man's pride in his work is a great asset for the business and that if a man is asked to do things in a manner which he thinks is not the best way, he will often lose interest in the result, he will be sure beforehand that his work is going to turn out badly (Urwick, 1949:21).

According to Hodge and Anthony (1991:23), Follett stressed the group principle in her works because she believed the group took precedence over the individual and that this emphasis would enable the individual to develop fully. In essence, as Hodge and Anthony (1991:23) point out, participation, cooperation, communication, coordination, and the sharing of authority were themes that characterised Follett's writing. Follett's ideas were, indeed, quite a departure from the basic foundations of the COT and her belief in the sharing of authority with subordinates was a clear break with the Classicists, as was her concern with the role and importance of the group (as opposed to the individual) (Hodge & Anthony, 1991:23).

In view of the discussion above, it is clear that the issuing of orders in organisations is a complex activity that requires the consideration of several factors impacting on the order. While it also became clear from the discussion above that an order must

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be clear and understandable if it is to be followed, it has also emerged that the circumstances under which an order is issued greatly influence how the person who is be ordered will react to such an order. It is also clear that participatory leadership style or approach may assist the organisation in dealing with the negative effects of issuing of orders. In addition, it became clear that since an order is issued to a person capable of logically thinking through how a situation must be dealt with, the dynamics of the situation must be taken into consideration as it dictates the intervention required to deal with the matter at hand.

2.6.2.8 Abraham Maslow's theory of human motivation and its influence on organisation theory

Another important contributor to this school is Abraham Maslow whose hierarchy of needs stands alongside the Hawthorne experiments and Douglas McGregor's Theory X and Theory Y as the points of departure for studying motivation in organisation (Hodge & Anthony, 1991:23; Ott *et al*., 2011:151). Maslow argued that physiological needs are usually taken as the starting point for motivation theory (Maslow, 1949:372). To illustrate his point, Maslow (1949:372) postulates that a person who is lacking food, safety, love, and esteem would most probably hunger for food more strongly than for anything else. If the physiological needs are relatively well gratified, then there emerges a new set of needs, which Maslow (1949:373) categorised roughly as the safety needs. The love needs find expression once both the physiological and safety needs are met and at this stage, the person will feel keenly, as never before, the absence of friends, or a sweetheart, or a wife, or children (Maslow, 1949:374). With regard to the esteem needs, Maslow (1949:374) is of the view that all in society (with a few pathological exceptions) have a need or desire for a stable, firmly based, (usually) high evaluation of themselves, for self-respect, or self-esteem, and for the esteem of others. Satisfaction of the self-esteem need leads to feelings of self-confidence, worth, strength, capability and adequacy of being useful and necessary in the world (Maslow, 1949:374).

The need for self-actualisation moves from the premise that even if all the above stated needs are satisfied, there may still often be expectation that a new discontent and restlessness will soon develop, unless the individual is doing what he is fitted for

– for example, a musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. In essence, what a man can be, he must be (Maslow, 1949:374). According to Gibson *et al*. (1994:142), after spending considerable effort attempting to define and clarify the major characteristics of the self-actualised person, Maslow identified the following as individual characteristics of self-actualised persons:

i.   The ability to perceive people and events accurately;

ii.   The ability to remove themselves from the normal turmoil of life;

iii.   The ability to derive personal satisfaction from their own personal development in doing something worthwhile;

iv.   The capacity to love and experience life in a very intense manner, and

v.   A high degree of creativity in their work.

Flowing from the above discussion, it is clear that in dealing with individuals, organisations must recognise the underlying factors that motivate human behaviour as outlined in the five-level need hierarchy above. While Maslow's theory of motivation contributed significantly to the field of organisation theory, it has also been a subject of fierce criticism. As Ott *et al*. (2011:152) observed, few empirical studies have supported it, and it oversimplifies the complex structure of human needs and motivations. This point is underscored by Gibson *et al*. (1994:142) who maintain that Maslow was subjective and biased in every procedure that he used. In fact, many of the living individuals whom he studied preferred to remain anonymous, making it impossible for other researchers to check the accuracy of his conclusions (Gibson *et al*., 1994:142). According to Gibson *et al*. (1994:142), Maslow's self-actualisation view is not realistic and shows little understanding of life when considering a working person, as people confined by a meagre education, routine jobs, or societal expectations are unlikely to approach a state of self-actualisation.

2.6.2.9 Douglas McGregor's Theory X and Theory Y's influence on organisation theory

Another of the major contributors to this school was Douglas McGregor whose ideas about human motivation were based on the proposition that a person's assumptions about others have a significant impact on the way that person behaves with respect to the others (Hodge & Anthony, 1979:37). According to Robbins and Barnwell (2002:44), one of the most often mentioned contributions from Type 2 theorists is McGregor's thesis that there are two distinct views of human beings: one basically negative - Theory X - and the other basically positive - Theory Y. McGregor, after reviewing the way managers dealt with employees, concluded that a manager's view of the nature of human beings is based on a certain grouping of assumptions and on the fact that he or she tends to mould his or her behaviour towards subordinates according to those assumptions (Robbins & Barnwell, 2002:44). According to McGregor (1957:183), the following three propositions underpins Theory X:

i. Management is responsible for organising the elements of productive enterprise-money, materials, equipment, people- in the interest of economic ends;

ii. With respect to people, this is a process of directing their efforts, motivating them, controlling their actions, modifying their behaviour to fit the needs of the organisation; and

iii. Without this active intervention by management, people would be passive -even resistant – to organisational needs. They must therefore be persuaded, rewarded, punished, controlled – their activities must be directed.

McGregor (1957:183) goes further and postulates that behind this conventional theory there are several additional beliefs – less explicit, but widespread:

i. The average man is by nature indolent – he works as little as possible;

ii. He lacks ambition, dislikes responsibility and prefers to be led;

iii. He is inherently self-centred, indifferent to organisational needs;

iv.   He is by nature resistant to change; and

v.   He is gullible, not very bright, the ready dupe of the charlatan and the demagogue.

In contrast to these negative views of human beings underpinning Theory X, Theory Y is based on the following principles:

i.   Management is responsible for organising the elements of productive enterprise-money, materials, equipment, and people in the interest of economic ends;

ii.   People are not by nature passive or resistant to organisational needs. This is only a result of experience in organisations;

iii.   The motivation, the potential for development, the capacity for assuming responsibility, the readiness to direct behaviour toward organisational goals are all present in people. Management does not put it there;

iv.   The essential task of management is to arrange organisational conditions and methods of operation so that people can achieve their own goals best by directing their own efforts toward organisational objectives.

According to Robbins and Barnwell (2002:45), the implications of McGregor's Theory X and Theory Y for organisational theory is that Theory Y assumptions/principles were preferable and that they should guide managers in the way they designed their organisations and motivated their employees. One reason for the popularity of McGregor's concepts among managers and administrators apparently lies in their simplicity – the notions of theory X and Y are uncompromisingly simple and easily grasped. While theory X and Y have contributed into understanding human behaviour and motivation, McGregor was criticised for over-simplification of the extreme complex nature of human beings in social organisations. It was believed that the manner in which it was done, has led to a false illusion of knowledge and understanding. This is referred to as the Theory Y- critique. This notion was then advanced by Theory X, which essentially postulates that most people fundamentally dislike work, responsibility. However, challenging experiences seems to widely

contradict this notion as accumulating evidence from empirical research on organisations continued to confirm (Lundstedt, 1972:330).

It is clear from the discussion above that McGregor was concerned about human motivation and its impact on organisational effectiveness. His Theory X is basically founded in the belief that active involvement of management is critical to harness the effort of the average worker in pursuit of organisational goals. In contrast to the Theory X, Theory Y recognises that the average worker is motivated to strive in pursuit of organisational goals and the duty of management is thus to create conditions necessary for the achievement of goals. However, it is important to note that McGregor's motivational theory, like that of Maslow and Herzberg, was largely founded on personal observations and beliefs (Carrell *et al.*, 1997:170). The neo-classical school played a very important role in the evolution of organisation theory (Ott *et al.*, 2011:95). Neo-classical writers provided the intellectual and empirical impetus to break the classicalists' simplistic, mechanically oriented, monopolistic dominance of the field (Ott *et al.*, 2011:95). Hodge and Anthony (1979:39) concurs with this observation and argue that the fundamental lesson for management from this school is that management cannot manipulate behaviour by assuming that money alone motivates man. Thus, scientific work methods should rather be added to the knowledge of individual and group behaviour. According to Scott (1961:15), the neo-classical school of organisation theory has been called bankrupt and criticism ranged from that "human relations is a tool for cynical puppeteering of people" to "human relations is nothing more than a trifling body of empirical and descriptive information".

2.6.2.10 *Criticism of the neoclassical school of organisation theory*

While the human relations school played a very important role in the evolution of organisation theory as its writers provided the intellectual and empirical impetus to break the classicalists, simplistic, mechanically oriented and monopolistic dominance of the COT, it has not escaped criticism (Ott *et al.*, 2011:95). The human relations doctrine has been faulted for the incompleteness of its approach as the school did not take the total set of functional relationships of the organisation into account (Hodge & Anthony, 1979:39). This view is underscored by Scott (1961:15) who is of

the view that like COT, the human relations school suffers from incompleteness, a short-sighted perspective, and lack of integration among the many facets of human behaviour studied by it.

Notwithstanding the criticism that has been directed to this school, it is safe to say as Hodge and Anthony (1979:39) observe, that the present understanding of organisation theory is in large measure a result of the work emanating from this school. Flowing from the discussion above, it thus become clear that the centrality of humans in organisational processes forms the foundation upon which the human relations school rests. With regard to the relevance of this school of thought to DRR, in Chapter 5, arguments are presented about the importance of mobilising a broad coalition of partners from village chiefs to government ministers in order to reduce disaster risks. Within the South African environment, this is given further impetus by the disaster risk management legislation which recognises active participation of all stakeholders, including all spheres of government, private sector, civil society organisations, technical experts and communities as essential to effectively reduce disaster risks in the country. To this end, thorough knowledge of theories that underpin the neo-classical school specifically on its notion of the centrality of humans within organisations (including disaster risk management organisations) is thus essential to understand the performance, functioning or lack thereof of these institutions.

By contrast to the COT (thesis) and the human relations theory (antithesis) Modern Organisation Theory adopted systems thinking/ analysis to examine their assertions about human behaviour in organisations (Kassem, 1977:12; Shafritz *et al*., 2011:241). The contributions of this school to the organisation theory is presented below.

2.6.3   MODERN ORGANISATION THEORY

The label "modern" is used to distinguish the more recent writers of structural organisation theory from the pre-World War II classical theorists such as Taylor and Weber (Ott *et al*., 2011:197; Shafritz *et al*., 2011:240). The tenets of Modern Organisation Theory (MOT) are similar to those of COT pioneered by Taylor, Fayol, Weber, Gulick and others, and rest on the premise that organisational efficiency is

the essence of organisational rationality, and the goal of rationality is to increase the production of wealth in terms of real goods and services (Ott *et al.*, 2011:197). The adoption of the systems approach for the study of organisations have a rich genealogy which can be traced back at least to the German philosopher Hegel (1770-1831) (Kast & Rosenzweig, 1972:448). According to Kast and Rosenzweig (1972:448), the momentum of systems thinking was identified by Scott in 1961 when he described the relationship between general systems theory and organisation theory.

According to Scott (1961:15), the distinctive qualities of MOT are its conceptual-analytical base, its reliance on empirical research data and, above all, its integrating nature. Scott (1961:15) goes further and argue that the qualities of MOT are framed in a philosophy which accepts the premise that the only meaningful way to study organisation is to study it as a system. Gibson (1966:242-243) echoes a similar view as he argues that an important feature of MOT is the systems approach which treats organisations as complex sets of mutually dependent and interacting variables which presents the opportunity to view the organisation as a totality.

MOT asks a range of interrelated questions which are not seriously considered by the two other theories. Key among these questions are: (1) what are the strategic parts of the system: (2) what is the nature of their mutual dependency? (3) what are the main processes in the system which link the parts together, and facilitate their adjustment to each other? (4) what are the goals sought by the systems? (Scott, 1961:16). Organisations have three goals (growth, stability and interaction) which may be either intermeshed or independent ends in themselves (Scott, 1961:20). According to Gibson (1966:243) and Scott (1961:20), MOT is on the periphery of general system theory and studies the following:

i.   The parts (individuals) in aggregates, and the movement of individuals into and out of the system;

ii. The interaction of individuals with the environment found in the system;

iii. The interactions among individuals in the system; and

iv. General growth and stability problems of systems.

While MOT and General System Theory (GST) are similar in that they look at organisation as an integrated whole, they differ in terms of their generality as GST is concerned with every level of system whereas MOT focuses primarily on human organisation (Scott, 1961:21). In the 1950s, Von Bertalanffy (a biologist) presented the outline of a theory intended to explain all scientific phenomena across both natural and social sciences from the atom and molecule, through the single cell, organ, and organism, all the way up to the levels of individual, group, and society (Hatch, 2006:37; Kassem, 1977:15). To understand the importance of systems thinking for organisation theory, it is necessary to grasp the concept of a system and its characteristics (Hatch, 2006:37). Kast and Rosenzweig, (1972:450) and Hatch, 2006:37) argued that a system by definition is composed of interrelated parts or elements. According to Shafritz *et al.* (2011:241), systems theory views an organisation as a complex set of dynamically intertwined and interconnected elements, including its inputs, processes, outputs, feedback loops, and the environment in which it operates and with which it continuously interacts
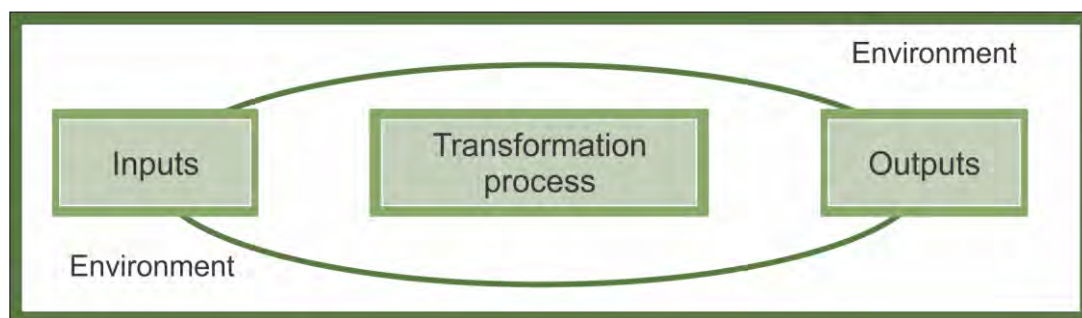
Figure 2.2:   Basic elements of a system (adapted from Gibson *et al.*, 1994)

Whereas classical organisation theory tends to be one-dimensional and somewhat simplistic, systems theories tend to be multidimensional and complex in their assumptions about organisational cause-and-effect relationships (Shafritz *et al.*, 2011:241). As Shafritz *et al.* (2011:242) point out, system thinking is critically important because the whole world, in essence, is a collection of interrelated systems- nothing happens in isolation.

Systems are classified typically as either closed or open (Hodge & Anthony, 1991:25; Robbins & Barnwell, 2002:11). While a closed system would be one that received no energy from an outside source and from which no energy was released into its

surroundings, an open system recognises the dynamic interaction of a system with its environment as indicated in Figure 2.2 above (Hodge & Anthony, 1991:25). According to Robbins and Barnwell (2002:11), no student of organisations could build much of a defence for viewing organisations as closed systems. Characteristics of an open system are outlined in the table below:

Table 2.3: **Characteristics of an open system**

Environmental awareness	The organisation consistently interacts with its environment
Feedback	The system adjusts to information from its environment
Cyclical character	The system consists of cycles of events
Tendency towards growth	Without active intervention, the system runs down or disintegrates
Steady state	There is an input or energy to counteract the winding-down properties
Movement towards growth and expansion	The more sophisticated the system, the more it is likely to grow and expand
Balance of maintenance and adaptive activities	To be effective the system must ensure that its subparts are in balance and that it maintains its ability to adapt to the environment
Equifinality	There are a number of ways to achieve the same objective

Source: Robbins (1987)

From the characteristics depicted in Table 2.3, it is clear that the ability to adapt to a changing environment is a vital feature of an open system. Building on this, the ensuing section examines the principle of equifinality which is one of the fundamental characteristic of the open system.

2.6.3.1 *The principle of equifinality*

Amongst the key characteristic of the open system as outlined in the table above is the concept of equifinality, a principle suggested by von Bertalanffy in 1940. According to this principle, a system can reach the same final state from differing initial conditions and by a variety of paths (Katz & Kahn, 1966:23). This view suggests that social organisations can accomplish their objectives with diverse inputs and with varying internal activities (conversion processes). As Coetzee and van

Niekerk (2012:80) observe, the state of equifinality is impossible to achieve within a closed system because the final state is unequivocally determined by the initial condition. According to Robbins and Barnwell (2002:15), one of the greatest limitations of the systems perspective is that it is an abstract concept which gives an observer viewing the organisation using this perspective a complex interaction of systems, subsystems and environments in a manner that creates an impression that everything depends on everything else.

With regard to the relevance of general systems theory to DRR discourse and practice, Becker (2009:3) maintain that disaster risk is a complex issue because it includes factors from all spheres of society and many of these factors are interdependent on each other. Against this background, general systems theory provides a useful framework for analysing various components or elements of a system and their relationships and this analysis is essential for effective DRR. From this discussion, it is also evident that from a general systems theory perspective, disaster risk management organisation are open systems that must consistently interface and adapt to their environments. General systems theory can also assist DRR practitioners to grasp the multi-dimensional nature of vulnerability to hazards within a particular community. As shown in Chapter 4, various factors exacerbates vulnerability of South Africans to hazards and knowledge of general systems theory can assist disaster risk managers in the development of strategies to reduce disaster risks.

Flowing from the discourses above, Ott *et al*. (2011:197) and Shafritz *et al*. (2011:240) are of the view that MOT is also concerned with vertical differentiations-hierarchical levels of organisational authority and coordination, and horizontal differentiations between organisational units - such as those between product or service lines, geographic areas, or skills. According to these authors, the organisation chart is the ever-present tool of a structural organisation theorist.

2.6.3.2   *Burns and Stalker's theory of mechanistic and organic systems of organisation*

A famous example of structural organisation theory in action was provided by two British researchers: Tom Burns and G.M. Stalker of the Tavistock Institute in London

(widely acknowledged as the birthplace of the "sociotechnical approach" to organisations) who developed a widely cited theory of "mechanistic" and "organic systems" of organisation, while examining rapid technological change in the British and Scottish electronics industry (Bedeian & Zammuto, 1991:323; Ott *et al*., 2011:197; Shafritz *et al*., 2011:241).

While a mechanistic management system is appropriate to stable conditions, organic management system is appropriate to changing conditions which give rise constantly to fresh problems and unforeseen requirements for action which cannot be broken down or distributed automatically arising from the functional roles defined within a hierarchic structure (Burns & Stalker, 1961:119). According to Burns and Stalker (1961:119), a mechanistic management system is characterised by (notably):

i. The specialised differentiation of functional tasks into which the problems and tasks facing the concern as a whole are broken down;

ii. The abstract nature of each individual task, which is pursued with techniques and purposes more or less distinct from those of the concern as a whole;

iii. The precise definition of rights and obligations and technical methods attached to each functional whole;

iv. Hierarchic structure of control, authority, and communication;

v. A tendency for interaction between members of the concern to be vertical, i.e. between superior and subordinate;

vi. A tendency for operations and working behaviour to be governed by the instructions and decisions issued by superiors; and

vii. Insistence on loyalty to the concern and obedience to superiors as a condition of membership.

In contrast with the mechanistic system, organic management system is characterised by (notably):

i. The contributive nature of special knowledge and experience to the common task of the concern;

ii.   The realistic nature of the individual task, which is seen as set by the total situation of the concern;

iii.   The adjustment and continual redefinition of individual tasks through interaction with others;

iv.   A network structure of control, authority, and communication; and

v.   Commitment to the concern's task and to the technological ethos of material progress and expansion is more highly valued than loyalty and obedience (Burns & Stalker, 1961:120).

Walker and Lorsch are also some of the major contributors to MOT and in their 1968 Harvard Business Review article, they grappled with one of the perennial questions facing those who will design organisations: should an organisation be structured according to product or function? Should all specialists in a given function be grouped under a common boss, regardless of differences in product they are involved in, or should the various functional specialists working on a single product be grouped together under the same superior? (Ott *et al*., 2011:198-199).

2.6.3.3   *Henry Mintzberg's contribution to organisation theory*

Without question, Henry Mintzberg is one of the most widely respected management and organisation theorists in the second half of the 20th century and the early years of the 21st century (Ott *et al*., 2011:198-199). In his 1979 book *The Structuring of Organisations* Henry Mintzberg sought to create a model of organisations with five interdependent parts: the strategic apex, the middle line, the operating core, the techno-structure, and the support staff (Ott *et al*., 2011:198-199):
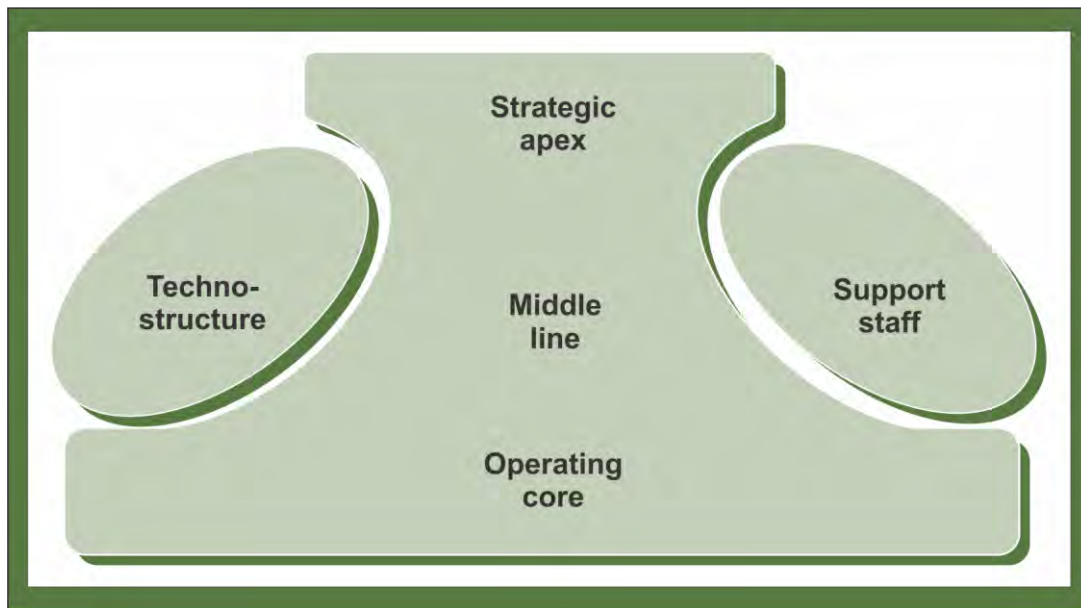
Figure 2.3: Five basic parts of an organisation (adapted from Mintzberg, 1979)

While there is no universally agreed-on framework for classifying organisations, Henry Mintzberg's work is the one that is most widely used (Robbins & Barnwell, 2002:111). Mintzberg argues that there are five basic parts to any organisation as shown in Figure 2.3 and are defined as follows:

i.   The operating core encompasses those members, the operators, who perform the basic work related directly to the production of products and services;

ii. The strategic apex are the people with overall responsibility for the organisation, namely the chief executive officer, and any other top-level managers with a global concern;

iii. The middle line is of an organisation and encompasses managers that connect the operating core to the strategic apex;

iv. The techno-structure forms part of an organisation and encompasses analysts who have the responsibility to set standardisations in the organisation; and

v.   The support staff which is the part of an organisation that encompasses people who fill the staff units that provide indirect support services for the organisation.

From the Figure 2.3 outlining the five basic parts of organisations according to Mintzberg, it is clear that for the organisation to function effectively and achieve its goals, the five parts of the organisation must be able to work together in harmony. It is also clear that while the strategic apex plays a critical role in setting the agenda for the organisation, the middle line also plays a vital role as it links strategic direction with operations. See Chapter 3 for a discussion on levels of strategy and how it relates to Mintzberg's five basic parts of an organisation. With regard to DRR practice and discourse, understanding Mintzberg's five basic parts of an organisation and how they contribute to effective and optimal functioning of an organisation is important. As noted in Chapter 8, weak participation in disaster risk management forums by functionaries operating at strategic apex level has been identified as one of the key challenges that undermine effective implementation of DRR programmes in South Africa.

2.6.3.4 Technology as a contingency factor

Burton and Obel 's focus on Technology as a Contingency Factor also dealt with important set of issues- the effects that various dimensions of technology have on organisation design (Ott *et al.*, 2011:198-199). Burton and Obel consider technology's effect on formalisation, centralisation, complexity, configuration, coordination and control, and incentives (Burton & Obel, 1998:224). With regard to technology effects on formalisation, Burton and Obel (1998:224) argue that the more routine the technology, the more the activities are predictable, with few exceptions that are easy to resolve and less information needs to be processed. According to Perrow, 1967, (cited by Burton and Obel, 1998:224), high routineness necessitates the establishment of rules and a programme to regulate and coordinate the work. With regard to technology effects on centralisation, Burton and Obel (1998:225) identified two propositions, firstly, that if technology routineness is high and the size of the organisation is small, then centralisation is high, and secondly, that if the organisation is large and technology routineness is high, then centralisation should be medium.

In terms of technology effects on organisational complexity, the argument is that large organisations can better specialise and, therefore, use the routine technology to

create experts for each speciality resulting in increased horizontal differentiation (Burton & Obel, 1998:226). Technology also affects the configuration in many ways. Burton and Obel (1998:227) argue that if the technology type is unit, then it is more likely that the organisation has a matrix configuration – the reason for this is that it may be needed to assign experienced and skilled personnel from one production unit to the next. The last factor deals with the technology effects on coordination and control mechanisms and essentially rests on two propositions as outlined below:

i.   If the size of the organisation is not small and if the technology is routine, then coordination and control should be obtained via rules and planning, and a media with low richness and a small amount of information can be used. Incentives should be based on procedures; and

ii.   If the technology is non-routine, then coordination should be obtained via group meetings, and media with high richness and a large amount of information should be used. Incentives should be based on results.

Flowing from the above discourse, it is clear that the effects of technology in organisations manifest in various ways. It also emerged that technology significantly influence how organisations are designed and configured. The impact of technology on organisations will be discussed further in the sections to follow. Having outlined the assumptions, tenets and philosophical basis of the three dominant schools in the field of organisation theory, the next section draws the reader's attention to the various components of organisation theory.

2.7   MAJOR COMPONENTS OF ORGANISATION THEORY

As stated by Hodge and Anthony (1991:9-10), it is important to examine the various parts or components of organisation theory both individually and collectively to understand its broad scope and to establish proper perspective of the theory. These major components are illustrated in Figure 2.4 below:

Figure 2.4: The major components of Organisation Theory (adapted from Hodge & Anthony, 1991)

2.7.1   Boundary and Environment

The environment is the total set of outside forces surrounding and shaping the behaviour of the organisation and its members (Hall 1972 cited in Nightingale & Toulouse, 1977:265; Hodge & Anthony, 1991:76-77). Bedeian and Zammuto (1991:319), Hall (2002:204-211), Hatch (2006:68-72), Hodge and Anthony (1979:78) and Nightingale and Toulouse (1977:265) identify the components of the organisation's general environmental components as illustrated in Figure 2.5 and briefly discussed below:

Figure 2.5: General environmental factors (adapted from Hatch, 2006)

2.7.1.1 Cultural sector

Hodge and Anthony (1979:94) show that every society develops its own culture over time, and continues that this culture determines how its members behave and interact with each other. Concern with the cultural sector revolves around issues such as history, traditions, and normative expectations for behaviour, beliefs and values (Hatch, 2002:68; Hodge & Anthony, 1979:94). Culture is dynamic, even in a single local setting and changes in values and norms relevant to the organisation requires that the organisation makes significant adjustments (Hall, 2002:210). The culture-organisation relationship is not a one-way street, as organisations are also capable of transfusing some of its values, norms, and behaviour patterns into its macro environment (Hall, 2002:210; Hodge & Anthony, 1979:97).

2.7.1.2 Social sector

The social sector of the environment is associated with class structure, demographics, mobility patterns, life styles, social movements and traditional social institutions including educational systems, religious practices, trades and professions (Hatch, 2006:68). Hatch (2006:68) goes further to provide an example (based on

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studies in the US and Western Europe) of how aging populations, increasing workforce diversity and professionalization of many types of work, including management, are all examples of recent trends in the social sector surrounding organisations that do business in those parts of the world.

2.7.1.3   Legal sector

The legal sector finds its definition in constitutions and laws of the nations in which the organisation conducts its business, as well as legal practices in each of these domains (Hatch, 2006:69). Hall (2002:206) shares a similar view when he observes that at the very least, legal mandates set many of the operating conditions of organisations, ranging from specific prohibitions of certain kinds of behaviour to regulations requiring the periodic reporting of income and staffing. Although factors from the legal sector directly impact organisations, Champagne *et al*. as cited in Hall (2002:206) argue that organisations are also important actors in the development of laws and regulations through their lobbying efforts.

2.7.1.4   Political sector

The political sector is usually described in terms of the distribution and concentration of power and the nature of political systems (e.g., democratic vs. autocratic) in those areas of the world in which the organisation operates (Hatch, 2006:70). Hodge and Anthony (1979:97) agree that the political system, i.e., government and political processes, is an important variable in managerial decision making in virtually all aspects of activity. Although political factors in a relatively stable environment will significantly affect organisations, the effect of these factors will be hardly gentle during a political revolution similar to the collapse of the former East Germany which had ramifications for almost all organisations (Hall, 2002:207). Although political factors complicate managerial operations, at the same time it makes it easier as managers know that all similar organisations must observe the same rules and regulations and thus can experience an element of certainty in their activity and performance (Hodge & Anthony, 1979:97).

2.7.1.5   Economic sector

Hodge and Anthony (1979:97) postulate that organisations exist within some form of economic system that exerts a tremendous influence on how they behave. In the words of Hall (2006:208) "changing economic conditions serve as important constraints on any organisation". Hatch (2006:70) confirms that this sector comprises of labour, financial markets and markets for goods and services. The following examples are identified, namely economic conditions generally found in economic sector analyses, the balance of payments; hard currency issues; economic alliances with other countries; trade agreements; price controls; access to raw materials markets; interest and inflation rates; price indexes; unemployment rates and investment risk. This sector significantly impacts on organisational activities. As Hodge and Anthony (1979:101) argued, ignorance of economics will surely bring about the calibre of decisions that will lead to disaster sooner or later.

2.7.1.6   Physical sector

According to Hatch (2006:71), the physical sector includes natural resources and the effects of nature and examples of general conditions and trends worth watching in this sector includes changing weather patterns (e.g. global warming), the disappearance of the rain forests, and disasters such as drought, earthquake, flood, famine and volcanic activity. Hatch (2006:71) goes further to argue that changes in this sector are extremely difficult to predict except for the case of dwindling natural resources.

2.7.1.7   Technology sector

Every organisation employs technology to some extent, whether that organisation is a small social club that uses a typewriter to send out notices of monthly meetings or a highly complex industrial plant that relies on sophisticated data processing equipment to control its assembly lines (Hodge & Anthony, 1979:101). It is clear from the discussion on these macro-environmental factors that for an organisation to survive, it should consider all factors emanating from the various sectors of the environment. It is also clear that the impacts of these environmental sectors will vary based on the activities that the organisation is involved in and that the organisation

activities also impact on its environment. For example, whilst factors such as global warming, changing weather patterns, and disasters may impact negatively on an organisation, the organisation must also reflect on its own activities' impact on greenhouse gases, global warming and environmental degradation. To put it differently, the organisation (in its scope of operations) must reflect on its activities' impact on the environment's vulnerability to disasters. For Hodge and Anthony (1991:77), the message for organisation theory is clear: A contemporary view of organisations must assume that they are open systems interacting with their environment.

With regard to boundary issues, Hodge and Anthony (1991:11) hold the view that it is important to maintain harmony between the organisation and the environment. In this regard, the organisation must carefully define and maintain a means of gathering the necessary inputs for effective decision making and implementation to decide on the making and implementation organisation outputs. This system is known as the boundary network. As Hodge and Anthony (1991:11) point out, within the boundary network, it is necessary to establish sensors to monitor change and trends. Daft *et al*. (2010:151) state that the traditional approach to cope with environmental uncertainty was to establish departments or roles to buffer or absorb its effects upon the 'technical core' of organisations. Hatch (2006:65) confirms that buffering involves protecting the internal operations of the organisation from interruption by environmental shocks such as material, labour, or capital shortages. In essence, buffering frees those working in production centres from concerns that might distract them from efficiently performing their work (Hatch, 2006:65). The discussion on the general environmental factors provides a useful theoretical framework to understand vulnerability to natural and anthropogenic hazards which is closely related and influenced by cultural, political, economic, social and physical factors within a particular community.

2.7.2   Information processing and choices

Information is the livelihood of the organisation. It links the organisation to its environment and it is the oil that lubricates the internal operations (Hodge & Anthony, 1991:167). Organisations are great information processors as they gather, analyse, synthesise, and interpret information from their environment for their own use and for

return to the environment (Hodge & Anthony, 1991:144). In order for the organisation to stay abreast of developments in its surrounding environment, the organisation must scan the environment on an on-going basis to understand important trends and patterns relevant to the organisation. In view of this, it is critical that such scanning of the environment is based on reliable and accurate information. Hodge and Anthony (1991:144) identify six primary characteristics of information that make it valuable to the organisation namely relevance; quality; quantity; timeliness; accessibility, and symbolism.

2.7.3   Adaptation and change

As stated by Hodge and Anthony (1991:11), today's organisation exists in a turbulent environment characterised by what has been termed by some as discontinuous change. If it is to survive and prosper, the organisation must be capable of adjusting all its component parts to accommodate this change (Hodge & Anthony, 1991:11). It is critical that organisations must adopt a philosophy and strategy to support the processes of adaptation and change as in the absence of these conditions, decay, deterioration, and eventual demise await the unsuspecting organisation (Hodge & Anthony, 1979:16). Hodge and Anthony (1991:12) confirm that organisations must essentially adapt to the changing requirements and opportunities in their environment.

2.7.4   Goals

An organisation is, by definition, created deliberately to achieve one or more specified goals (Hodge & Anthony, 1991:12; Robbins, 1987:31). The goal-attainment approach assumes that organisations are deliberate, rational, goal-seeking entities (Robbins, 1987:31). As Bedeian and Zammuto (1991:25) argue, goals are an essential part of everyday language of organisations and a cornerstone of traditional organisation theory. According to Bedeian and Zammuto (1991:26), organisational goals are those ends that an organisation seeks to achieve by its existence and operation. It is therefore imperative that organisational goals are defined and communicated to all members of organisation as rules usually always affect all members of an organisation. Hodge and Anthony (1991:263-268) identified several techniques or methods that can be used to set organisational goals in Table 2.4:

Table 2.4: **Goal setting techniques**

Conflict	Conflict can provide the impetus for the type of interaction that brings out the factors affecting the goals of all parties;
Compromise	This occurs when managers set goals that are quite ambitious in their initial form in order to establish a base for compromise as well as for an increased share of resources;
Co-optation	This occurs when an organisation becomes a member of a larger organisation wherein goals are set in accordance with guidelines furnished by the parent / larger organisation;
Goal displacement	This occurs when an original goal is given a different place in the hierarchy or is substituted by some other goal that the organisation did not originally deem as important.

Source: Hodge & Anthony (1991)

Having defined what organisational goals are and outlined the techniques for setting goals, it is important to also briefly describe the benefits of organisational goals. As Bedeian and Zammuto (1991:30-33) note, goals provide several important benefits that vary according to time and circumstances as summarised below:

i.   Guidelines for action: Goals prescribe focus and direction for employees by prescribing what should be done, provide parameters for strategic planning and resource allocation;

ii.   Constraints: The same extent that goals prescribe rules to follow, it also set down restrictions and limitations;

iii. Source of legitimacy: Goals also serve as a source of legitimacy by justifying an organisation's activities to such stakeholder groups as customers, politicians, employees, owners, and society at large;

iv.   Standards of performance: Goals offer direct standards for evaluating an organisation's performance to the extent that they are clearly stated and understood;

v.   Source of motivation: An organisation's goals can also serve as an important source of employee motivation; and

vi.   Rationale for organising: Organisational goals and organisation structure interact in that the actions necessary for goal accomplishment may impose

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unavoidable restrictions on employee activities and resource utilisation patterns, necessitating implementation of a variety of organisation design elements.

2.7.5 Work

Once the goal structure of an organisation is established, it is time for the members to decide on the type of work that will be necessary to accomplish these goals effectively (Hodge & Anthony, 1991:13). Scott and Davis (2007:21), describe the tasks that the organisation needs to accomplish as the goals that were set. Basically, as Hodge and Anthony (1991:13) point out, any organisation must perform two fundamental types of work: primary it will be the actual production and distribution of goods and services and secondary it will be the support and/or extension of the operations or functions of the primary work. The primary function can also be referred to as line work while the secondary function can be referred to as staff work. A sound theory of organisations, should then enable both the manager and student of organisations to understand these relationships and how they fit the goal structure if they are to be successful in predicting and controlling the organisational behaviour (Hodge & Anthony, 1979:9).

2.7.6 Organisation Design

Organisational design refers to managerial decision making that determines the structure and processes that coordinate and control the jobs of the organisation (Gibson *et al.*, 1994:537). According to Hatch (2006:322), organisation design is a fundamental concern for managers because it provides the basis for the coordination of organisational work and activities. Hodge and Anthony (1979:240) are of opinion that organisations should be designed in order to carry out the work necessary to achieve the organisation's goals and objectives. In other words, the goals of the organisation should dictate the way in which organisations manage and put themselves in order.

According to Gibson *et al.* (1994:537), there are two general models of organisation design: the mechanistic and the organic models. Henri Fayol proposed a number of principles. Some deal with the management function of organising. Four of these principles are relevant for understanding the mechanistic model and include the principle of:

i.   Specialisation: Fayol states that specialisation is the best means for making use of individuals and groups of individuals;

ii.   Unity of direction: Jobs should be grouped according to speciality, i.e. engineers with engineers, sales people with sales people and accountants with accountants;

iii.   Authority and responsibility: Fayol believes that a manager should have sufficient authority to carry out his or her assigned responsibility; and

iv.   Scalar chain principles: This is the route for the vertical communication in an organisation (Gibson *et al*., 1994:537-538).

According to Gibson *et al*. (1994:542), the organic model of organisational design stands up in sharp contrast to the mechanistic model due to their different organisational characteristics and practices. While the mechanistic model seeks to maximise efficiency and production, the organic model seeks to maximise satisfaction, flexibility, and development (Gibson *et al*., 1994:542). An organisational design that provides individuals with this sense of personal worth and motivation and that facilitates satisfaction, flexibility, and development would have the following characteristics, that it will be relatively:

i.   Simple because of its emphasis on increasing job range;

ii.   Decentralised because of its emphasis on delegation of authority and the increase job depth; and

iii.   Informal because of its emphasis on product and customer as bases for departments (Gibson *et al*., 1994:542).

2.7.7   Size and Complexity

Organisation size is a contextual variable that influences organisation design and functioning. Other contextual variables include technology, environment and goals (Daft *et al*., 2010:351). Daft *et al*. (2010:365) extend his argument to include that in the field of organisation theory, organisation size influences structural design and methods of control. As the organisation grows and develops, it becomes more

complex and formalised with written procedures, policies and rules that replace the unwritten, Standard Operating Procedures.

2.7.8 Technology

Technology is defined as the knowledge, tools, techniques, processes and behaviours used to transform organisational inputs into organisational outputs (Bedeian & Zammuto, 1991:192; Daft & Steers, 1986:251; Hatch, 2006:141; Jaffee, 2001:3; Robbins, 1987:125; Robbins & Barnwell, 2002:201; Scott & Davis, 2007:21-22). Charles Perrow defined technology as the action that an individual performs upon an object, with or without the aid of tools or mechanical devices, in order to make some changes in that object (Robbins & Barnwell, 2002:201). There is however agreement that the concept of technology, despite its mechanical or manufacturing connotation, is applicable to all types and kinds of organisations (Robbins, 1987:125). Regardless of whether the organisation is a manufacturing firm, a bank, a hospital, a social service agency, a research laboratory, a newspaper, or a military squadron, it will use technology of some sort to produce its product or service (Robbins, 1987:125).

According to Hicks and Gullett (1975:95), the technology an organisation uses to provide its product or service is dependent upon a number of factors:

i.   State of technological development;

ii.   Nature of product or service itself. Some products can most efficiently be produced by assembly line technology while others require specialised technology;

iii.   Cost involved in the use of technology; and

iv.   Impact of the organisation's goals on technology, i.e. the differences in technologies that reflect the differences in organisational goals.

2.7.9 Culture

Culture has become a legitimate concern and part of the basic conceptual toolkit in much of contemporary organisation theory (Morrill, 2008:15). Organisational culture

is the set of values, norms, guiding beliefs and understandings that is shared by members of an organisation and is taught to new members (Daft *et al.*, 399). According to Ott *et al.* (2011:338), culture is to the organisation what personality is to the individual- a hidden, yet unifying theme that provides meaning, direction, and mobilisation. In essence, as Carrell *et al.* (1997:569) points out, organisational culture is a set of key characteristics that describe the essence of an organisation. The critical characteristics that define an organisation's culture have been identified as:

i.   *Values*, namely the dominant values that an organisation has adopted;

ii.   The *philosophy* that guides an organisation's policies towards its employees; and customers;

iii.   *Norms* of behaviour that evolve in working groups;

iv.   *Politics, namely* the rules of the game for getting along in the organisation;

v.   The *climate* of work which is conveyed by the physical layout and the way people interact;

vi.   *Behaviours* of people when they interact such as the language and demeanour which is the social interaction (Carrell *et al.*, 1997:569; Denhardt *et al.*, 2009:178-79).

Flowing from the discussion above, it is clear that organisation culture plays a key role in engendering a sense of identity amongst individuals within an organisation. It is also clear that conscious and sustained efforts that management lead, is required to ensure that members of an organisation, especially new members, are aware of various organisational culture aspects in an organisation.

2.7.10   Power and Authority

American political scientist Robert Dahl offered this widely cited definition of power: "A has power over B to the extent that he can get B to do something that B would not otherwise do" (Gibson *et al.*, 1994:369; Hatch, 2006:254). Daft and Steers (1986:476) and Fox and Meyer (1995:99) agree with this definition and point out that power is the ability of one person or group to secure compliance from another person or group. Power is an intangible force in organisations and although it cannot be

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seen, its effects can be felt (Daft *et al*., 2010:542). In line with Hodge and Anthony (1979:10), no theory of organisations would be complete without a treatment of the roles that power and authority play in organisational activity. Hall (2002:106) concurs with this observation when he notes that organisations and power are synonymous in many ways as after all, organisations are powerful tools of the powerful when we think of organisational outcomes.

According to Hodge and Anthony (1979:306), influence based on power is rooted in several possible bases or sources. Daft *et al*. (2010:543), Daft and Steers (1986:477-478), French and Raven (1959:348-352), Gibson *et al*. (1994:370-371), Hall (2002:111) and Hodge and Anthony (1979:306) identify five sources of personal power which either individuals or organisations could execute:

i.   Legitimate power is the authority that the organisation grants to the formal management position that a manager holds;

ii.   Reward power stems from the ability to bestow rewards such as promotion, raise or a pat on the back to other people;

iii.   Coercive power refers to the authority to punish or recommend punishment;

iv.   Expert power derives from a person's greater skill or knowledge about the tasks being performed, and

v.   Referent power derives from personal characteristics wherein people admire the manager and want to be like the manager or identify with the manager as a result of respect and admiration.

Power is the ability to influence others successfully. Authority can be defined as power that an organisation had officially recognised (Hodge & Anthony, 1979:10). The concept of formal authority is related to power, however more narrow in scope (Daft *et al*., 2010:543; Gibson *et al*., 1994:370; Hicks & Gullett, 1975:73). Authority is a form of legitimate power that all employees can possess in one form or other (Hodge & Anthony, 1979:10). Authority is also a force for achieving desired outcomes, but only as the formal hierarchy and reporting relationships have prescribed. Authority can be identified by the following three properties:

i. Authority is vested in organisational positions- people have authority because of the positions they hold, not because of personal characteristics or resources;

ii. Authority is accepted by subordinates- subordinates comply because they believe position holders have a legitimate right to exercise authority; and

iii. Authority flows down the vertical hierarchy- authority exists along the formal chain of command and positions at the top of the hierarchy are vested with more formal authority than are positions at the bottom (Daft *et al*., 2010:543; Gibson *et al*., 1994:370).

Flowing from the discussion above, it is clear that a discussion of organisation theory cannot be complete without a reflection on the role of power and authority in organisation. It also emerged that since an organisation exists essentially to perform work necessary to achieve goals, understanding of how power and authority manifests in organisations is therefore essential. It is also clear that while power has various sources in an organisation, authority is in essence vested in formal position.

Together with chapters 3 and 9, this chapter addresses the first objective of the study, viz. to define, assess, examine and critically analyse the theories of Organisation and Strategic planning and how they inform national multi-sectoral planning. This chapter raised a number of issues pertaining to organisations, including their definition and importance in society, evolution and contribution of identified scholars and practitioners to the body of knowledge about organisations and the major components of organisation theory. It has come out clearly that organisations play a fundamental and leading role in society. It is also evident that a thorough understanding of organisation theory is essential to understand the structure, functioning and performance of organisations. This chapter has also revealed that organisations operates in a complex and dynamic environment thus necessitating that those operating within them understand the various environmental factors that can impact on the achievement of organisational goals. The main aim of this study is to develop a model for integrating DRR in national multi-sectoral planning in South Africa and the effective and efficient implementation of this model depends on a number of diverse organisations (see Chapters 5, 7, 8 and 9). To this end, acquiring knowledge and understanding on organisations and organisation

theory will assist in the development of a model to integrate DRR in national multi-sectoral planning.

2.8   CONCLUSION

Chapter 2 provided an in-depth investigation to the evolution of the organisation theory. Firstly, the term organisation was defined followed by a discussion on the reason for the existence of organisations. It is evident from the discussion that various scholars in the field interpret the term 'organisation' differently. It also emerged that organisations exist to achieve a goal or set of goals that can be clearly identified. Secondly, this Chapter explained the evolution of organisation theory from its ancient origin to the contemporary era. It was found that organisation theory, in its essence, is an interdisciplinary field that has benefited in borrowing from fields such as engineering in general and industrial engineering in particular. Other fields include psychology, sociology, political science, management, and economics, to mention but a few.

Furthermore, it also appeared that classical thinking about organisations was essentially based on closed system thinking. The closed system regards organisations as self-sufficient entities able to function without significant influence from its external environment. While the neoclassical school agreed with the fundamental tenets and assumptions of COT, this school (neoclassical) recognised that the interactions of people in an organisation is capable of modifying the tenets in which classical thinking is rooted. The Chapter then examined the various components of organisation theory.

In the next Chapter the theory of strategic planning and how it affects multi-sectoral planning is explored.

CHAPTER 3:

OVERVIEW OF STRATEGIC PLANNING THEORY

"Strategic planning provides some of the concepts, procedures, and tools that can help organisational and political leaders cope with an increasingly turbulent and interconnected world in which they are held accountable for the performance of their organisations or communities"
(Bryson & Einsweiler, 1988:xi).

3.1 INTRODUCTION

In Chapter 2 an overview of the organisation theory and its key components were thoroughly explored. Chapter 3 sets out to provide an overview of the strategic planning theory. This Chapter addresses the research objective of defining, assessing, examining and critically analysing how the theory of Strategic Planning informs national multi-sectoral planning. In essence, the Chapter examines and explores how organisations can use strategic planning to survive in a rapid changing environment and remain relevant to their stakeholders. At the heart of strategic planning, lies the concept of 'strategy'. Therefore the Chapter commences with a discussion of the origin and definition of strategy followed by a brief reflection on why organisation needs strategies. Also, it reflects on the different levels of strategy found in an organisation. The fundamental distinction between strategic planning and long-range planning is explored before turning to the link between strategic management and strategic planning.

The focus of strategic planning as well as the premises upon which strategic planning rest are explored. Critical factors that can be used by an organisation to determine the need for strategic planning are also attended to. Afterwards follows a detailed discussion of the process or model that an organisation can utilise for strategic planning. The benefits that an organisation can accrue from strategic planning are discussed and in conclusion, the Chapter reflects on the limitations of strategic planning.

Strategy as a concept is central to the discussion of the strategic planning theory. Against this background, the first part of this Chapter provides a brief understanding

of strategy by considering its historical origin and definition. It also shows how thinking in strategy is influenced by the military. In this Chapter the concept of strategy is examined from different viewpoints.

3.2   ORIGIN AND DEFINITION OF STRATEGY

According to Moore (2000:46), useful efforts have been made in the past to open up the definition of strategy and explore its dimensions as a concept from a variety of standpoints. Theorists such as Hart (1992), Mintzberg (1980) and Quinn (1988) have devoted significant time and attention over the last two decades to the exploration of diverse perspectives and to the facilitation of a multi-faceted understanding of this complex field (Moore, 2000:46). The word *strategy* originates from ancient Greek, and refers to the art of the general (Louw & Venter, 2010:11; Mehta, 2013:3; Shafritz *et al*., 2011:215; Van Niekerk, 2005:15). It is in this context that Steiss (2003:1) argue that from a military viewpoint, strategy entails the planning and directing of battles which is the central responsibility of the general. Indeed, as Thompson and Martin (2010:47) and Wilkinson and Monkhouse (1994:16) observe, strategy has always had military roots. Against this background, Webster's New World Dictionary describes strategy as a science that focuses on the planning and directing of military operations. Strategic manoeuvres use the principles of military strategy. This is a theme that James (1984) took up (cited by Thompson & Martin, 2010:47). He believed understanding the rules of the game is fundamental for survival. In this regard, it is important to note that these rules have evolved in response to realities in both the internal and external environment. Therefore the changes necessitate the adoption of innovative and dynamic approaches to ensure organisational survival and prosperity.

As discussed in Chapter 2, the comparison between warfare and business was made as long ago as during the era of Socrates who compared the duties of a general and a businessman which showed that both utilised plans to meet objectives (Hughes,1998:150). While there is consensus that strategy had its roots in military philosophy, Thompson and Martin (2010:47) caution against the usefulness of the military analogy in light of the fact that a business cannot conquer all its enemies and go home. This view is shared by Mintzberg *et al*. (2005:20) who maintains that the analogy between military operations and running a business venture was abandoned

when it became evident that slaughtering one's opponents and outselling them were fundamentally different. The philosophy of modern warfare is premised upon the destruction of enemy forces as well as on the utilisation of superior resources to give an overwhelming advantage thus enabling one to destroy the enemy – this does not often occur in business (Thompson and Martin, 2010:47). Further, as Thompson and Martin (2010:48) observe, another major distinction between military and business strategy is that while the latter is formulated, implemented, and evaluated with an assumption of competition, the former is grounded on the assumption of conflict.

McNichols (1983:4) indicates a proliferation in the application of the concept *strategy* in management literature and in corporate annual reports which has resulted in confusion and varied interpretations of the word. Mehta (2013:3) and Van Rensburg *et al.* (2010:16) concur with this view and postulate that it is difficult to give one, all-encompassing definition of strategy as there are numerous different viewpoints, opinions and ideas about what the concept strategy entails. French (2009:7) supports this and indicates that the term strategy, or one of its derivatives, seems to occur with great regularity in the written press, the media generally, as well as in everyday conversation. Yet, there is still not a clear definition of strategy. In view of this, it is important to present a few definitions of strategy to clearly outline how this concept is utilised within this study.

In his seminal book, "*The rise and fall of strategic planning*", Henry Mintzberg (1994:23-29) (one of the original management thinkers as discussed in Chapter 2) draws attention to the different and alternate views of strategy, also known as the five P's of strategy namely:

i.   Strategy is a **plan** – strategy outlines the desired course of action into the future – a roadmap from one point to another;

ii.   Strategy is also a **pattern** – this relates to consistency in behaviour over time;

iii. Strategy is **position** – the determination of specific products in a given market;

iv.   Strategy is **perspective** – this relates to how an organisation approaches things; and

v.   Strategy as a **ploy** – a specific plan intended to outsmart an adversary or competitor.

McNichols (1983:3) is of the view that "strategy is embedded in policy formulation; it comprises a sequence of decisions reflecting the will and purpose of the organisation, its basic economic and business objectives, and its operational plans to utilise its skills and resources". Shim (2012:1) posits that "strategy outlines a course of action or a plan which include resource requirements necessary to achieve a given objective". Stryker (2012:8) argues that strategy is a master plan that specifies critical courses of action and the means to accomplish three ends, to:

i.   Achieve objectives established by the organisation;

ii.   Exploit opportunities and strengths; and

iii.   Counteract present and future threats and weaknesses.

According to Holloway (1986:16), in simple terms, strategic planning is the process of positioning an organisation so that it can prosper in future. Considering the above, strategy can be defined as an all-encompassing plan of action which outlines the direction an organisation should take in pursuit of its desired goals and objectives. From the definitions presented above, it is evident that several definitions of the term strategy exist, but authors are one that an organisation needs a strategy to achieve its goals and objectives in a rapid changing environment. A strategy is developed today, and its focus is future oriented in nature. A strategy requires adequate allocation of resources to be realised. Recent literature recognises a link between strategic planning and scenario planning (e.g. Lindgren & Bandhold, 2009: 22; Taylor on King, 1987:31-33). As Lindgren and Bandhold (2009:23) and Van der Waldt (2000:78) recommend, scenario planning is a critical instrument of strategic planning which is useful for medium to long-term planning in specific circumstances (scenario planning will be discussed in upcoming sections).

This section has provided an overview of the concept of strategy and how the military thinking has influenced its development. Having clarified what strategy entails, the logical progression is to discuss the importance of strategy in an organisation.

3.3 IMPORTANCE OF STRATEGY IN AN ORGANISATION

Hughes (1998:150) and Van der Waldt (2000:61) indicate that strategy is important because it provides direction and coherence to routine activities within an organisation. Mintzberg (1987:25) adds that, most observers, focussing on the concept of strategy as a plan and market position recognise its importance in providing strategic direction for the entire organisation thereby enabling survival in hostile environments. This view is supported by Louw and Venter (2010:16) who proclaim that strategy provides overall direction for the organisation. It is in this vein that Mintzberg (1987:25) asserts that at its most fundamental, the key role of strategy is to set out a trajectory or flight path toward that bull's eye. Melcher and Kerzner (1988:5) concur with this and add that indeed strategy gives direction to diverse activities thereby ensuring cohesive and unified action in pursuit of organisational goals.

Flowing from the above discourses, Melcher and Kerzner (1988:6) are of the view that having a strategy increases the organisation's control over its own destiny. Louw and Venter (2010:16) add that while strategy looks inside the organisation, its focus is also upwards toward the purpose and overall direction of the organisation. Indeed, as Mintzberg (1987:27) argues, strategy serves to direct attention of the people working within an organisation as well as provide meaning for those working outside the organisation. Lastly, Louw and Venter (2010:17) and Mintzberg (1987:29) contend that strategy is needed to reduce uncertainty and provide consistency. Makridakis and Heau (1987:7) share similar views on the importance of strategy as presented above, but warn that for strategy to be relevant and applicable, it needs (1) to be used proactively, (2) to accept the limited ability to predict environmental changes, (3) to take into account the organisational, political, and psychological dimensions of corporate life; and (4) to be accepted by a majority of those concerned with strategy as a realistic tool for more effectively coping with the future.

The views presented in the definitions above resonate with the central argument advanced in Chapter 2 that the essence of an organisation is collective action. As Mintzberg (1987:27) proclaims, strategy is essential in an organisation as it provides a sense of direction. The above said, it is thus clear that although an organisation can survive without a strategy, in a fast changing and complex environment, having a

clearly defined strategy is crucial for an organisation to achieve its goals and objectives. In other words, a strategy defines the roadmap that an organisation intends to follow in pursuing its goals and objectives taking into consideration the changes in its environment. As Mintzberg (1987:28) asserts, without a strategy, an organisation is similar to an individual without a personality – unknown, and unknowable.

While there is consensus on the importance of strategy for an organisation as indicated above, it is nonetheless important to realise that strategies are not always successful as other organisations also have strategies of their own. In view of this, an organisation cannot develop its strategy in a vacuum (Katsioloudes, 2006:7-8). The importance of strategy in an organisation was discussed in this section. The next section covers the different levels of strategy found within an organisation and the interaction between these levels.

3.4   LEVELS OF STRATEGY

According to Melcher and Kerzner (1988:7), strategies may be classified according to their scope, specifications and deployment. Strategies exist at various levels in an organisation and they are categorised in terms of their scope and intended objectives (Shim, 2012:18-20; Wheelwright, 1984:20). Carroll and Hall (1982:134), Lewis *et al.* (2004:124-125), Louw and Venter (2010:19), Robbins and Coultar (1996:257-259), Thompson and Martin (2010:28) as well as Wheelwright (1984:20), all identify a three-tiered classification of strategy namely, corporate strategy, business or competitive strategy and functional strategy. Figure 3.1 below illustrates organisations as pyramids with senior management, middle management, first-line managers, as well as non-managerial personnel in descending order (Katsioloudes, 2006:14). Figure 3.1 shows a variation to represent the three levels of strategy found in an organisation. Nienaber (2010:17) concurs with this observation and note that strategy manifests at three distinct but interrelated and interdependent levels.

CHAPTER 3: OVERVIEW OF STRATEGIC PLANNING THEORY
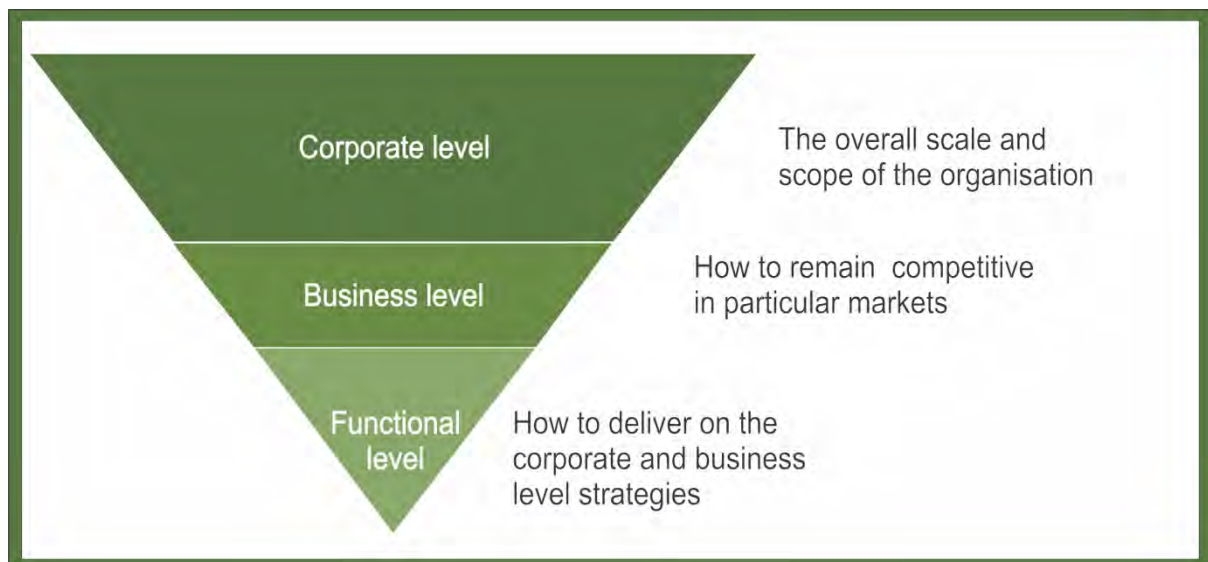
Figure 3.1: Strategic levels (adapted from Louw and Venter, 2010)

From Figure 3.1 above, it is clear that each strategic level focuses on specific aspects that enables an organisation to achieve its objectives. The ensuing sections examine these three strategic levels in detail.

3.4.1 Corporate level

As depicted in Figure 3.1, corporate strategy outlines an organisation's strategic direction with regard to its general attitude toward growth and how it manages its various operations to achieve its desired objectives (Hunger & Wheelen, 2007:6; Shim, 2012:19). This level of strategy is related mostly to the external environment and is formulated at the higher level of management (Mehta, 2013:4). It is in this context that Louw and Venter (2010:20) point that this level of strategy is developed by the Chief Executive Officer, board of directors and other senior executives within an organisation. According to Katsioloudes (2006:15), at this level, strategies often have the broadest scope. Goldman *et al*. (2010:17) and Smit *et al*. (2007:86) add that an organisation's corporate level strategy largely concerns itself with the chosen focus in which an organisation intends to compete. In addition, corporate strategy focuses on the organisation's scope of activities and resources deployment (Smit *et al*., 2007:86). Simply put, corporate strategy addresses the following basic questions: What is the purpose of the organisation? What business are we in as an organisation? What are our basic directions for the future? (Carroll & Hall, 1982:134;

Louw & Venter, 2010:355). Porter (1987:211) notes that any effective corporate strategy is grounded on a number of premises as outlined below:

i.   Competition takes place at the business-unit level;

ii.   Diversified companies do not compete; only their business units do;

iii. Unless a corporate strategy gives explicit focus on nurturing the success of the various units within an organisation, the strategy will not succeed even if it well conceptualised; and

iv.   Effective corporate strategy must emanate from competitive strategy.

According to Crow and Bozeman (1988:52-53), this level of strategy also entails the selection of business alternatives and the acquisition and allocation of resources. Mehta (2013:5) concurs with this observation and adds that while corporate strategy focuses on the optimal allocation of organisational resources, it also deals with the provision of a unified direction for the organisation. At this level, the focus of strategy is futuristic, innovative and pervasive in nature (Mehta, 2013:5). Johnson and Scholes (2002:11) argue that in view of the fact that corporate level strategy forms the basis or foundation of other strategic decisions, it is critical that all stakeholders must be clear about the content of such strategies.

This section gave an overview of the role of corporate strategy. It is evident from the discussion that this level of strategy provides the macro framework within which all strategic activities take place. The next section expands on this and explores how an organisation utilise corporate and business strategies to compete in their environment.

3.4.2   Business level

Once formulated, this level of strategy sets strategies related to ensure that the organisation is competing or performing within the broad framework of its mission (Katsioloudes, 2006:15; Smit *et al*., 2007:87). Often referred to as competitive strategy, business strategy is formulated at the divisional level, and puts emphasis on enhancing the competitive position of an organisation's products or services in a given industry or sector which the unit serves (Crow & Bozeman, 1988:53; Hunger &

Wheelen, 2007:8). In short, as Mehta (2013:5) argues, this level of strategy relate to a unit within an organisation. Also consistent with Carroll and Hall (1982:134) and van Niekerk (2005:15) holding that at this level, the primary focus is on how the business will compete in a certain industry or market. While the corporate level strategy concerns itself with the "what" aspect of corporate strategy, the business level strategy largely focuses on the "how" dimension (Mehta, 2013:5).

While Louw and Venter (2010:311) concur that the essence of business level strategy is on how an organisation will compete in the industry, they went further to identify four business level strategy options:

i.   The first option is a cost leadership strategy which an organisation pursue when it aims to gain a competitive advantage over competitors by maintaining a lower overall cost base;

ii.   The second option is the best value strategy which aims to achieve a lower price than opponents while attempting to retain a similar value product or service to that which the competitors;

iii.   The third strategy option is a differentiation strategy where the organisation seeks to provide unique services that are dissimilar from those that their contenders offer; and

iv.   Finally, with a focus or niche, the organisation develops its competitive advantage by offering products especially developed for the identified niche market (Louw & Venter, 2010:311).

Having outlined how an organisation utilises its business level strategy to compete in its industry, the ensuing section provides a brief overview of how an organisation deliver on the corporate and business strategies respectively through functional level strategies.

3.4.3   Functional level

At the functional level, the strategy is primarily focused on maximising resource productivity and is employed in the various functional areas such as human resources, production, marketing, finance, research and development the

organisation (Hunger & Wheelen, 2007:8; Nienaber, 2010:20; Shim, 2012:19). At this level of strategy as Carroll and Hall (1987:134) state, the key question posed is what functional policies should be employed in order to implement the strategies? In addition, as Melcher and Kerzner (1988:10) point out, strategies at this level are narrow in scope and are generally for a one-year time frame. With regard to involvement, Louw and Venter (2010:20) argue that heads of functional sections play a crucial role in crafting this strategy with the support of key employees. In essence, functional strategies deal with "how to" questions and are the starting point of the implementation phase of the strategic planning process (Melcher & Kerzner, 1988:10).

In contrast to the other two levels of strategy as discussed above, functional strategy is similar to what is typically called operational planning and thus has a short term focus (Crow & Bozeman, 1988:53). They (functional strategies) however must be carefully integrated with each other and with business and corporate strategies to assure that the organisation actually moves in the desired direction (Melcher & Kerzner, 1988:10). From the explanation above, it is therefore clear that for an organisation to achieve its desired objectives, the corporate strategy must set the overall framework and direction for the organisation. It is also clear that both business and functional strategies are designed to support the achievement of objectives of the organisation within the macro framework set out in the corporate strategy. As Smit *et al*. (2007:87) posit, ensuring consistency of strategies across all three levels is a fundamental issue in strategic planning. Louw and Venter (2010:19) hold a similar view that cohesion is essential between the three levels of strategy. Throughout this thesis, reference to the term strategy encompasses the three levels of strategy as outlined above. Chapter 5 outlines DRR roles and responsibilities of national sector departments in South Africa. Moreover, as indicated in Chapter 5, each national organ of state is required to prepare a disaster risk management plan which sets out its capacity to fulfil its roles and responsibilities and particulars of its disaster risk management strategies. In view of this, acquiring knowledge and understanding on the importance of strategy within an organisation and the different levels of strategy is essential to enable DRR practitioners to develop appropriate strategies to reduce disaster risk within their functional environment.

Having outlined the different levels of strategy, the next section briefly examine several definitions of the term 'strategic planning' as various strategic management scholars put forward. As has been mentioned earlier, this chapter seeks to explore and examine strategic planning theory and it is therefore important to briefly define and discuss the term 'strategic planning' to ensure clarity and correct application thereof when this field is critically examined in ensuing sections of this chapter.

3.5 DEFINITION OF STRATEGIC PLANNING

Crucial to this thesis is the definition of strategic planning. Shim (2002:3) says that strategic planning is the process of setting overall organisational objectives and drafting strategic plans. Bryson (2004:6) defines strategic planning as a deliberate, orderly process to produce important decisions and actions that provide guidance regarding what an organisation *is* (its identity), what it *does* (its plans and activities), and *why* it does it (obligations, mission, aims, and value creation). Goodstein *et al*. (1993:3) state that strategic planning is a process through which the leadership of the organisation provides a vision for the future and formulate strategies to achieve that future.

Van der Waldt (2000:61) argues that strategic planning enables an organisation to effectively respond to the outcome of an assessment of both its internal and external environments. Lu (2010:1317) shares a view similar to that advanced by Van der Waldt (2000) in defining strategic planning as a process through which an organisation develops its strategy on the basis of a robust evaluation of its internal and external environments. As Mintzberg *et al*. (2005:006) proclaims, strategic planning proceeds on the basis that the future can be laid out for organisations.

When examining and comparing the mentioned definitions it is clear that while various authors move from different premises in defining strategic planning, there is essentially consensus that strategic planning is a critical tool for an organisation to navigate its way to a desired future state. It is also evident that without strategic planning, changes in the organisation's macro environment may undermine the ability of the organisation to achieve its desired objectives. Wilkinson and Monkhouse (1994:16) view strategic planning as necessary for an organisation to achieve its

objectives. The objectives are reached through effective prioritisation of resources with a view to provide guidance and direction over a period of time.

Next is the historical development of strategic planning from its roots in military thinking and science. The following section shows how ancient science of warfare has influenced strategic planning. It also traces strategic planning's evolvement from long-range planning. Attention is given to discuss the reason for strategic planning to replace long-range planning eventually.

3.6 EVOLUTION OF STRATEGIC PLANNING

Strategic planning has evolved from the discipline of warfare (Pacios, 2004:260; Rezvani *et al*., 2011:1537; Young, 2003:2). Shafritz *et al*. (2011:215) concur with this observation and postulate that there is hardly any core concept in modern strategic thought that had not been anticipated by Sun-Tzu in ancient China. Bryson (2010:s527) is of the view that the development of strategic planning gained impetus in 1942 from John Vieg (an American political scientist and civil servant). Vieg argued at the end of the Great Depression and the start of the second World War that America had witnessed adverse planning which to him meant "deliberately refraining from public control over more than a few fields of social action in the confident belief that all would then go well in the vast areas left free" (Bryson, 2010:s527). Vieg was of the view that America was ready to change toward constructive forms of planning, which necessitated the preparing of things to come thereby reducing dependence on chance (Bryson, 2010:s527).

In line with Makridakis and Heau (1987:4), strategy evolved into a prominent subject during the 1950s and 1960s when it became necessary for large firms and growing businesses to be more methodological in considering the future. This was in the form of long-range planning, which had as its primary purpose the definition of the objectives of the firm as well as the allocation of resources through capital budgeting (Makridakis & Heau, 1987:4). As Pacios (2004:260) observes, this type of planning was regarded as an extension of the regular one-year financial planning which was centred on budgets and operating plans. Paterson (2009:10) indicates that long-range plans were based on the key assumption that conditions in the field are stable over time and therefore predictable. The utilisation of long-range planning, as a

method of developing strategy suffered a downturn when it became clear that predicting existing trends and patterns into the future did not produce precise results, that growth, as it was experienced in the 1950s and 1960s, could slow down or be interrupted, and that new opportunities as well as threats, which nobody had envisaged beforehand, were possible (Makridakis & Heau, 1987:4). Pacios (2004:260) confirms that long-range plans barely took into account any socio-economic and political factors because it was assumed that markets will largely remain stable.

Long-range planning was essentially concerned with closing the gap between the firm's aspirations and plans as well as the extrapolation of prevailing tendencies (Makridakis & Heau, 1987:4). Volatile markets, overcapacity, oil crises, demographic shifts, and resource constraints became dominant management considerations in the 1970s and as a result, this form of planning was substituted by strategic planning, which acknowledged that changes could occur and adversely impact on the firm's ability to achieve its objectives (Bryson & Roering, 1988:995; Makridakis & Heau, 1987:4). Whereas long-range planning was primarily focused on the comprehensive sequencing of actions necessary to achieve desired objectives, strategic planning was more concerned with the environmental assumptions upon which any plan hinges and this led to the replacement of number crunching methodologies associated with long-range planning by what if approaches which are at the heart of strategic planning (Makridakis & Heau, 1987:5).

However, in terms of the application of strategic planning principles in business environments, this can be traced back to the early 19th century when Harvard Business School developed the Harvard Policy Model which can be regarded as one of the first commercial business methodologies of strategic planning (Carter, 1999:46; Rezvani *et al.* 2011:1537). While strategic planning in business environments can be traced back to the beginning of the 19th century, its use in the public sector can be traced to the late 1950s (Steiss, 2003:53; Young, 2003:2). As David (2013:35) points out, strategic planning was very popular between the period from 1960s and the1970s and viewed as the solution for all challenges faced. Following this upsurge however, strategic planning was cast aside during the 1980s as different planning models failed to yield desired results (David, 2013:35). Although strategic planning suffered a decline in popularity and influence since the early

CHAPTER 3: OVERVIEW OF STRATEGIC PLANNING THEORY

1980s, it recovered some of its status that it had lost during the 1990s (David, 2013:35; Rezvani *et al*. 2011:1537). The 1990s, brought the renewal of strategic planning, and the process is widely practiced in the modern business world (David, 2013:35). Steiss (2003:10) adds that during the 1980s and 1990s, strategic planning evolved. This was a response to the need of a more dynamic and robust planning process to enable on-going efficacy of decisions to be tested against the realities of current conditions and in turn, corrected and modified if required.

From the discussion above, it is thus clear that while strategic planning has military roots, contemporary thinking in strategic planning recognised that there are fundamental dissimilarities between the management of warfare and business. It is also clear that whereas strategic planning became popular in the 1950s and 1960s, it was preceded by other forms of planning such as long range-planning which firms/ businesses applied. Long-range planning was primarily premised upon clear goal definition for the firm as well as to forecast existing trends about the future. Although useful as a methodology for planning, long-range planning was criticised for failing to recognise the impact of socio-political factors on the firm's ability to achieve its objectives. The realisation that environmental factors are dynamic and capable of producing both threats and opportunities resulted in strategic planning taking the place of long-range planning.

This section explored how strategic planning evolved and how its foundation rests on long-range planning. It was also indicated that while strategic planning was prevalent in business environments from the 1920s, its use in the public sector can be traced to the 1950s. To follow is some fundamental differences between long-range planning and strategic planning. These differences illustrates that although long-range planning presuppose the continuation of current trends, strategic planning recognises the fundamental importance of regular assessment of the organisation's environment to maximise the ability of the organisation to adapt to such changes.

3.7 DIFFERENCE BETWEEN STRATEGIC PLANNING AND LONG-RANGE PLANNING

Van der Waldt (2000:62) indicates that there is a distinction between long-range planning which is reactive, and strategic planning, which enables an institution to

create its future. Stryker (2012:9) supports this view and continues that long-range planning describes the aspects that the future could be without (if any), any sense of how to bring about that future. On the other hand, strategic planning in the here and now is trying to create and fulfil the design for tomorrow. Bryson and Einsweiler (1988:4) add that the fundamental difference in practice between strategic planning and long-range planning is that while they both focus on an organisation and what it should do to enhance its performance, the strategic planning typically depend more on the identification and resolution of issues whereas the long-range planning focuses more on the specification of goals and objectives and their translation into current budgets and work programmes. Another major difference between the two forms of planning is that strategic planning emphasises assessment of the organisation's internal and external environments while long-range planning tend to assume that existing trends will continue (Bryson & Einsweiler, 1988:4; Steiss, 2003:10). As Van der Waldt (2000:62) proclaims, in long-range planning, goals and projections are based on the assumption of institutional stability while, in strategic planning, the institution's role is considered within the context of both its internal and external environment. Cope (1989:28), Fahey (1989:7), Pacios (2004:260), and Van der Waldt (2000:62) expanded to summarise the characteristics of long-range planning versus strategic planning as follows:

Table 3.1:   Characteristics of long-range planning versus strategic planning

LONG-RANGE PLANNING	STRATEGIC PLANNING
Short-term	Long-range
Single issue	Multiple issues
Organisational issues	Community issues
Hierarchical	Non-hierarchical
Low involvement/ participation	High involvement
Directive-based	Consensus- based
Staff-oriented	Citizen-oriented
Management-oriented	Politics-oriented
Staff awareness	Public awareness
Operational focus	Policy focus
Reactive	Proactive
Deductive and analytical	Inductive and integrated
Closed system and internal focus	Open system and external focus
Follows goals and objectives	Vision directed
Extrapolation from the past	Premised upon alternative futures
Driven by numbers	Driven by ideas

Sources: Cope (1989); Fahey (1989); Pacios (2004); Van der Waldt (2000)

From Table 3.1, it is clear that long-range planning is reactive, while strategic planning is proactive and recognises the impact of environmental factors on its activities. On the one hand, it is evident that long-range planning is primarily focused on the internal dynamics of the organisation, and strategic planning considers multiple issues that are important in the creation of a desired future state of the organisation. To sum up, long-range planning can be regarded as having a narrow focus and strategic planning is broad and cognisant of environmental changes. Steiss (2003:54) agrees that the fundamental assumption that underpins strategic planning is that an organisation must be responsive to a dynamic, changing environment (as opposed to the relatively stable environment assumed for long-range planning).

To summarise, this section provided the difference between long-range planning and strategic planning. It is evident that long-range planning can be characterised as

reactive while strategic planning is proactive and take into account changes in its environment. This section also introduced that from a systems perspective (as discussed in Chapter 2), long-range planning can be regarded as a closed system and strategic planning is an open system that recognises the importance of dynamic interaction with its environment. Having examined the evolution of strategic planning and the fundamental differences between it and long-range planning, and in view of the lack of consensus amongst scholars on the use of terms such as strategic management and strategic planning, it is logical that the next section defines these concepts and to shed some light on how they relate to one another.

3.8　RELATION BETWEEN STRATEGIC MANAGEMENT AND STRATEGIC PLANNING

The field of strategic management as a distinct area of study is fairly new (Birkinshaw, 2004:xi; Eskridge, 1987:103). Whilst the ideas it advances can be traced back to historical figures such as Sun Tzu, Nicolai Machiavelli, and Carl von Clausewitz, the terminology, the core concepts, and the seminal bodies of literature mostly stem from the 1960s and the 1970s (Birkinshaw, 2004:xi). Consistent with strategic management principles, Sun Tzu (in Michaelson, 2001:8) argues that in planning for a battle, the commander should act expediently in accordance with what is to their benefit in the field and be able to meet any exigency. Similarly, in reflecting on the importance of strategy on his seminal book 'On *War*,' Von Clausewitz (1976:177) acknowledges that the strategist must develop the plan of war. It is the objective that will determine the sequence of actions to achieve the objective. Von Clausewitz (1976:177) expand on this that a Prince or a General can best demonstrate his brilliance by handling a campaign to suit his objectives and the resources at his disposal, doing neither too much nor too little. While these principles are ancient, they continue to inform thinking in contemporary strategic management.

It is in this context that Shafritz *et al.* (2011:337) indicate that strategic management is hardly novel. For example, ancient Rome was into strategic management in a big way although there was no single document entitled "The Strategic Plan for the Roman Empire," but all of its elements are scattered in various laws, policies, and proclamations (Shafritz *et al.*, 2011:337). Eskridge (1987:103) suggests, strategic

management is a fairly new discipline for which there is no precise idiom used. In view of this, it is necessary to consider a few definitions of strategic management as outlined below:

Strategic management can be defined as the art and discipline of developing, implementing, and evaluating cross-functional decisions that are necessary for an organisation to achieve its goals (David, 2013:35). Hunger and Wheelen (2007:2) share a similar view when they note that strategic management encapsulates key managerial decisions and actions that determine the performance of an organisation in the long term. To Certo and Peter (1991:5), strategic management is an on-going process that seeks to keep an organisation in its totality matched to its environment.

Certo and Peter (1991:6) further proclaim that "strategic management consists of a series of steps that are repeated in cyclical fashion". In comparison with strategic planning, strategic management is the broader process that is inclusive of strategic planning as well as other essential steps such as strategy implementation and evaluation (Lu, 2010:1317; Mehta, 2013:20). Overall, senior managers, boards of directors, as well as personnel responsible for planning are usually involved in driving the strategic management process within organisation (Certo & Peter, 1991:7).

While some authors (Lozier and Chittipeddi, 1986 and Mehta, 2013:13) use the terms strategic planning and strategic management interchangeably, in this study, the terms are not applied as such. As Smit *et al*. (2007:83) observe, strategic management is about change, and planning to survive amid change. Bryson (2010:S255) contends that strategic management may be regarded as the integration of strategic planning and implementation across an organisation with a view to achieve organisational goals.

Taking the above into consideration, it is therefore evident that while strategic planning is primarily concerned with defining the course of action that an organisation will adopt to achieve its goals, strategic management is a more broad process that encompasses strategic planning, implementation and control. Louw and Venter (2010:21) also share this view that strategic management is concerned with strategic planning, strategy implementation as well as the integration of sustainability into the strategies. Stated differently, strategic planning is a key component of strategic

management. As Steiner (1979:4) and Van der Waldt (2000:62) acknowledge, strategic planning is indeed a critical phase of strategic management and not the entirety of strategic management.

This section has indicated that strategic planning is but one of the components of the broader strategic management processes which also covers other phases such as strategy implementation and strategy evaluation and control. The following section explores the focus of strategic planning. The fundamental questions that an organisation must grapple within this specific process are also examined.

3.9   FOCUS OF STRATEGIC PLANNING

The primary focus of strategic planning is on changing the future not the present or the past (Smit & Cronje, 2002:110). Donnelly (1984:viii) proclaims that strategic planning reverses the historical perspective of regarding the previous year in the light of this year and the next as well as beyond that in order to establish future goals. This in fact is to work back in time and develop strategies to move from the existing stage to an envisaged stage or position. Bryson *et al*. (2009:175) argue that key to understand the effectiveness (or lack thereof) of strategic planning is to know the complexity of the process and to know which organisation (or multi-organisation) stakeholders engage with one another through association and/or performances over a period of time to search and reach consensus as well as implement solutions to a series of Socratic questions. The Socratic questions include the following:

i.   What should be done?

ii.   How should it be done?

iii.   What purposes or goals would be achieved by doing it? and

iv.   How can we be sure we are doing what we agreed we ought to do, and that we are achieving the effects we want? (Bryson, 2009:175).

Strategic planning is taking these questions to the management team in a rigorous exercise that forces them to answer these questions and to hold themselves accountable for making it happen (Donnelly, 1984:vii). Smit and Cronje (2002:111)

support the above and also state that top management play a key role in the formulation of strategy, while middle and lower management must put these plans into action. Strategic planning bridges the gap between the annual business plan and the traditional long-range plan (Donnelly, 1984:1). It is thus clear that by grappling with the Socratic as well as the fundamental questions, an organisation will be able to correctly focus its strategic planning efforts. The application of the Socratic questions is also relevant to the disaster risk management environment and will provide a useful framework to guide the multi-sectoral development of DRR strategies that seek to reduce disaster risk in the country. Thus, broad understanding and knowledge of what strategic planning seeks to achieve as guided by the Socratic questions is essential for disaster risk management practitioners and policy makers to enhance and focus their planning initiatives.

This section has indicated that while strategic planning takes place in the present, its primary focus is on the future and how an organisation can adapt to such changes. Like most activities, strategic planning is based on several fundamental principles. At this point, it is therefore important to briefly examine the premises on which strategic planning is founded. Consideration of these premises is important as failure to take this into account may hamper successful strategic planning in an organisation.

3.10 STRATEGIC PLANNING PREMISES

Steiner (1979:18) says that premises literally mean that which goes before, is previously set forth, or is stated as introductory, postulated, or implied. Like most other processes, strategic planning is based on a set of premises. King *et al*. (1978:23-24) has identified the following basic premises on which strategic planning is based (although not established truths):

i. Professional planners can manage a planning process, but cannot on their own, conduct the planning for the organisation;

ii. Ownership is essential especially by those responsible for the implementation of the plans;

iii. Strategic planning is fundamentally a group activity because it must involve various divisions of the organisation;

iv.   Strategic planning involves much more than the numerical extrapolation of trends; it also involves the selection of a mission, objectives, and strategic alternatives; and

v.   A critical assessment of future environmental trends, threats as well as organisational strengths and weaknesses are crucial to the strategic planning process.

Scholars from the Harvard Business Policy, specifically Andrews, Kenneth and Mintzberg (1994:37-39) identified a few fundamental premises that underlie the "design school", which are: (1) Strategy formation should be a deliberate, conscious process of thought; (2) Responsibility for the process must reside with senior management; (3) The model of strategy formation must be kept understandable and informal; (4) Strategies should be distinctive; (5) Strategies must emerge from the design process fully developed; and (6) The strategies should be made clear and, if possible, articulated. This means it should be straightforward. Once these distinctive, full-scale, explicit and straightforward strategies are fully formulated, they must be implemented.

Thus it is clear that strategic planning is essentially a team-based effort that requires managers to be active participants at various levels in an organisation. It is also evident that a team of planners can drive the process, but full ownership of the organisation is essential for the success of the strategic planning process. Having outlined the premises of strategic planning, it is only logical that aspects or factors that can be used to identify the need for strategic planning should be further explored.

3.11   IDENTIFYING THE NEED FOR STRATEGIC PLANNING

King and Cleland (1978:6-7) indicate a glaring need in modern organisations for more effective strategic planning processes and systems. This is evident from a variety of symptoms that tend to inhibit an organisation from achieving its potential. These symptoms are:

i.   A tendency for each manager to regard his or her existing domain from the standpoint of the discipline in which he or she first obtains credentials,

irrespective of its broader scope and the requirements for more diverse considerations;

ii.   A "tunnel vision" phenomenon, in which managers fail to recognise the various objectives of the organisation even though they have moved to a general management position and can no longer afford the luxury of simplistic efficiency oriented objectives that are the speciality of managers at lower levels;

iii.   A bureaucratic organisational structure designed to maintain efficiency as well as control in current operations as opposed to nurturing long-range innovation;

iv.   The absence of an "organisation" or process designed specifically for fostering the managerial participation and innovativeness for developing new products and services; and

v.   An assumption that senior managers or alternatively, those responsible for planning should do the planning (King & Cleland 1978:6-7).

The strategic planning process in an organisation should enable managers to address some fundamental questions about the organisation in a manner that is impossible within the framework of their day-to-day operational activities (King *et al*., 1978:7). It is evident that managers must strive to achieve broad organisational goals and avoid focusing on narrow, programme specific objectives at the expense of macro-strategic goals of the organisation. As discussed in preceding sections, it is also clear that strategic planning requires full organisational ownership and should not be delegated to the chief executive officer (CEO) or the planning unit.

Having outlined the premises on which strategic planning is founded as well as key aspects that can be used to identify the need for strategic planning the next section provides a detailed discussion and analysis of the process of strategic planning. The strategy change cycle that Bryson has developed will be used to contextualise the discussion with the various steps that form part of the process.

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3.12   STRATEGIC PLANNING PROCESS

The strategic planning process is the set of human interactions that takes place in the process to produce a strategic plan (Lyles and Lenz, 1982 cited in Dutton & Duncan, 1987:105). According to Nieboer (2011:373) and Paterson (2009:5), there are various models of strategic planning and most of these follow a common approach which includes the formulation of a mission statement, analysis, constructing and implementing goals, objectives and strategies. The Bryson model is known as the strategy change cycle which is typically utilised in private sector settings, but with some adjustments to enable usage in public sector context (Hughes, 1998:155; Nieboer, 2011:373). This model, as Johnston (1998:356) argues, is responsible for joining the Harvard Policy Model (environmental fit) with a stakeholder model (reconciling the views of disparate constituents). This is essentially intended to respond to the issue of pluralist interests through consensus building (Johnston, 1998:356).

Bryson and Alston (2004:15) state that the strategy change cycle is designed to assist organisations to meet their mandates, fulfil their mission, and create public value. Young (2003:15) adds that Bryson's model is systematic, inclusive, orthodox, and particularly adaptable to public organisations. As indicated in Chapter 1, an aim and objective of this research is to define, assess, examine and critically analyse the theories of organisation and strategic planning and how they inform national multi-sectoral planning. The utility of the Bryson Model (Figure 3.2) in the public sector is therefore the main reason for choosing the model in this study. While the sequencing of these steps may vary from one organisation to the other, the model provides a robust framework that is essential for the development of a strategic plan (Hughes, 1998:155).

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THE STRATEGIC CHANGE CYCLE

B = places where the process typically begins
S = places where stakeholder analyses may occur
G = places where goal formulation occur
V = places where vision formulation may occur
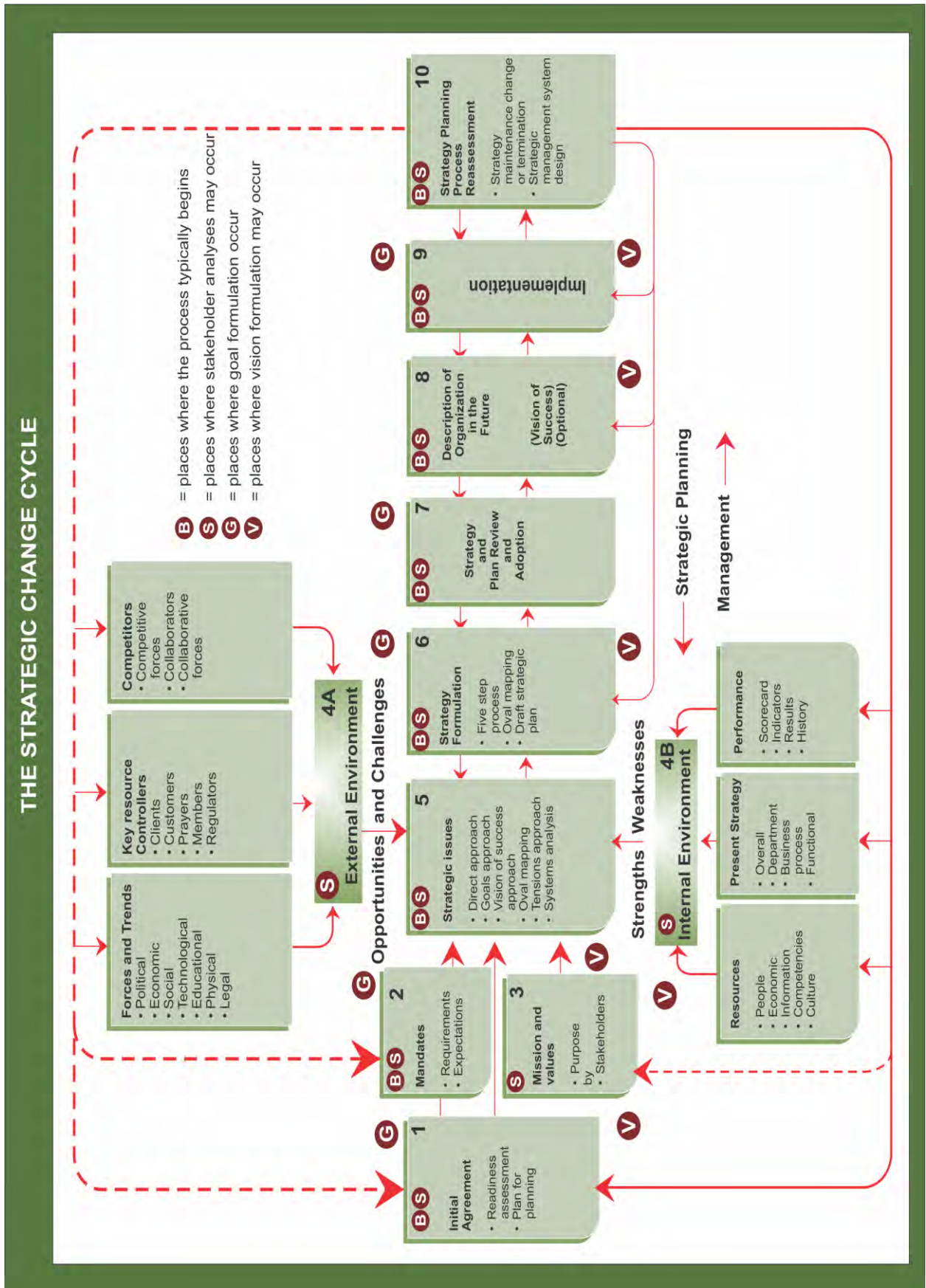
Figure 3.2: The strategy change cycle (adapted from Bryson, 2004:33)

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3.12.1   Step 1: Initiating and agreeing on a strategic planning process

The purpose of this step is to obtain consensus among key decision makers or opinion leaders about the overall strategic planning process (Bryson, 2004:34). Bryson (2011:47-48) adds that as part of the initiation process, initial agreement must be negotiated between the initiating team and persons, groups or units that will play a role in the strategic planning effort. This agreement should outline the rationale, the steps in the process, the resource and reporting requirements, sponsors of the process as well as the responsibilities and participation of any group or committee empowered to provide oversight in the process (Bryson, 2004:35). The support and commitment of top management is vital for the success of this process (Olsen & Eadie, 1982, cited by Bryson & Roering, 1988:16). In addition, Berry (2007:334) points out, that a discussion about the process on the expectations of the organisation precedes the preparation for strategic planning. A core team of 8-10 people representing the major units in the organisation generally drives the strategic planning (Berry, 2007:334). To be successful, a strategic planning exercise needs the support and involvement of management – everyone from the CEO to the junior managers (Donnelly, 1984:3).

Bryson (2011:91-92) notes distinctly that as the strategic planning process has impact on the organisation in its totality, it is essential to ensure that all internal and external stakeholders are actively involved in the organisation. In short, as Bryson (2011:116) hypothesises, the initial agreement provides a road map for all role players regarding the overall strategic planning effort. This section provided an overview of the engagements that must occur between the sponsors of the strategic planning process and the team responsible for driving such process. From this discussion, it is evident that the support and buy-in of the sponsors or executive leadership of the organisation is critical for the success of the process.

As has been discussed in preceding sections, an organisation exists to fulfil a specific purpose and this is usually expressed in the various mandates that inform the work of the organisation. In view of this, the ensuing section explores in detail the process of identifying organisational mandates and the types of mandates that an organisation has to contend with.

3.12.2　　Step 2: Identifying organisational mandates

Before an organisation can define its mission and values, it should be clear about its mandate (formal and informal) (Bryson, 2004:37). The formal and informal mandates placed on the organisation consist of the various "musts" that are confronted i.e. the various requirements, restrictions, expectations, pressures, and constraints it faces (Bryson, 2004:37). The private sector organisation's mandate is in a sense without constraints, as it is common for a private organisation to diversify its products or services across sectors. Instead public organisations have mandates specified in legislation that limit the scope of their activity (Hughes, 1998:156). It is in this context that Van der Waldt (2000:64) argues that public institutions staff must be conversant with applicable legislation, ordinances and contracts from which the formal mandate of the organisation flows.

According to Bryson and Alston (2005:47), mandates can be expressed formally or informally. Formal mandates define what must or should be done according to the organisation's current charter and policy as well as local laws, codes, and regulations, informal mandates may flow from election results or community or key stakeholder expectations (Bryson & Alston, 2005:47). Within the South African context, the Framework for Strategic Planning and Annual Performance Plans which the National Treasury has developed, compel government departments and entities respectively to link their strategic planning with the progressive implementation of their legislative mandates, policies and programmes (South Africa, 2010b:7). This linkage between strategic planning and formal or informal mandates will be discussed in greater detail in Chapter six which will examine and analyse how national multi-sectoral planning developed in South Africa. Chapters 7 and 8 have revealed that integrating DRR in planning processes and initiatives of various national departments must flow from the different hazard specific legislative mandates and policies that these departments administer. To this end, acquiring knowledge of the strategic planning process and the importance of identifying organisational mandates as articulated in the Bryson Model is essential for DRR practitioners and policy makers.

In light of the above, it is sure that identification of organisational mandates is a critical step in the strategic planning process. It is also evident that mandates,

especially in a public organisation, provide the overall framework within which organisation activities can be defined. Strategic planning must enable an organisation to execute its organisational mandates. The above said, the following section highlights the importance of clarifying the mission and values of an organisation. This section also shows the fundamental role and importance of a mission in an organisation and examines the role of stakeholders in the process of developing an organisational mission.

3.12.3   Step 3: Clarifying organisational mission and values

Shim (2012:9) states that an organisation's mission is fundamental as it provides an overarching goal and a sense of direction which is essential to guide decision making for all levels of management. A mission is a statement of purpose and reason for the organisation to exist (Bryson, 2011:138; Certo & Peter, 1991:66; Ehlers & Lazenby, 2010:71; Hunger & Wheelen, 2007:6; Katsioloudes, 2006:8). Mehta (2013:6) argues that a mission describes what the organisation does (i.e. present capabilities), why it exists, who it serves (i.e. stakeholders) and what differentiate it from other organisations. Bryson (2004:37) adds that an organisation's mission together with its mandates, provide the organisation the most important justification for its existence. Pearce *et al*. (1987:71) affirm the above and maintain that the mission of the organisation is a broadly defined but enduring statement of purpose that differentiates an organisation from others of its type and identifies the scope of its operations in product and market terms. As Robbins and DeCenzo (2008:83) indicate, every organisation has a mission statement that defines its purpose and answer the question, "What business or businesses are we in?"

Berry (2007:334) and Louw and Venter (2010:115) identify the following as questions that the mission might address, who do we serve? What is the organisation's operating philosophy with regard to quality, organisational image, and self-concept? What are the reasons that the organisation exists and what are its primary goals? What societal challenges was the organisation created to address? What makes the organisation different? How does the organisation view its responsibilities to its stakeholders? In addition, a mission statement should ensure unanimity of purpose within the organisation, serve, amongst other things, as the basis for the allocation of

resources and sets the parameters within which all decisions should be made (Smit *et al*., 2007:88-89).

In the absence of a clear mission, it is difficult for an organisation to formulate strategies and objectives (Shim, 2012:9). Mehta (2013:6-7) explains that a mission must be feasible and attainable. It should be in writing and should be time-bound (Holloway, 1986:51; Shim, 2012:9). Certo and Peter (1991:68), David (2013:78), Holloway (1986:51), King and Cleland cited in Pearce *et al.* (1982:72) indicate that an established and documented organisational mission accomplishes several important things, which are outlined as, it:

i.   Helps focus human effort in a common direction;

ii.   Helps ensure that the organisation will not pursue conflicting purposes;

iii.   Provides a framework for resource allocation within an organisation;

iv.   Establishes wide areas of job responsibilities within the organisation; and

v.   Provides a premise for the development of organisational objectives.

Figure 3.3 illustrates the numerous stakeholders outside the organisation who make decisions that are crucial to the success of the organisation (Shim, 2012:12).

Figure 3.3: Stakeholder map for a government (adapted from Bryson, 2004:109)

Those individuals and organisations that directly and indirectly influence, or that the organisation's operations have and influence on, are known as stakeholders (Bryson & Alston, 2005:53; Katsioloudes, 2006:20; Lake, 2012:69; Steiss, 2003:3). A key assumption of the stakeholder framework is that successful strategies can be developed and implemented only when strategic planners take into account the potential impacts of their organisation's stakeholders (Mendelow, 1987:176). On the one hand, stakeholders depend on the organisation for the fulfilment of some of their goals and needs and on the other hand, an organisation depends on these stakeholders for the full realisation of its purpose and goals (Steiss, 2003:3).

Kenny (2005:17) shares a similar view that stakeholders are indeed important and that organisations and business units have a good number and variety of stakeholders. There will usually emerge a core set that have a fundamental impact, known as *key stakeholders*. Furthermore, Kenny (2005:16) notes that, it is not enough to simply emphasise the needs of *one* key stakeholder, to the exclusion of all others, success requires consideration of the needs of all organisational stakeholders. It is difficult for an organisation to satisfy the claims of all stakeholders

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at all times due to the antagonistic nature of their expectations at times (Hill & Jones, 1995:45).

The above discussions clearly accentuate that a mission is a foundation upon which the activities of the organisation stems. It is also clear that in the process of developing a mission, inputs of key stakeholders must be taken into consideration. The views of stakeholders must be canvassed, and to ensure successful implementation of the organisational mission, employees at all levels within an organisation must also be mobilised to support and take ownership of the mission. With regard to organisational values, Berry (2007:334) says that values assist in defining the culture and expectations about how people will be treated as well as how the organisation will deliver its services. Wilkinson and Monkhouse (1994:18) support this view and indicate that organisational values are the principles that support management style and ethics within an organisation. As Louw and Venter (2010:120) point out, a statement of value reflects the fundamental beliefs, values, ambitions and strategic priorities to which decision makers are committed in the management of the organisation. Values are also important to guide staff behaviour during working hours given the diverse backgrounds of staff in an organisation (Louw & Venter, 2010:120). Lake (2012:97) proclaims, the job of the value statement is to answer the question 'How do we go about doing our work?' From the discussion above, and in light of diverse culture, differences in background, and individual values of members of an organisation it is clear that organisational values are essential to regulate behaviour.

This section stipulated the importance of a mission in an organisation and demonstrated that a mission forms the foundation from where organisational activities evolve. As discussed in preceding sections, strategic planning differs from other forms of planning such as long-range planning by its explicit focus on both the internal and external environment and how variables from these environments impact the ability of the organisation to achieve its objectives. The following section specifies the importance of assessing the environment as well as the techniques that can be used during such a process.

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3.12.4 Step 4: Assessing the external and internal environment to identify strengths, weaknesses, opportunities and threats

Chapter 2 demonstrated that organisations must adapt to their environment in order to survive. With this in mind, a thorough analysis of the organisation and its environment remains at the heart of most strategic planning methodologies with a view to ensure an appropriate alignment between the organisation and its environment (Mahon & Murray, 1981:252). In this regard, Robbins and DeCenzo (2008:83) acknowledge that this environmental analysis enables management to better define strategies that are aligned with their operating environment. For Rezvani (2011:1541) this step of strategic planning entails the identification of strengths and weaknesses of the organisation compared to other organisations; and to identify environmental risks and threats compared to opportunities available in it. In carrying out this environmental analysis, Hunger and Wheelen (2007:33) hold the opinion that environmental scanning is an instrument that an organisation utilises to prevent strategic surprises and to ensure long-term health. Elenkov (1997:288) concurs that environmental scanning is a difficult organisational process as the environment is complex and management experience bounds rationality, meaning that they are unable to fully comprehend the environment.

The planning team should explore both the internal and external environment of the organisation to firstly identify the opportunities and challenges which the organisation face; and secondly to identify the existing strengths and weaknesses (Bryson, 2004:38; Certo & Peter, 1991:36). Certo and Peter (1991:36) indicate the purpose of environmental analysis as the assessment of the organisational environment so that management can react to it appropriately and thereby enhance organisational success. While a comprehensive discussion of the various models that can be utilised to analyse environmental trends, such as the McKinsey seven-S Framework of Tom Peters and Robert Waterman, and Michael Porter's approach to industry analysis would illustrate the different approaches to analyse the environment, this study does not require a thorough and critical analysis of these theories. Hence, such comprehensive analysis will not be executed (Certo & Peter, 1991:111; Jones *et al.*, 1998:210; Katsioloudes, 2006:104; Porter, 1979:36; Waterman Jr *et al.*, 1980:18). The SWOT technique as Anderson introduced in 1980 is explored in full detail as a useful strategic planning tool (Rezvani, 2011:1541). SWOT is the acronym for

internal strengths and weaknesses of an organisation and opportunities and threats existing in the external environment. It is based on the logic that effective strategies maximise the strengths and opportunities in the outside and internal environments, and in the same instance minimising the current weaknesses and threats (Ehlers & Lazenby, 2010:111; Lu, 2010:1317; Rezvani, 2011:1541; Shim, 2012:70).

According to Learned *et al*. 1965 (cited by Lu, 2010:1317), SWOT has its origins in the 1960s and was popularised in the work of Weihrich in 1982. The fundamental principles behind this technique are that an organisation's strategy should match the environmental threats and opportunities with the organisation's weaknesses and particularly its strengths (Lu, 2010:1318; Rea & Kerzner, 1997:13). This philosophy can even be traced back to Sun Tzu's *The Art of War*, "Know your enemy, and know yourself, you can fight a hundred battles with no danger of defeat" (Sun Tzu, 1971, cited by Lu, 2010:1318). As Ehlers and Lazenby (2010:111) proclaim, SWOT is one of the popular techniques for doing an environmental analysis. It is also called situational analysis and its underlying assumption is that effective strategies can be developed by managers after they have carefully reviewed the organisation's strengths and weaknesses in light of the threats and opportunities presented by the environment (Shim, 2012:70; Steiss, 2003:52). Shafritz *et al*. (2011:344) argue that analysis of strengths and weaknesses highlights capability issues, and that attention to opportunities and threats focus on the opportunistic and predatory aspects of organisational survival.

Robbins and DeCenzo (2008:84) maintain that at its most basic, opportunities are positive external environmental factors while threats refer to the adverse factors. The core of the SWOT matrix (sometimes called a TOWS matrix) is shown in Table 3.2.

Table 3.2:   TOWS/ SWOT matrix

	Strengths	Weaknesses
Opportunities	O/S Maxi-Maxi	O/W Maxi-Mini
Threats	T/S Mini-Maxi	T/W Mini-Mini

Source: Lu (2010:1318)

As shown in Table 3.2, there are four generic options:

i.   The opportunity-strength (O/S) options which maximise strengths and opportunities;

ii. The threat-strength (T/S) options which maximise strengths and minimise weaknesses;

iii. The opportunity-weakness (O/W) options that maximise opportunities and minimise weakness, and

iv. The threat-weakness (T/W) options that minimise the weaknesses and threats (Lu, 2010:1318; Mehta, 2013:212).

Lu (2010:1319), claims that the SWOT analysis remains popular because it is inclusive and fit along with other models and tools which was later developed like the Porter's five forces model, resource-based approach and scenario analysis. Mehta (2013:221) adds that strategists prefer SWOT analysis because it gives alternative set of strategies which help the organisation to choose suitable strategies in terms of available resources. Steiss (2003:73) proclaims that the SWOT technique is useful for a quick overview of an organisation's strategic situation. A SWOT analysis offers strategy planners a logical but simple method for conducting an environmental analysis. It is also flexible and various types of organisations can utilise it, including companies, non-profit organisations, government units, and even by individuals.

Notwithstanding its popularity, the SWOT technique is not without limitations. Ehlers and Lazenby (2010:113) postulate that SWOT analysis is a static approach and is also focused only on a single dimension. Ehlers and Lazenby (2010:113) argue that the SWOT analysis's focus on the external environment may be too narrow, identified strengths may not necessarily result in an advantage and may lead to overemphasis of a single feature or strength and ignore other important factors that may enhance competitive success. In addition, Hunger and Wheelen (2007:77) assert that SWOT analysis, by itself, is not a solution. Some of the primary criticism of SWOT analysis is that it generates lengthy lists and uses no weights to reflect priorities (Agarwal *et al*., 2012:12; Hunger and Wheelen, 2007:77). Lu (2010:1318) further note that, notwithstanding its common usage, a large gap nevertheless exists between this

technique and its following step – strategy formulation because at its current stage of development, the SWOT analysis is inadequately revealing for the creation of strategic options. Lu (2010:1319) is of the view that this critical gap could be lessened if the traditional SWOT analysis can be enhanced by refining extended lists of SWOT factors into more focussed ones.

From the discussion above, it is evident that aligning organisational strategies with internal and external environment of the organisation is a fundamental necessity for organisational survival. It also became clear that for an organisation to achieve such alignment, an environmental analysis must be undertaken using credible and robust techniques such as the SWOT analysis. As Mehta (2013:225) postulates, a SWOT analysis provides information that is critical in matching the resources and capabilities of the organisation to its operating environment.

This section examined the importance of environmental assessment and how it can be used to enable an organisation to adapt to its environment. Inevitably, an organisation faces both strategic and non-strategic issues and the following section shed some light on how an organisation identifies strategic issues. It also briefly explores some techniques that can be used in identifying strategic issues facing an organisation.

3.12.5 Step 5: Identifying the strategic issues facing an organisation

Bryson (2004:153) states that identifying strategic issues is central to the strategic planning process. Strategic issues are fundamental policy questions or critical challenges affecting the organisation's mandates, mission and values, product or service level and mix, clients, users or payers, cost, financing, structure, processes, and management (Bryson, 2004:42). Certo and Peters (1991:47) as well as Dutton and Duncan (1987:104) share a similar view and note that strategic issues are both internal and external developments and trends which decision-makers regard as significant to the organisation. These events and tendencies are not dealt with in isolation, instead, organisational resources are scattered across a set of strategic issues known as the strategic issue array (Dutton & Duncan, 1987:104). Dutton *et al.* (1983:310) is of the view that exogenous threats and opportunities that confront an organisation is most often the responsible trigger for strategic issues.

Bryson (2011:187) indicates that this step should ordinarily result in the formation of the organisation's strategic issue agenda which is a product of three prior outcomes. The first is an inventory of issues facing the organisation and the second entails the division of the list into two wide categories i.e. strategic and operational issues while the third involves an arrangement of strategic issues in some form of order: priority, logical, or temporal (Bryson, 2011:187). The planning team can use the SWOT analyses to highlight strategic issues facing the organisation (Berry, 2007:338). Bryson (2004:43) is of the view that strategic issues, fundamentally by definition, contain conflicts of one type or another. The conflicts may involve ends (what); means (how); philosophy (why); location (where); timing (when); who (responsible) as well as the stakeholders that might be advantaged or disadvantaged by diverse ways of solving the issue (Bryson, 2011:186). Fundamental questions critical to strategic issue identification which the Southern Growth Policies Board has developed requires that organisations consider the questions: What is the issue? Why is it an issue? Who says it is an issue, and how do we know it is an issue? What are the consequences of not doing anything about the issue? (Berry, 2007:338).

According to Lindgren and Bandhold (2009:47), both trend-based scenarios and contrast, alternative scenarios could be useful as a foundation for producing and choosing strategic issues. Another useful model for evaluating strategic options is the WUS analysis wherein strategy suggestions are put on one axis in a matrix and the evaluation criteria on the other thereby enabling evaluation of each strategy separately against each of the criteria as depicted in Figure 3.4:

CHAPTER 3: OVERVIEW OF STRATEGIC PLANNING THEORY
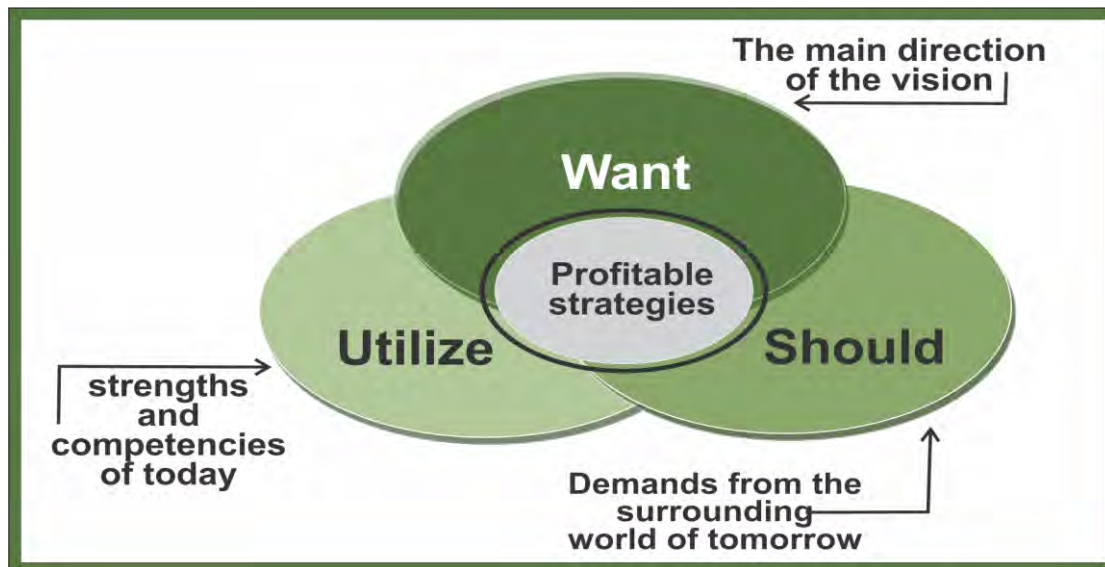
Figure 3.4: WUS analysis (adapted from Lindgren & Bandhold, 2009)

As Lindgren and Bandhold proclaim, a WUS analysis is a single impact analysis that considers three dimensions (Want, Utilise and Should) thereby giving quick answers to these three questions:

i.   Does the strategy contribute to the desired direction of the organisation (Want)?

ii.   Does it utilise present strengths or assets of the organisation (Utilise)? and

iii.   Does it match the future environment (Should)?

It is clear that the identification of strategic issues facing an organisation is a significant step in the strategic planning process. It is also evident that the process of identifying strategic issues facing an organisation may generate conflict regarding how such issues must be addressed. Stated differently, a matter has strategic implications if it can undermine the ability of an organisation to achieve its goals and objectives or threatens the survival of the organisation thereof. Having discussed how an organisation identifies strategic issues, it is logical to expand further in the ensuing section by shedding light on the process of formulating strategies. The critical questions that an organisation must grapple with as part of this process need to be unravelled.

3.12.6   Step 6: Formulating strategies to manage the issues

The purpose of the strategy formulation step is to create a set of strategies that will effectively link the organisation (or community) to its environment and produce significant and enduring public value (Bryson, 2011:222). Draft strategies are generated in this step to express the desired patterns (Bryson, 2004:46). Bryson (2004:183) believes, typically, these strategies are developed to deal with strategic issues, i.e. they outline the organisation's response to the fundamental challenges it faces. According to Certo and Peter (1991:96), managers rely on environmental analysis (as discussed in preceding sections) to provide the information required to start the strategy formulation process.

While there are many ways to develop strategies, Bryson (2004:199-200) is of the view that a useful approach involves a five-part process in which planners answer five questions about each strategic issue:

i.   What are the practical alternatives or visions that must be pursued to address this strategic issue, achieve this goal, or realise this idealised scenario?

ii.   What are the obstacles to the achievement of these alternatives, dreams, or idealised scenarios?

iii.   What key proposal might be pursued to attain these alternatives, dreams, or idealised scenarios directly or to overcome the barriers to their realisation?

iv.   What significant actions (with existing staff working within existing job descriptions) must be taken within the next year (or two) to implement the major proposals? and

v.   What specific steps must be taken within the next six months to implement the major proposals, and who is responsible for each step?

This process begins conventionally, by requesting strategic planning team members to envisage outstanding alternatives for dealing with a specific issue, to be followed with an unconventional task of enumerating the barriers in order to realise the alternatives (Bryson, 2004:200). Listing barriers at this point helps ensure that implementation difficulties are dealt with directly rather than randomly (Bryson,

2004:200). While Bryson (2004:201) recognised the utility of these questions in formulating strategies, he warns that this method does not promote understanding of the relationships between ideas.

In addition to using a SWOT analysis to focus environmental analysis on strategy formulation, Certo and Peter (1991:96) are of the view that the critical question analysis is another useful approach. Critical question analysis provides a general framework for analysing an organisation's current situation and formulating appropriate strategies by answering the following four basic questions: (1) What are the purpose(s) and objective(s) of the organisation? (2) Where is the organisation presently going? (3) What critical environmental factors does the organisation currently face? (4) What can be done to achieve organisational objectives more effectively in the future? (Certo & Peter, 1991:96). Ideally, managers select those strategies that optimise the chances of achieving their organisation's objectives (Certo & Peter, 1991:120). However, a number of constraints often need to be considered when planning and selecting organisational, business or functional strategies. Some of the major ones are mentioned below.

i.   Availability of financial resources: Even when a particular strategy appears optimal for an organisation, serious consideration is necessary regarding the resources to finance the strategy;

ii.   Attitude towards the risk: Some organisations will only accept minimal levels of risk, regardless of the level of potential returns. In these cases, acceptable strategies may be limited to those that expose the organisation to little risk;

iii. Organisational capabilities: Some other excellent strategies may require capabilities beyond those currently at the organisation's disposal; and

iv.   Competitive retaliation: Some strategies may have the unintentional effect of radically increasing competitors' efforts in the marketplace (Certo & Peter, 1991:120-121).

Taking the above into consideration, it is therefore clear that an effective strategy must comply with certain criteria. Key amongst these criteria is that a viable strategy should be acceptable to key organisational stakeholders. The constraints facing an

CHAPTER 3: OVERVIEW OF STRATEGIC PLANNING THEORY

organisation must also be taken into consideration when strategies are formulated. In this regard, an organisation must ensure that it has the required resources (both financial and human resources) to implement the formulated strategies. In formulating strategies, risks from its operating environment also constrain an organisation. It is thus evident that the Bryson Model recognises that risks (including disaster risks) have the ability to undermine the achievement of organisational goals and objectives. This realisation assists those managing programmes within an organisation to critically reflect on the possible impacts of hazards and other unforeseen events on the achievement of projects and initiatives. Moreover, the five-part process discussed above in which planners answer five questions about each strategic issue facing an organisation provides a useful framework for DRR practitioners and policy makers to utilise during development of strategies to reduce disaster risks. Thus acquiring knowledge of the Bryson Model will assist DRR practionners in the development of strategies to reduce disaster risks.

While this section explored how an organisation formulates strategies to manage strategic issues facing it, the ensuing section briefly examine key aspects in the process of reviewing and adopting strategies. The key window of opportunity during which strategies can be adopted is discussed.

3.12.7 Step seven: Review and adopt the strategies or strategic plan

The purpose of this step is to obtain an official decision to adopt and advance with the strategies and plan prepared and informally reviewed in step six (Bryson, 2004:186-187; Bryson, 2011:243). According to Bryson (2011:244), formal adoption is likely to occur at a *window of opportunity,* an occasion when action favouring change is possible. There are three types of windows: firstly, those opened by the emergence of demanding issues, secondly, those opened by significant political shifts (newly elected or appointed policymakers, new executive directors, changed priorities of funding agencies), and lastly, those opened by reaching decision points (times when official bodies are authorised and empowered to act) (Bryson, 2011:244). As Bryson (2004:183) adds, the team should develop strategies that are politically acceptable, administratively workable, as well as legally and morally defensible.

It is important that projects are sponsored and supported by actors whose knowledge of negotiating the intricacies of the relevant arena can help ensure passage. In view of the arguments presented above, it is evident that formulated strategies must be politically acceptable and technically workable. It is also clear that while the frequency of reviewing adopted strategies depends on several factors (some of which militate against regular reviews), as Eskridge (1987:105) argues, generally the strategic plan should be reviewed annually to determine the cumulative effect of seemingly small environmental changes that occurred during the year. Eskridge (1987:105), however adds that a review can also be triggered by meaningful or anticipated changes in the environment.

This section gave an insight into the process necessary for formal adoption of the strategy within an organisation. The following section expands on adopting a strategy by exploring the importance of having an effective vision for the organisation.

3.12.8 Step 8: Establishing an effective organisational vision

In this step, the organisation develops a clear and succinct description of what it should look like once it has successfully implemented its strategies and achieved its full potential (Berry, 2007:334; Bryson, 2004:49). In essence, the vision statement answers the question: "What does the organisation want to become?" (Ehlers & Lazenby, 2010:68; Mehta, 2013:7). Wilkinson and Monkhouse (1994:17) add that the vision articulates a view of a realistic, reliable and desirable future which in some ways is better than the existing state of affairs. Van der Waldt (2000:77), in agreement with the previous authors, note that there are several approaches to develop a vision. Firstly, the desired future state can be expressed philosophically in terms of the belief system capable of moving the institution into the future. Secondly, it can be expressed practically in terms of what the organisation desires to achieve in the future. Lastly, small to micro-sized public institutions may adopt either a scenario approach or a critical issues approach to future visioning (Van der Waldt, 2000:77).

It is important that a vision statement is clearly understood by all levels of managers and employees as failure to do this can slow down strategic decision making and also be an obstacle to the efforts of implementing strategy (Ehlers & Lazenby, 2010:70). Mehta (2013:7) adds that in contrast with the mission which is for the

customer or clients, a vision statement is for the organisation and its members and describes how the organisational future would be like on achieving the mission. A vision of success can become a living document only if it is utilised consistently as a premise for discerning and justifying appropriate organisational decisions and actions (Bryson, 2004:236). When a vision statement does not regularly inform organisational decision making and actions, then preparation of the statement was probably a futile exercise (Bryson, 2004:236). It is evident that a vision is critical to define a realistic and attractive future that the organisation strives to realise. It is also clear that while top management is responsible for developing an organisational vision, such process must include employees at all levels within an organisation to maximise buy-in and reduce resistance to its implementation. In short, an organisation must utilise a vision as a rallying point for decision-making and resource allocation within an organisation.

The discussion above is important for DRR practionners as it outlines the importance of establishing a vision for each organisation. This is essential because each disaster risk management organisation also need to adopt a clear and unambiguous vision which outlines what an organisation seeks to achieve. The adoption of a national vision for disaster risk management by India demonstrate that it is important for DRR practitioners to acquire knowledge on how to develop an organisational vision (see Chapter 7).

Having outlined how a vision can be used to articulate the desired future state for the organisation, the next section attends to the critical aspect of developing an effective vision implementation process.

3.12.9 Step 9: Develop an effective implementation process

Goldstein *et al.* (1992:325) argue that strategic planning in itself is of little use to the organisation. Indeed, as Bryson (2004:238) proclaims, well-executed implementation (step nine) completes the transition from strategic planning to strategic management by incorporating adopted strategies throughout the relevant system. As Bryson (2004:238) and David (2013:274) postulate, creating a strategic plan can produce significant value, especially in terms of building intellectual, human, social, political, and civic capital, but it is often inadequate in itself. This view is echoed by

Katsioloudes (2006:19) who argues that the implementation of the strategy is arguably the most important stage in the process for one reason: without successful implementation, an organisation's strategy is really nothing more than fantasy. Carroll and Hall (1987:138) add that no design, however grand, will assist the organisation if it is left on the drawing board without being implemented. It is in this context that Poister and Streib (1999:311) argue that strategy implementation requires vehicles like action plans, budgets, robust performance management systems, changes in organisational structure, as well as programme and project management. Bryson (2004:50) stipulates that these actions plans should outline implementation responsibilities of oversight bodies, organisational teams or task forces, and individuals, expected results, specific objectives and milestones as well as resource requirements.

Thus it is critical that the organisation must draw up adequate action plans, sponsors and resources to ensure successful and meaningful implementation (Bryson, 2004:51). Ehlers and Lazenby (2010:335) supports this view and confirm to achieve successful strategy implementation, it is essential that resources be allocated in such a way that they support the organisation's long-term goals, chosen strategy, structure and short-term goals. Louw and Venter (2010:32) further state that successful strategy implementation relies on strategic leadership which is the key for implementation as well as sound organisational architecture.

With regard to problems facing strategy implementation, Stiles (2000:171) notes that there are two broad causes of problems: one is simple, one is more complex. While the simple cause is through bad decision making, either at the level of strategy making itself, in terms of poor design or unrealistic aims, or through choosing inappropriate communication media with which to transfer the plans or processes through the organisational hierarchy, the complex cause lies in the interpretations that middle managers make about the strategy to be implemented (Stiles, 2000:171). In this regard, Floyd and Wooldridge, 1997 cited in O'Creevy (2000:153-154) and Melcher and Kerzner (1988:2) argue that middle managers are central in the development and implementation of strategy. Developing a strategy is a key step in the strategic planning process, developing an effective implementation strategy is arguably the most important stage of the process. Strategy implementation thus requires active participation of managers throughout all levels. It was also found that

middle managers play a vital role in the process of developing and implementing strategy.

Chapters 5 of this study has revealed that South Africa has relatively advanced, robust and comprehensive regulatory and institutional frameworks to support effective DRR in the country. This observation was also affirmed by respondents who participated in this study (see Chapter 8). The discussion on the mechanisms and systems to support effective implementation of strategies including action plans, budgets, performance management systems, programme and project management is therefore relevant to DRR practices within the South African environment (see Chapter 8 and 9). To this end, acquiring knowledge and understanding on measures that can enhance implementation of strategies is vital for effective an efficient DRR in South Africa.

As discussed in the previous sections, strategic planning is an on-going process that does not end when plans are implemented. Due to the dynamic nature of the environment within which an organisation functions, it is imperative that strategies must be regularly assessed to accommodate changes from the environment. In view of this, the ensuing section examines the importance of reassessing the strategies and the strategic planning process.

3.12.10   Step 10: Reassess the strategies and the strategic planning process

Once the implementation process has been underway for some time, the organisation should review the strategies and the strategic planning process, as a preamble to a new round of strategic planning (Bryson, 2004:51). Times change, situations change, and coalitions change and in view of this, strategies that work must be maintained and protected through vigilance, adaptability, and updated plans (Bryson, 2004:264). According to Bryson (2004:264-265), strategies cease to work because of four reasons:

i.   When insufficient resources are devoted to its implementation;

ii.   Problems changes, typically provoking a need for new strategies, meaning that what was once a solution now becomes the problem;

iii.   Significant problem areas become crowded with several policies and strategies, thereby producing undesirable results; and

iv.   The political environment may shift or supportive leaders and managers may be replaced by people who are antagonistic to the strategy.

Bryson (2011:319-320) identified three key outcomes from this phase which include the maintenance of good strategies, modifications of unsuccessful ones as well as removal of undesirable strategies, the construction and maintenance of a strategic management system to ensure effective strategic management within the organisation, and lastly, the mobilisation of energy and enthusiasm to address the next important strategic issues that comes along. Bryson's four reasons why strategies cease to work are particularly relevant and applicable to DRR in South Africa and have been identified as some of the main factors adversely impacting on implementation of DRR in the country (see Chapters 8 and 9). Thus, the strategic planning process outlined in the Bryson Model is relevant to DRR discourse in South Africa hence acquiring knowledge regarding this can significantly contribute to improved implementation of initiatives that seek to reduce disaster risk in the country.

Although the Bryson model is widely used, it is not without limitations. While this model recognises some of the problems of strategic management in a public sector environment, the model does not fully address the complexities of competing internal managerial processes, such as with the budget and corporate-planning approaches including rational and power behavioural factors (Johnston, 1998:356). The above said, it is clear that in a rapidly changing environment, in which most organisations operate, strategies must be continuously reassessed and adapted to ensure they remain relevant.

This section discussed the process of strategic planning in detail and outlined the steps necessary for the process. From this discussion, it became unequivocally evident that an organisation can benefit immensely from strategic planning. The following section expands further on this by examining the benefits that an organisation can obtain from this process.

3.13 BENEFITS OF STRATEGIC PLANNING TO AN ORGANISATION

Bryson and Alston (2005:4), Donnelly (1984:3), Ehlers and Lazenby (2010:12-13), Kriemadis, 2009 cited in Rezvani *et al*. (2011:1538), and Steiner (1979:35-45) all note that while strategic planning cannot predict future state, in turbulent environments, it can assist organisations develop a coherent and defendable basis for decision making, improve organisational performance and anticipate future problems and opportunities. It is however difficult to describe in specific form the benefits that will accrue to an organisation because of strategic planning as the assessment of these benefits is highly subjective (Radford, 1980:7). However, flowing from the above discourses, it is clear that strategic planning forms the foundation upon which most organisational activities such as resource allocation, decision making, flow from. It is also clear that for an organisation to maximise its benefits from strategic planning, it must ensure active involvement by staff at all levels within the organisation. This view is supported by David (2013:45) who argues that this is important as line managers play a critical role in strategy implementation.

While there is consensus that strategic planning is beneficial to organisations, Barry 1986 cited in Bryson and Einsweiler (1988:3) is of the view that it is not always advisable. In this regard, Bryson and Einsweiler (1988:3) advance the following reasons for this failure of strategic planning:

i. Strategic planning will not be beneficial if its costs outweigh any benefits or the process takes resources that can be better deployed elsewhere;

ii. Many organisations tend to depend on the intuition of extremely gifted leaders instead of formal planning processes – in instances where such leaders are strategically minded and experienced, the organisation may not need more formalised strategic planning;

iii. Other organisations – particularly those that have difficulty reaching decisions that cut across levels or programmes may find that "muddling" is the only process that will work;

iv.   Strategic planning may not be the best first step for an organisation whose roof has fallen. For example, an organisation may need to fill a key position of leadership prior to commencing with strategic planning;

v.   If an organisation does not have the skills, resources, or commitment of key decision makers to produce a credible plan, strategic planning will be a futile exercise; and

vi.   Strategic planning should not be undertaken if implementation is extremely unlikely.

According to Rea and Kerzner (1997:2), despite the obvious benefits of effective strategic planning, it has come under much criticism for a variety of reasons. In view of this, the following section briefly presents limitations of strategic planning.

3.14   LIMITATIONS OF STRATEGIC PLANNING

Several business and public management academics have reasoned that strategic planning does not work, or at least does not work very well (e.g., Mintzberg 1994) (Bryson *et al*., 2009:173). According to Rea and Kerzner (1997:2-3), strategic planning has become fragmented and lacks a widely accepted framework. Mintzberg identified 10 schools of thought concerning strategic planning and contends that confusion about different schools of thought is further exacerbated by planners who separate thinking and doing (Rea & Kerzner, 1997:3). Steiner (1979:44) is of the opinion that planning does have its limitations. Makridakis and Heau (1987:5); and Steiner (1979:44-46) argue that plans, when completed, limit choice and reduce initiative in a range of alternatives beyond the plans. Also, organisational politics and personal ambitions play an important role in the formulation and implementation of strategy, and strategists are not immune from judgemental biases, nor are they free from the considerable judgemental limitations that characterise humans.

Furthermore, strategic planning's harshest detractors have described it as comprising of no more than a fairly inflexible, mechanistically applied sequence of agreed steps often needing enormous amounts of information, power, and authority to complete; and typically removed from processes, methods, and mechanisms of implementation, like budgeting (Altshuler 1965; Mintzberg 1994; Widavsky 1979, cited by Bryson *et*

al., 2009:174). Flowing from the above discourses, other opponents of strategic planning including Korosec (2006:222) argue that strategic planning often does not result in major new initiatives within departments or activities that are useful to the organisation. In short, critics suggest that organisations undergo strategic planning to comply with prescripts and because it is accepted as a normal part of the annual planning process, or because it is seen as the politically correct action to take (Allison, 1997; Koteen, 1997, cited by Korosec, 2006:221). In this section it was explained that despite the popularity and widespread use of strategic planning, it still has its limitations. Managers involved in strategic planning need to take these limitations into consideration.

Together with Chapters 2 and 9, this chapter addresses the first objective of the study, viz. to define, assess, examine and critically analyse the theories of Organisation and Strategic planning and how they inform national multi-sectoral planning. This chapter raised a number of issues pertaining to origin and development of strategy, importance of strategy in an organisation, levels of strategy, evolution of strategic planning, strategic planning process as well as benefits and limitations of strategic planning. Chapter 2 revealed that organisations exit to achieve certain goals in a dynamic and complex environment. Building on this theoretical foundations, this chapter unearthed that for an organisation to achieve its desired goals, it must have a clear and coherent strategy which must provide direction to those working within an organisation and also provide meaning for those outside it. This chapter has also revealed that the Bryson Model also known as the Strategy Change Cycle provides a robust framework that is essential for the development of a strategic plan. The main aim of this study is to develop a model for integrating DRR in national multi-sectoral planning in South Africa. To this end, acquiring knowledge and understanding on strategic planning theory is essential to understand the theoretical principles and considerations that underlie strategic planning practices by national government departments in the country. This knowledge will also assist in framing how DRR can be integrated into strategic planning frameworks that are utilised by the South African government.

3.15   CONCLUSION

Chapter 3 aimed to provide the reader with an overview of strategic planning theory. The origin and definition of the concept strategy was presented. From this discussion, it emerged that the term 'strategy' has military roots. It also came to sight that while several authors define strategy from different standpoints, consensus exist that having a strategy enhances the ability of an organisation to achieve its goals and objectives in a fast changing and turbulent environment. It was also found that there are three levels of strategy in an organisation, each with different focus and locus. Strategic planning as a process was examined as well as its evolvement over the years. The differences between strategic planning and long-range planning were explored together with the linkage between strategic planning and strategic management.

From this discussion, it appeared that strategic planning is a significant component of strategic management which is a broader process encompassing strategy implementation and control. The focus and premises of strategic planning were also discussed. Subsequently, this Chapter focussed on the strategic planning process using the Bryson model, which is also known as the strategy change cycle. Emphasis was placed on specific models or frameworks that an organisation can utilise in analysing environmental trends. Chapter 3 presented the benefits that strategic planning holds to an organisation. In conclusion, this Chapter produced a critique of strategic planning, from where it became evident that despite its popularity, strategic planning does have pitfalls which managers must consider when they are involved in the process.

The next Chapter intends to provide the reader with an overview of South Africa's disaster risk profile.

CHAPTER 4:

THE SOUTH AFRICAN DISASTER RISK PROFILE

South Africa faces increasing levels of disaster risk. It is exposed to a wide range of hazards, including drought, cyclones and severe storms that can trigger widespread hardship and devastation (South Africa, 2005:1).

4.1   INTRODUCTION

This Chapter presents an overview of South Africa's disaster risk profile in order to contextualise DRR practices and discourses within the South African environment. It is inevitable that the geographic location within the southern Africa region impacts South Africa's disaster risk profile. Against this background, this Chapter starts off with a brief analysis of disaster risks within the Southern African Development Community (SADC) to provide a regional perspective to the DRR discourses in the South African environment. This will be followed by an in-depth discussion of South Africa's disaster risk profile which will cover the key hazards that South Africa face, factors that increases the country's vulnerability to these hazards as well as the impacts thereof.

Like in most developing countries, urbanisation and climate change are amongst the key drivers of disaster risks in the country. First, the relation between urbanisation and disaster risks is explored before focusing on the interface between climate change and disaster risks within the South African environment. As highlighted above, disaster risks in South Africa are inextricably linked to risks within the region. In the light of this, the next section provides a brief discussion of key factors that exacerbate the vulnerability of the SADC region and its people to hazards (natural and anthropogenic) with a view to provide context and perspective to disaster risks that South Africa faces.

4.2   DISASTER RISKS WITHIN THE SOUTHERN AFRICAN REGION

South Africa shares boundaries with six countries, four to the north i.e. Namibia, Botswana, Zimbabwe and Mozambique and two effectively landlocked within South

Africa i.e. Swaziland and the Kingdom of Lesotho (as illustrated in Map 4.1) (South Africa, 2011a:1; South Africa, 2013b:2).

Figure 4.1: Map of the SADC (adapted from SADC: 2013)

As is evident from Figure 4.1 above, South Africa faces significant trans-boundary disaster risks and this was aptly captured in the White Paper on Disaster Management which asserts that "*natural and other threats are not constrained by national boundaries. Measures taken in South Africa can increase or reduce risks in neighbouring countries, just as potential dangers across our borders can directly affect South Africa*" (South Africa, 1999a:19). The cross-border nature of disaster risks facing the country and its neighbours have also been highlighted in the White Paper on Climate Change Response (South Africa, 2012a:24) which noted that extreme weather events often cross national borders thereby impacting on the region as a whole. In addition to this, the World Bank (2012:13) observes that cross border disasters present particular challenges like how to manage risks across frontiers, or how to deal with reconstruction. It is therefore critical that South Africa's DRR efforts

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recognise the effects of trans-boundary risks on the country's disaster risk profile and ensure that appropriate institutional measures are put in place to manage these risks. (See Tau, 2014 for an authoritative account on institutional arrangements for collaboration on DRR within the SADC region).

4.2.1   Factors driving disaster risks within the SADC

A study conducted by the United Nation (UN) 's Food and Agriculture Organisation (FAO) in 2013 of emergencies from 2000-2012 revealed that the SADC region is under sustained environmental and social pressure despite widespread perceptions that it has a relatively homogenous and low risk profile (Holloway *et al*., 2013:28). The above is consistent with Karimanzira (1999:20-21); SADC (2010a:10) and UNHABITAT (2014:236) who also assert that this region faces numerous socio-economic and developmental challenges such as HIV/AIDS, circular migration, urbanisation, unemployment, food and water insecurity, malnutrition, poverty, conflict and instability as well as climate change. All these challenges exacerbate the vulnerability of the region and its people to disaster risks. Additionally, climate change is also expected to significantly impact on the disaster risk profile of the region.

A study by the SADC (2010a:5) discovered that the dependence of SADC countries on climate-sensitive sectors such as health, agriculture (especially rain-fed), water, infrastructure and transport, coastal zones, energy, tourism, biodiversity and ecosystems, forestry and fisheries, environment and land significantly increases the vulnerability of the region to climate change. UNHABITAT has done a study on the state of African cities in 2014 and concurs that climate change threatens (directly and indirectly) to disrupt systems critical to the survival of cities in the SADC (UN HABITAT, 2014:227). Furthermore, the SADC region is amongst the poorest regions in the world with the majority of its total population living below the poverty line (SADC, 2010a:10). Poverty in all its various forms and manifestations remains one of the major development challenges facing the region (SADC, 2003:5). While poverty levels vary from one country to another, there is consensus that the manifestation of poverty is acute, especially among vulnerable groups such as households where the elderly and children are in charge. These groups specifically show an upward trend as a result of HIV/AIDS (SADC, 2009:12). Karimanzira (1999:21) argues that due to

climate change, this region must brace itself for extremely difficult times ahead as predictions shows an increase in the frequency, extent and severity of extreme weather events like droughts, windstorm and heavy rains, wildfires, flooding, pests and diseases to name but a few. This evolving risk patterns will inevitably impact on the socio-economic development trajectory of the region and has the capacity to adversely undermine the achievement of the Millennium Development Goals (MDGs) (Karimanzira, 1999:22; SADC, 2010a:18-19).

It is evident that the SADC region is facing numerous developmental challenges, some of which significantly impact directly and/or indirectly on the vulnerability to disasters. It is also clear that the high levels of poverty, high prevalence of HIV/AIDS and crisis-induced mass migration which increases vulnerability of this region and its populace to disasters. As the White Paper on International Relations (South Africa, 2011b:20) observed, the destiny of South Africa is inextricably linked to that of the SADC region. It is against this backdrop that the disaster risk profile of South Africa must be contextualised.

Having provided a summary of SADC's disaster risk profile as well as some key factors driving vulnerability, the following section expands further on this by closely examining the disaster risk profile of South Africa.

4.3   SOUTH AFRICA'S DISASTER RISK PROFILE

While South Africa is not susceptible to spectacular, destructive and media-attracting hazards such as volcanic eruptions and earthquakes, localised incidents of wildfires, informal settlement fires, flooding (especially flash flooding), drought, oil spills and mining accidents occur frequently and undermine livelihoods at both household and community levels (UNISDR, 2004c:1; Vermaak & van Niekerk, 2004:555). The International Federation of Red Cross (IFRC) has executed a study in 2011 that supports the above assertion and notes that South Africa faces a wide-range of natural and anthropogenic hazards which include droughts, floods, dam failures, urban and rural fires, mining-induced earthquakes and sinkholes, epidemics, large scale transportation accidents, and spillages of hazardous waste that could potentially lead to disaster events (IFRC, 2011a:18).

Flowing from the discourses above, a study by the IFRC (2011a:18), revealed that most frequently occurring disasters are as a result of impacts of these hazards: floods, droughts and wildfires (in order of frequency). Viljoen (2003:1) echoes the previous observation in his analysis of the country's hydrology characteristics and argues that although drought is the most general hydrological characteristic, floods remain a major issue within the South African climate. These hydro-meteorological hazards are also prevalent across the African continent as a study that the World Meteorological Organisation (WMO) has executed in 2014, highlighted. This specific study observed that between 1970 to 2012, 1 319 disasters were reported in Africa and floods were the most prevalent hazard (61%) while drought led to the highest number of deaths (91% of all deaths due to disasters) in the continent (WMO, 2014:10). Closer scrutiny of data from South Africa 's National Disaster Management Centre (NDMC) confirms that indeed, most disasters in the country occurred as a result of flooding and drought as illustrated in Table 4.1 below (list not exhaustive):

Table 4.1:   Table of declared drought and flood disasters 2004 – 2013

YEAR	PROVINCE	TYPE OF HAZARD
2005	Western Cape	Drought
2005	North West	Drought
2005	Limpopo	Drought
2006/2007	Eastern Cape	Floods
2009/2010	KwaZulu Natal	Floods
2010/2011	Limpopo	Floods
2013/2014	North West	Drought

Source: South Africa, (2014a)

There are other hazards (natural and anthropogenic) that can occur and result in disasters as stated previously in section 4.3, however, this chapter cannot address all these hazards. Therefore, the focus of the discussion will be on the three primary

hazards i.e. floods, wildfire and drought (as alluded to above) as well as aspects that increases vulnerability of the country to these hazards. In the following section, an overview of each of these hazards and the factors contributing to vulnerability are explored.

4.3.1 An overview of flood risk in South Africa

Globally, flooding is a very common environmental hazard with over 3000 disasters recorded in the CRED database since 1990 (Ahern *et al*., 2005:36; Smith & Petley, 2009:232). This view is supported by Jonkman (2005:151) who assert that, annually, floods cause significant damage globally and has killed about 100, 000 persons and affected over 1.4 billion in the 20th century. Within the South African context, floods occur naturally as a result of the country's highly variable climate, but they may also be caused by dam failures (South Africa, 2004:109). Consistent with data in Table 4.1, Viljoen (2003:1) notes that on average, floods causing significant damage occur once every two years in some parts of the country. An analysis of some of the worst disasters that occurred in South Africa reveals that flooding has resulted in significant loss of lives over the last three decades (1980-2010). Notable amongst these are Laingsburg (104 lives lost in 1981), Merriespruit (17 lives lost in 1994) and Pietermaritzburg floods in which 173 lives were lost in 1995 (South Africa, 1998a; Zuma *et al*., 2012:128). In addition to the high number of lives lost due to floods, livelihood disruption, destruction of dwellings in communities living in the floodplains of rivers, and damage to critical public infrastructure such as water distribution systems and sewage treatment works are some of the effects of flooding (South Africa, 2004:109).

4.3.1.1 The interface between flooding and urbanisation in the South African context

According to Douglas *et al.* (2008:188) and the UNHABITAT (2007:185), flooding is one of the hazards that urbanisation has accentuated. In an analysis of climate change, flooding and the urban poor in Africa, Douglas *et al* (2008:187-188) maintain that widespread urbanisation and population growth have increased the risk of flooding in urban areas. This analysis further revealed the following key emerging trends regarding urban flooding in Africa:

i. Urban flooding is becoming an increasingly severe and recurrent problem for the urban poor;

ii. Climate change is altering rainfall patterns and increasing storm frequency and intensity thereby accentuating flood potential;

iii. Local human factors, particularly urban growth, the occupation of floodplains and the lack of attention to waste management and to the construction and maintenance of drainage channels are also aggravating the flood problem; and

iv. The unwillingness of government at all levels to engage in the provision of integrated drainage systems in informal settlements, which are often considered as being outside the framework of urban regulation and planning.

Within the South African context, urbanisation is one of the key drivers of disaster risks. Urbanisation also results in the increase of informal settlements often located in hazard prone areas. Additionally, urbanisation influences the magnitude and frequency of flooding through various pathways such as through the creation of highly impermeable surfaces which limits infiltration thereby increasing runoff and the absence of adequate storm-water drainage facilities (Smith & Petley, 2009:240). More specifically, Benjamin (2008:58) adds that within the South African environment, urbanisation emphasizes urban flood risk through factors such as location of houses in flood plains, poor solid waste and storm water drainage management, poor housing construction materials and building practices. Bouchard *et al.* (2007:4) confirm these views and their study on how to improve flood risk management in informal settlements of Cape Town identified typical factors (largely prevalent across South Africa's informal and peri-urban areas) that increase flood risk in the informal settlements as poor location, blocked infrastructure and lack of infrastructure. The following section briefly explores factors driving vulnerability to flood in the South African environment.

4.3.1.2 *Floods as a socio-economic phenomenon in South Africa*

Like in most developing countries, vulnerability to flooding in South Africa is driven by a myriad of socio-economic factors. This view is echoed by Douglas *et al.* (2008:187)

and Few (2003:50) who posit that while floods are a natural phenomenon, the damage and losses from the floods are largely the consequences of human action. In a pioneering book published in 2000 to mark the end of the International Decade for Natural Disaster Reduction (IDNDR), Parker (2000:3-12) echoed a similar view and argued that floods are the result of an interaction between environmental and social processes (where the term 'social' embraces social, economic and political processes). Jonkman (2005:168) and Parker (2000:8) goes further to assert that while natural events causes floods, social and environmental factors which structures and configures the lives of individuals and groups of people in a given society magnify vulnerability to this hazard as illustrated in Figure 4.2 below. At the heart of Parker's argument is that social factors determine the victims of flood disasters, who will recover most quickly from a flood event, the scale and impacts of flood disasters to mention but a few (Parker, 2000:10). With the above as a guiding context, Douglas *et al*. (2008:187-189) add that within the South African environment, the poorest people are most vulnerable as they settle and live in floodplains especially in urban areas as illustrated by areas such as Soweto on-sea near Port Elizabeth and Alexandra in Johannesburg.
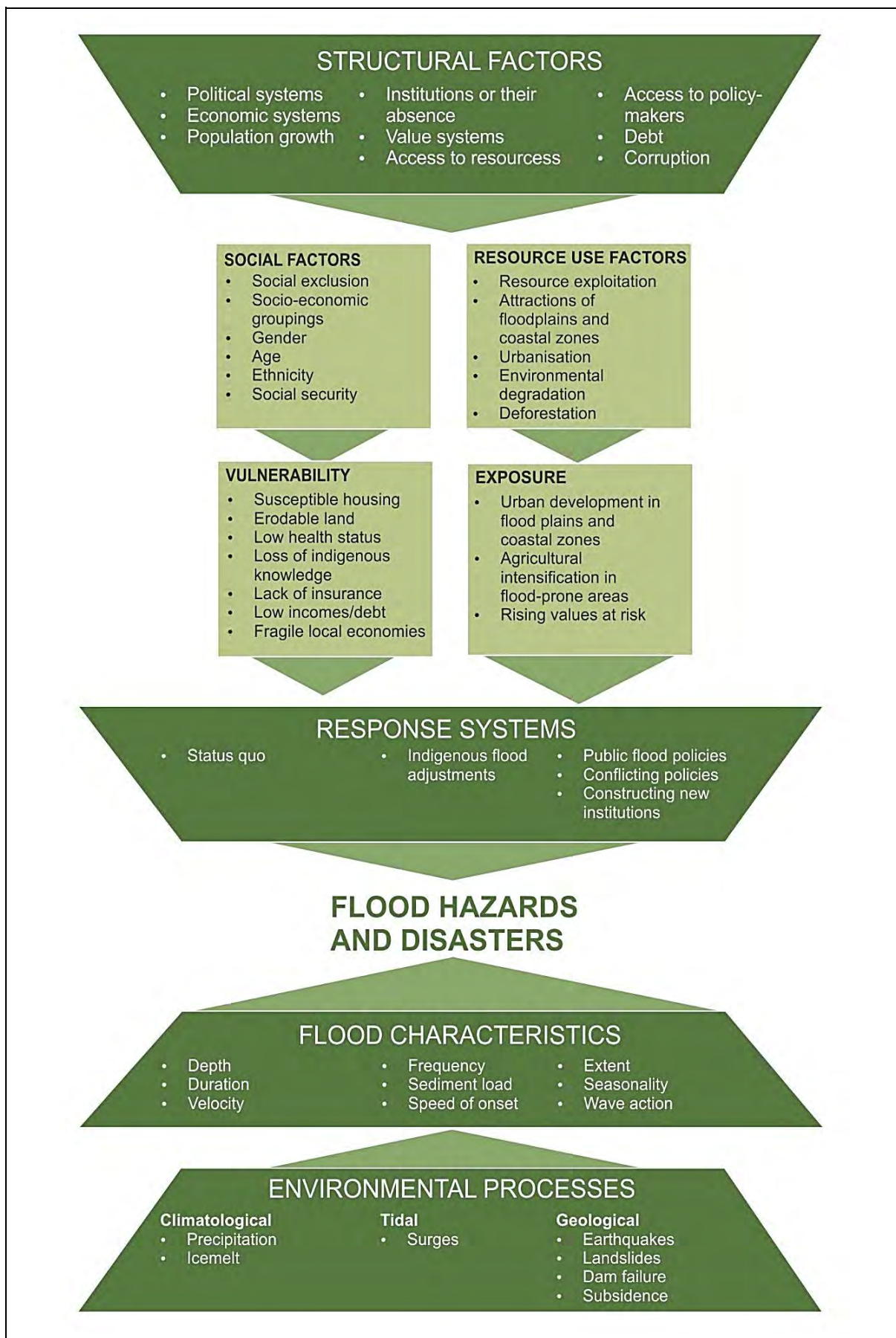
Figure 4.2: Causes of flood hazards and disasters (adapted from Parker, 2000)

While these factors (outlined in Figure 4.2) at the heart of flood vulnerability are not unique to South Africa, experience has demonstrated that most of these factors are in fact prevalent in the country and drives vulnerability to flooding in both urban and rural areas within the South African environment.

4.3.1.3   Impacts of flooding on South African society

Parker (2000:30) and Schmuck (2012:245), confirm that the impacts of floods on society are complex and pervasive. Parker (2000:31) adds that damages caused by floods can be classified or categorised into tangible and intangible, direct or indirect as well as primary (immediate effects), secondary and tertiary losses as illustrated in Figure 4.3.
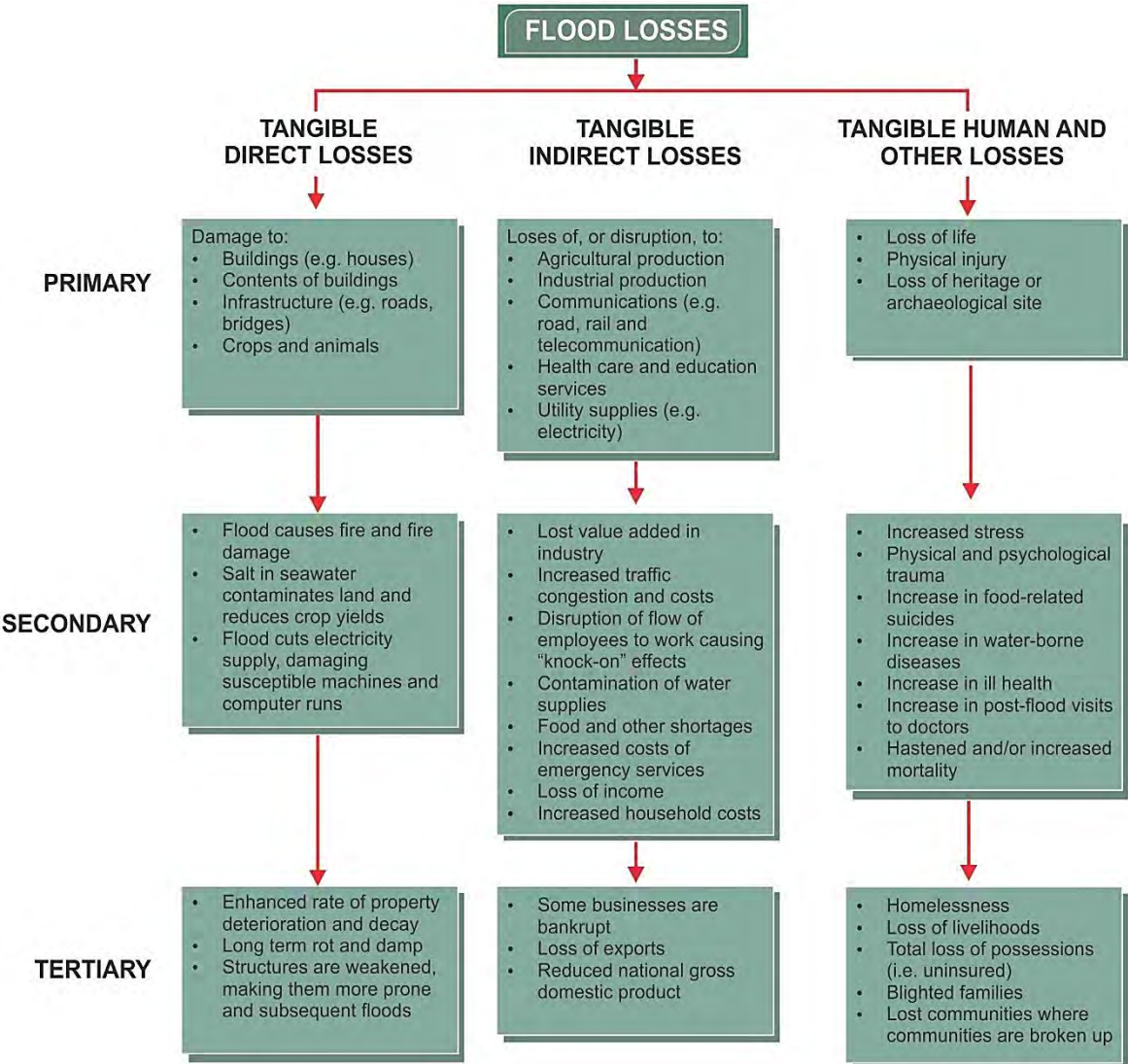
Figure 4.3:   Categorisation of flood losses (adapted from Parker, 2000)

As illustrated in Figure 4.3, floods also impact significantly on health and well-being (Ahern *et al.*, 2005:36). Within the South African context, an analysis by Khandlhela and May (2006:275) on the impact of the floods that occurred in the Limpopo Province in the year 2000 revealed that health of most victims was adversely affected as compared to years without such flood events. In this regard, diarrhoea was reported to be widespread, followed by influenza, tuberculosis, asthma, body sores (emanating from mosquito and tick bites) as well as waterborne diseases such as malaria and cholera (Khandlhela & May, 2006:281). With regard to other causes of mortality in floods and their immediate aftermath, Schmuck (2012:245) posits that electrocution, deaths occurring during evacuation in traffic accidents, heart attacks when people try to carry their belongings upstairs are all causes of deaths in urban areas, while snake and spider bites and collapse of poorly constructed houses contributes significantly to mortality in rural areas. In short, following a flood event, weak individuals are likely to be killed by diseases.

Notwithstanding these adverse effects, floods also have positive impacts at both household and community levels (Few, 2003:45). Pelling, 1999 (cited by Few, 2003:45) argues that while some people make financial gains from floods as contract labourers to clear waste and debris following a flood event, the local and national institutions sustained by the flood targeted resources also benefit significantly. This assertion resonates with the finding of Khandlhela and May (2006:282) that after the 2000 floods in the Limpopo Province of South Africa, substantial increases in income were recorded as relatives living in urban cities increased remittances to support reconstruction efforts. Additionally, floods can also irrigate fields, flush out salts and unwanted toxins from soils and watercourses as well as recharge reservoirs (Few, 2003:45). Schmuck (2012:244) and Wisner *et al.* (2004:202-203) confirm this and state that floods are also a normal and required component of agricultural and ecological systems and assist in the regeneration of plants, crops and aquatic life. This two-faced nature of flood impact is fundamental to recognise as it provides a basis for understanding why many residents (particularly in developing countries) take an ambivalent attitude toward flood events (Few, 2003:46).

As illustrated in Figure 4.3, it is evident that the impacts of floods are indeed complex and cut across various sectors. It is also clear that flooding can have an adverse impact on the economy. The fact that floods can trigger the onset of other hazards

CHAPTER 4: THE SOUTH AFRICAN DISASTER RISK PROFILE

such as fires and water-borne diseases clearly indicates that if flooding is not well-managed, it has the potential to undermine societal resilience to hazards. In essence, this discussion has demonstrated that effective flood management strategies are critical as the adverse impacts of floods are pervasive and capable of pushing back developmental progress.

Having presented how floods contribute to disaster risks in the South African environment, the ensuing section turns attention to wildfire risks faced by the country.

4.3.2   An overview of wildfire risk in South Africa

According to Goldammer and de Ronde (2004:ix), fire is a widespread phenomenon in Africa with over 168 million hectares that burn annually. It is in this context that several scholars (e.g. Forsyth *et al*. 2006:12; Goldammer & de Ronde, 2004:ix) have characterised Africa as a fire continent. Within the SADC context, wildfires have also become a major concern in the region with regard to the negative impacts they have on the environment and human welfare alike (SADC, 2010b:2). Like other countries in the region, South Africa is particularly prone to wildfires (Pyne *et al*., 2004:ix). In line with Forsyth *et al*. (2006:1), wildfires occur widely throughout the country and it is only in the desert regions such as the Western Kalahari and in the Nama and Succulent Karoo Biomes that they pose negligible or no risk. As Forsyth *et al*. (2006:25) suggest, wildfires are indisputably a natural and ecological factor in South Africa and numerous species are adapted to fire and thus require it to complete key stages in their life cycle.

Additionally, the risk of wildfires is also directly linked to the various types of vegetation found in different parts of the country. Some vegetation is not only fire prone but is also fire-dependent and the exclusion of fire in these biomes leads to undesirable structural transformation and significant adverse biodiversity change (Bond *et al*., 2003, cited in South Africa, 2011a:124). A study by Forsyth *et al*. (2010:11) captures aptly and succinctly the ecological role of fires in the country's ecosystem:

> *"Fire in the ecosystem is an ecological process and part of the environment. It has a fundamental role in sustaining biodiversity. However, if fire is mistimed, occurs too frequently or too seldom, or is too severe, it may result in ecosystem*

degradation. Without fire, many of the country's ecosystems would look quite different, because fires rejuvenate grasses and fynbos shrublands and prevent the development of dense woodlands and forests".

4.3.2.1   Wildfire as a hazard in the South African environment

There is consensus on the ecological importance of wildfires as well as its utility as a tool in sustainable land use and resource management (FAO, 2006:10; Goldammer & de Ronde, 2004:ix; SADC, 2010b:I). Nonetheless, wildfires pose a major hazard to human lives, livelihoods and the ecosystem, property and fire-sensitive natural resources in South Africa with resource poor communities being the most vulnerable (Forsyth *et al*., 2006:8; Le Maitre *et al*., 2014:424; Pyne *et al*., 2004:ix). Although information on loss of life and injury due to these fires remains poor and fragmented, there is sufficient empirical evidence that indicates that during bad years, hundreds of people lose their lives and livelihoods with significant associated socio-economic losses (Forsyth *et al*., 2010:5). Forsyth *et al.* (2010:5) add that, similar to most countries prone to wildfires, smoke pollution with significant long-term health effects as a result of planned or unplanned fires is a challenge that South Africa has to contend with as well.

In the same way, Forsyth *et al*. (2010:4), identified the key factors exacerbating wildfire risk in the country as rural insecurity coupled with land tenure insecurity in most rural areas, gentrification which has resulted in unprecedented increases in absentee landowners, human-induced ignitions as well as the increasing rural-urban interface. More specifically, the growing rural-urban interface is also magnifying the risks by exposing more vulnerable communities especially in informal settlements to wildfires. Furthermore, rural-urban migration which depletes the human resources required for sustainable fire management activities in rural areas contributes to increased wildfire risk. Lending support to this notion, Le Maitre *et al*. (2014:424) proclaim that population density in rural areas where most vegetation types are prone to fires as well as the dependence of livestock on natural pasture for grazing heightens vulnerability of rural areas to wildfire hazard. Furthermore, the vulnerability of critical assets like plantation forests, pasture, crops and ecotourism facilities

necessary to sustain rural economies also compounds the challenges posed by wildfire risks.

4.3.2.2   *Classifying wildfire risk in South Africa – an overview*

Inevitably, the risk of wildfires varies across the country. This variation is also linked to the distribution of different types of vegetation as discussed above. An analysis conducted by Forsyth *et al.* in 2010 revealed that 30.6% of the country has an extreme veldfire risk, 31.3% is high, 11.7% is medium and 26.4% is low as illustrated in Figure 4.4 below:
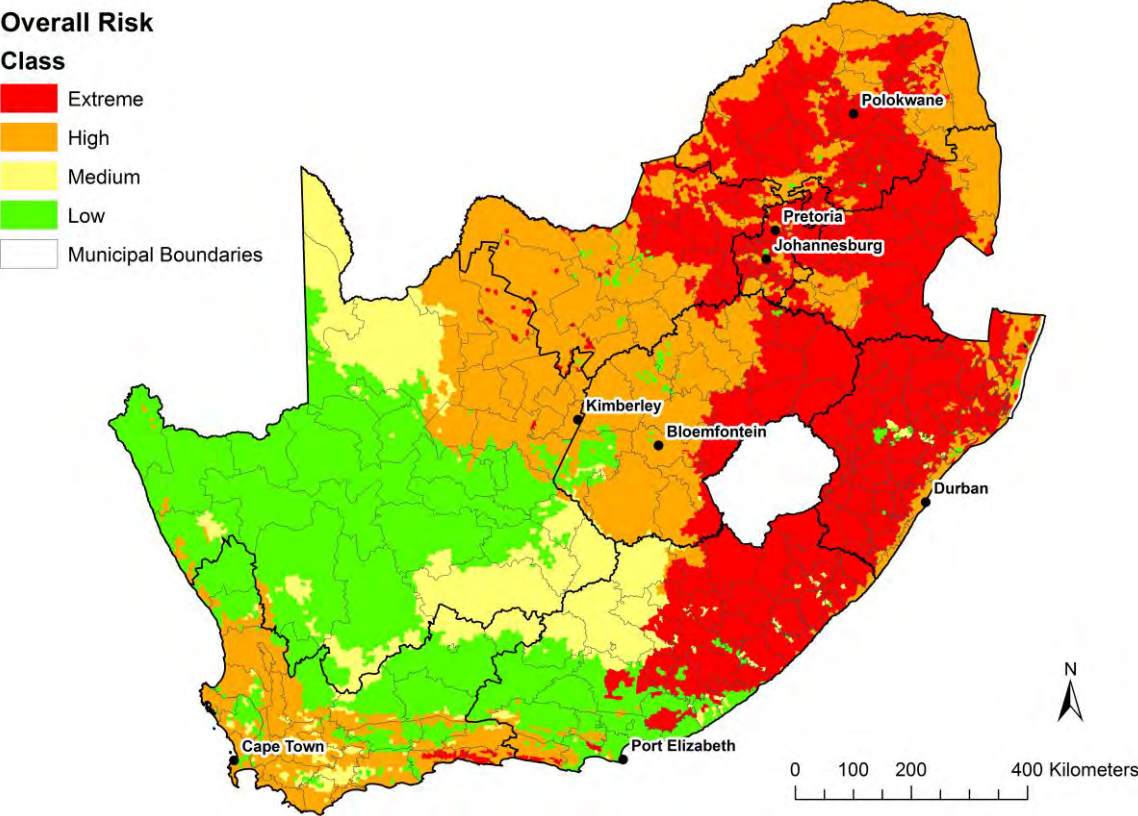
Figure 4.4:   Overall wildfire risk levels in South Africa (Forsyth *et al.*, 2010)

It is evident that South Africa faces a significant wildfire risk and that adequate strategies and measures are required to reduce these risks (see Figure 4.2). It is also clear that there are substantial risks along the borders of South Africa and its neighbours particularly Lesotho and Swaziland. This necessitates the establishment of institutional structures and systems to jointly collaborate in reducing the risk and to

ensure that mechanisms are put in place to manage the trans-boundary effects of these fires.

It is evident that wildfires are essential for most ecosystems within the country's environment, but then they pose a significant risk to lives, property, livelihoods, public infrastructure and the environment. A distinct fact from this discussion remain that rural areas are mostly vulnerable to these risks due to factors such as land tenure insecurity as well as mass movement of people from rural to urban areas which significantly reduce the human resources required for effective fire management. The dependence of rural livelihoods and economies on land based resources like pasture for grazing which are particularly prone to wildfires exacerbates the risk in these areas. As discussed in preceding sections, hazards are not constrained by national boundaries and wildfires in the South African environment are a typical example of such cross-border hazards.

Having outlined how wildfires contribute to the country's disaster risk profile, the ensuing section turns attention to drought as a hazard within the South African environment.

4.3.3   An overview of drought risk in South Africa

As outlined in the preceding sections, drought is a major hazard in the SADC region and has occurred during the periods: 1910; 1921-1930; 1947-48; 1967-73; 1981-82; 1991-92; 1994-95; 2001-03 and 2004-05 (SADC, 2008:48; SADC, 2010a:13). It is with this in mind that Vogel *et al*. (2000:348) note that the climate and rainfall of the entire region has been highly variable for millennia and is expected to remain like this in the future. As a result of climate change (based on future climate modelling findings), it is widely accepted that SADC's climate will be hotter and drier in the future than it is today (Engelbrecht, 2008:126; SADC, 2008:49-50; SADC, 2010a:14). As per Vogel *et al*. (2000:348), drought is a regular feature in the SADC region and all future planning should be based on the assumption that the region is an area of drought as opposed to plentiful rain. In connection with South Africa, Vogel *et al*. (2000:363) contemplate that drought is a normal feature of climate and has occurred with varying intensity in several parts of the country. Put simply, droughts can occur

at anytime, anywhere in the country, and often last for a number of years (South Africa, 2004:109).

The IFRC (2011a:19) supports this view and notes that regular droughts in terms of a shortage of precipitation over an extended period are indeed a normal part of the climate in South Africa. As Ngaka (2012:1) proclaims, during the last decade (2000-2010), several disasters were declared due to drought. Consistent with the findings of the IFRC above, Ngaka (2012:1) further observes that data from the Centre for Research on the Epidemiology of Disaster (CRED) (2011) reveals that although floods top the chart in terms of loss of lives, drought remains a major hazard in the country in terms of the number of people affected and total economic loss. Concerning some of the key drivers of drought in South Africa, Van Zyl *et al*. (2011:26) argue that climate variability is one of the primary factors behind drought occurrences in the South African environment. This view is shared by van Riet (2012:18) who in his analysis of recurrent drought in one of the districts in the country (Dr. Ruth Segomotsi Mompati within the North West province), observed that the climate change makes the drought situation even more complex. Currently, an average annual rainfall of 450 mm years (compared to a global average of about 860 mm) below-normal rainfall is more common than years with above-normal rainfall (South Africa, 2011a:20; van Zyl *et al*., 2011:26).

Having provided an overview of drought risk in the country, the next logical step is to explore the socio-economic and environmental impacts of this hazard in South Africa.

4.3.3.1 *Impacts of drought in South Africa*

As highlighted in preceding sections, drought has severe impacts on the social, environmental, and financial spheres of the country and in the broader region as a whole (Vogel *et al*., 2000:350). Figure 4.5 clearly indicates that contrary to widespread beliefs that the impacts of drought are largely limited to food supply problems, based on the severity and duration of a drought event, the impacts of drought in the South African economy are pervasive and devastating.

PRIMARY IMPACTS	SECONDARY IMPACTS
SOCIAL	
Disrupted distribution of water resources	Migration, conflicts between water users
Increased quest for water	Increased conflicts between water users
Marginal lands become unsustainable	Poverty, unemployment
Reduced grazing quality and crop yields	Overstocking, reduced quality of living
Employment lay-offs	Reduced or no income
Increased food insecurity	Malnutrition and famine; civil strife and conflict
Increased pollutant concentrations	Public health risks
Inequitable drought relief	Social unrest, distrust
Increased forest and range fires	Increased threat to human and animal life
Increased urbanisation	Social pressure, reduced safety
ENVIRONMENTAL	
Increased damage to natural habitats	Loss of biodiversity
Reduced forest and crop productivity	Reduced income and food shortages
Reduced water levels	Lower accessibility to water
Reduced cloud clover	Plant scorching
Increased daytime temperature	Increase fire hazard
Increased evapotranspiration	Crop withering and dying
More dust and sandstorms	Increased soil erosion; increased air pollution
Decreased soil productivity	Desertification and soil degradation
Decreased water resources	Lack of water for feeding and drinking
Reduced water quality	More waterborne diseases
ECONOMIC	
Reduced business with retailers	Increased prices for farming commodities
Food and energy shortages	Drastic price increases; expensive imports
Loss of crops for food and income	Increased expense of buying food, loss of income
Reduction of livestock quality	Sale of livestock at reduced market price

PRIMARY IMPACTS	SECONDARY IMPACTS
Water scarcity	Increased transport costs
Loss of jobs, income and property	Deepening poverty; increased unemployment
Forced financial loans	Increased credit risk for financial institutions

Figure 4.5: Primary and secondary impacts of drought in South Africa (Vogel *et al*., 1999 in Food and Agriculture and Organisation, no date)

Not all the impacts listed in Figure 4.5 occur with every drought, but there is some area in the country affected by drought where most of these impacts are prevalent almost annually (Vogel *et al*., 1999, cited in FAO, undated, 7-8). Closer scrutiny of these impacts also reveal that while drought interface with other hazards like wildfires, it is also inextricably linked to a host of developmental challenges facing the country such as poverty and food insecurity, water scarcity, migration, urbanisation, unemployment to name but a few. It is in this context that Austin (2008), Jordaan (2012:20-25) and Smucker (2012:257) argue that drought is a complex hazard with the most pervasive and devastating impact on people's livelihoods, and that it has a complex set of impacts that affect society in a myriad of ways. It is also clear that although rural areas and livelihoods are most vulnerable to drought, urban areas also bear the brunt due to increased prices of food and urbanisation with all its associated socio-economic effects. As it has been highlighted in preceding sections, the movement of people from rural areas to urban areas due to drought conditions also impact on sustainable fire management as experienced fire managers are forced to migrate thereby heightening the risks posed by wild fires in these communities.

In summary, this section highlights that the three key hazards that South Africa has to contend with are all likely to be accentuated by climate change, which adds further complexities to the disaster risks that the country faces. This exposition illustrates that drought interfaces in various pathways with many other developmental challenges that South Africa needs to deal with. In view of this, the development and implementation of robust drought management strategies that also take into account the emerging challenges posed by climate change is critical for the country to achieve its national development goals.

Like in most developing countries, there is no single factor that drives disaster risks in South Africa. In light of this, the ensuing section provides an overview of key drivers of disaster risks within the South African environment.

4.4 KEY DRIVERS OF DISASTER RISKS IN SOUTH AFRICA

While there may be several factors that impact either directly or indirectly on the country's disaster risk profile, this study will explore two drivers of disaster risks i.e. urbanisation and climate change because of their potentially large and negative effect on disaster risks within the South African context. In what follows, each of these important aspects and their interface with disaster risks are discussed.

4.4.1 The interface between urbanisation and disaster risks in the South African context

According to Pelling (2012:145), there is consensus that globally, humanity is increasingly moving towards an urban model of living. Consistent with this global trend, South Africa has also experienced rapid urbanisation (South Africa, 2012b:83; South Africa, 2016:7; van Huyssteen *et al*., 2013:1). South African towns and cities are presently estimated to be home to almost 68% of the national population, generating close to 85% of the country's economic activities and characterised by alarmingly high concentrations of poverty (South Africa, 2012b:21; van Huyssteen *et al*., 2013:1). The fact that South African cities dominate migration absorption from the rest of the SADC region, both from the country's rural regions and from other African states south of the Sahara adds further complexities to the urbanisation problem (UN HABITAT, 2014:239). These migration patterns have been trending upward particularly since the advent of democracy in South Africa in 1994 and has often resulted in violent social conflicts like the xenophobic attacks in 2008 (UN HABITAT, 2014:249).

Projections of the United Nations indicate that 71.3% of the country's population will be living in urban areas by 2020. This number is expected to trend upwards to around 80% by the year 2050 (South Africa, 2016:7). Close scrutiny of the factors driving movement of people from urban to rural areas reveals that natural hazards

such as drought are amongst the key drivers of this rural to urban migration in the country as outlined in Figure 4.6.
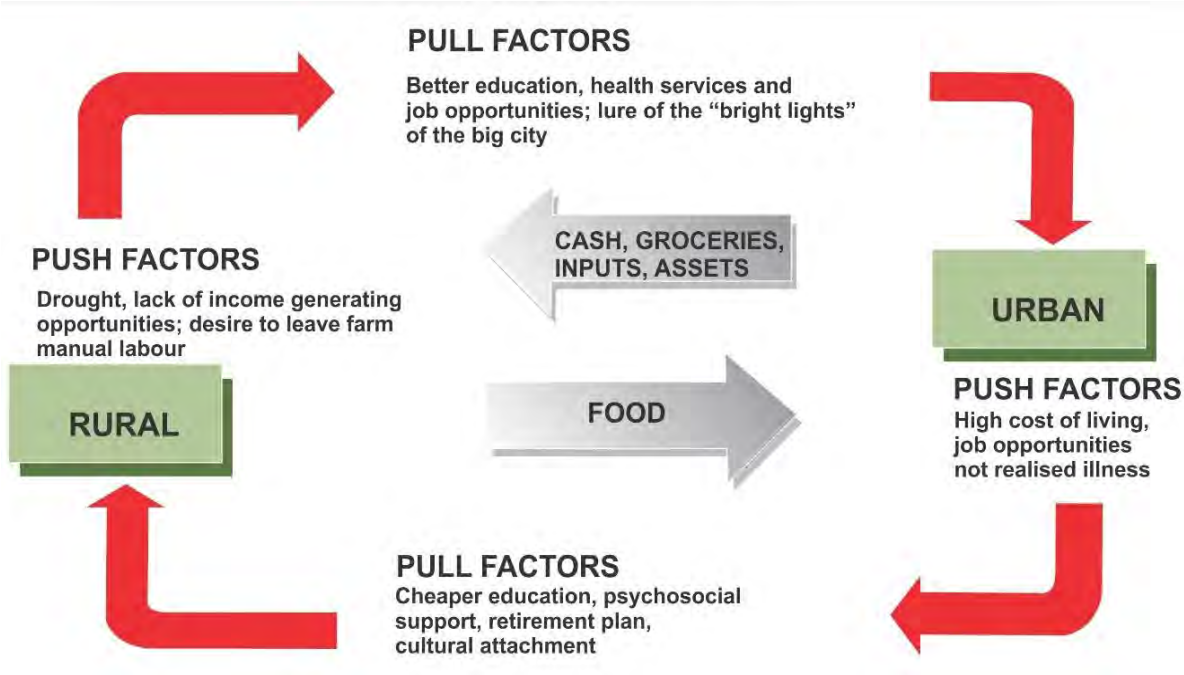
Figure 4.6: Rural-urban push and pull factors (adapted from South Africa, 2016)

As indicated in preceding sections, the advent of climate change will also significantly impact on the rural push factors as rain-dependent agricultural production is likely to be adversely impacted by changes in climate variability resulting in a loss of income for communities dependent on this livelihood option. Sharing similar propositions, the Green Paper on Disaster Management (1998a:4) observed that migration from rural to urban areas is also due to drought which often results in job losses and disruption of livelihoods. Therefore, the country's National Development Plan (2012b:84) notes that due to a variety of socio-economic factors such as lack of affordable land and proximity to income-generating opportunities, most incoming migrants can only afford to live in informal settlements which are largely unsafe and un-serviced. As informal settlements are an affordable entry to the city for most job-seeking migrants moving to cities, they present particular challenges (South Africa, 2012b:84; Turok, 2012:21). It is in this context that Turok (2012:21) characterises informal settlements as 'escalator areas' that enable migrants to establish themselves, acquire relevant skills and contacts as well as increase their earnings with a perception to reposition

themselves to better, safer and disaster resilient housing elsewhere. Taking this argument further, Donner and Rodriguez (2008:1096), note that the vulnerability of migrants to disasters is magnified by their lack of cultural, social and economic capital which is essential for anticipating, coping and recovering from disasters.

Inevitably, these informal settlements present a myriad of challenges to municipalities. Amongst these challenges are the location of settlements in flood prone areas, difficulties in achieving the delivery of basic services such as sanitation, water, electricity, sustainable housing, solid waste management and other associated problems which exacerbate the vulnerability of most informal settlements to environmental hazards (South Africa, 2011a:4; South Africa, 2012b:21). In support of the above Chagutah (2013:4); Turok (2012:28) and Wisner (2000:93) observe that informal settlements or shack areas are particularly vulnerable to flooding, illegal dumping of hazardous waste, fires, soil instability and all types of pollution. The fact that it is mostly the urban poor with the least capacity to anticipate, resist and recover from the impacts of these hazards further compounds vulnerability to disasters. Donner and Rodriguez (2008:1091) and the World Bank (2012:4) argue that those who are economically, politically and culturally disadvantaged are usually the ones hit hardest by disasters. This is exacerbated by the fact that housing that can withstand the impacts of hazards as well as affordable insurance are often beyond the financial grasp of the poorest groups within society thereby heightening their vulnerability (Donner and Rodriguez, 2008:1091). To illustrate this point, Donner and Rodriguez (2008:1098) used the Hurricane Katrina and conclude that "at the time, a triune of vulnerability – race, poverty and geographic location – would set the stage for one of the worst catastrophes in American history".

Sharing the propositions advanced by the various scholars as outlined above, Twigg (2004:232) captures aptly and succinctly the linkage between poverty and urban vulnerability to disasters which to a large extent resonates with the reality of urban vulnerability in South African: "*Poverty forces people to live in the most polluted and dangerous areas: river valleys, flood plains, hillsides, next to roads, waste dumps and hazardous industries. Where they lack title to their property – as in many urban settlements – and live in fear of eviction they have little incentive to invest in private or communal mitigation measures, and in any case have little money for doing so. Landlords are often unwilling to invest in their properties, and may raise the rents of*

those improved by their tenants. Local governments may refuse to provide services to informal settlements on the grounds that this will imply recognition of the inhabitants' right to the land where they have settled".

Baker (2012:28) adds that tenure insecurity also heightens the challenges of the poor as they face constant risk of eviction which hampers residents from investing in housing improvements necessary to reduce their vulnerability to hazards. This observation is reinforced by a global Report on Human Settlements which the UNHABITAT conducted in 2007. This Report revealed that tenure insecurity often results in violent evictions, limited access to basic services such as water, sanitation and electricity, social exclusion and homelessness, human rights abuse and violations, reduced investments in housing and distortions in the price of land and services (UNHABITAT, 2007:120). Security of tenure is not only fundamental for adaptation by the urban poor, but also a necessary condition to obtaining public infrastructure as most municipalities are hesitant to provide basic services due to constant fears of forced eviction (Baker, 2012:51-52). In essence, the lack of basic services within these informal settlements coupled with the fact that most cities do not have the resources to provide for the growing need for services undermines the resilience of the urban poor to hazards (World Bank, 2012:38-39). Within the South African context, there is consensus that the high concentration of people, assets and infrastructure in urban areas heightens exposure to hazards like floods, infectious diseases, fires, transport and other industrial hazards (South Africa, 2013b:20).

4.4.1.1   Linkage between urbanisation and climate change

Baker (2012:12) confirms that the historic expansion of urban areas expose the population and its residents to the potential impacts of climate change and related hazards. These are summarised in Figure 4.7.

Incremental impacts on urban systems	Impacts on urban residents
Built environment • Stress on building foundations • Road washouts • Changing disease vectors • Stress on storm-water and sewage systems • Stress on water treatment systems • Disruption to shipping and ports • Increased energy demand • Increased road surface damage • Increased demand for water **Natural environment** • Coastal erosion, altered ecosystems and wetlands • Sanitization of water sources • Slope instability • Groundwater depletion • Reduction in green space and growing conditions, including urban agriculture • Changes in fish populations • Increased runoff contamination • Increased heat island effect • Increased air pollution	• Illness – heat stress, stroke, malnutrition, water-borne disease, asthma, physical and mental disability • Exposure to elements from substandard construction • Disruption of basic service provision and access to supplies • Housing instability • Property loss and relocation • Loss of livelihoods • Community fragmentation • Exposure to flood-related toxins and wastes • Disruption in availability of portable water, food, and other supplies • Food shortages; higher food prices • Disruptions of electricity

Figure 4.7:   Incremental impacts of climate change and natural hazards on urban systems and residents (adapted from Baker, 2012)

Figure 4.7 clearly demonstrates that urban areas will bear the brunt of climate change as these projected impacts threaten to undermine the viability of urban systems. This is particularly important for countries like South Africa that has already reached an urban tipping point (over 50% of population living in urban areas). The above discourses, clearly depicts that various factors conspire to heighten disaster risks in urban areas across South Africa. This can be attributed to the high concentration of vulnerable individuals and communities who are forced to occupy marginal and unsafe areas due to factors stated above. Furthermore, it is also evident that the complex interaction between the various underlying factors such as

insecurity of tenure, socio-political dynamics and lack of basic services magnify disaster risks in urban areas. The fact that climate change may result in increased rural-urban migration demonstrates that explicit and sustained focus is urgently required to reduce disaster risks in urban areas. This is an area requiring further research.

As discussed in preceding sections, climate change presents a fundamental challenge to humanity and systems necessary for sustaining its survival. Simon (2012:207) underline this view that climate change is arguably one of the highest and environmental challenge of the early 21st century, and one with a significant impact on natural hazards. With this in mind, an analysis of the country's disaster risk profile cannot be complete without a brief reflection on how climate change will impact on disaster risks in South Africa. Set against this backdrop, the ensuing section briefly explores the complex interconnections between climate change and disaster risk in South Africa. This discussion is important as the three most prevalent hydro-meteorological hazards discussed in preceding sections are also likely to be impacted by climate change.

4.4.2 Effects of climate change on the disaster risk profile of South Africa

Cognisance should be taken that a discussion on the effects of climate change in South Africa cannot be disentangled from global discourses on this subject. In light of this, it is therefore fundamental that such exposition must be premised on a thorough understanding of global trends and observations. Against this background, the Intergovernmental Panel on Climate Change (IPCC) in its 2014 Fifth Assessment Report entitled Climate Change, Impacts, Adaptation and Vulnerability made the following observation with regard to observed impacts, vulnerability and exposure to climate change:

i.   In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans;

ii.   In many regions, changing precipitation or melting snow and ice are altering hydrological systems, affecting water resources in terms of quantity and quality;

iii.   Many terrestrial, freshwater, and marine species have shifted their geographic ranges, seasonal activities, migration patterns, abundances, and species interactions in response to ongoing climate change;

iv.   Based on many studies covering a wide range of regions and crops, negative impacts of climate change on crop yields have been more common than positive impacts;

v.   At present the worldwide burden of ill-health from climate change is relatively small compared with effects of other stressors and is not well quantified;

vi.   Differences in vulnerability and exposure arise from non-climatic factors and from multidimensional inequalities often produced by uneven development processes. These differences shape differential risks from climate change;

vii.   Impacts from recent climate-related extremes, such as heat waves, droughts, floods, cyclones, and wildfires, reveal significant vulnerability and exposure of some ecosystems and many human systems to current climate variability;

viii.   Climate-related hazards exacerbate other stressors, often with negative outcomes for livelihoods, especially for people living in poverty; and

ix.   Violent conflict increases vulnerability to climate change (IPCC, 2014:4-8).

A discussion of climate change in South Africa must be viewed within the context of the IPCC's observations. That said, the next section expands on these observations by closely examining the interface between climate change and DRR within the South African environment.

4.4.2.1   South Africa's vulnerability to climate change

As discussed in preceding sections, climate change is one of the critical challenges confronting many regions including the SADC. This challenge co-exist with other risk factors, such as health, environmental degradation and other stresses, which can compound the overall impact of changes in a place and region (Vogel, 2011:36). Like many other parts of the world, South Africa is particularly vulnerable to climate change and its effects (Masters, 2013:258). Indeed, within the South African context, climate change is already a measurable reality and along with other developing

countries, the country is especially vulnerable to its impacts (South Africa, 2012a:5). Already characterised as semi-arid, the country faces a significant threat of increased drought especially towards the north-west part of the country while the threat of increasing frequency and intensity of flooding is projected in the east coast of KwaZulu-Natal (Masters, 2013:258). According to van Niekerk *et al*. (2009:2), many parts of the South Africa are prone to climatic extremes and there are indications that the country has been experiencing discernible temperature changes since the 19th century.

The fact that a large section of the country's society live below the poverty line accentuates South Africa's vulnerability to climate change and its effects (South Africa, 2011a:x). A report by the country's national Department of Environmental Affairs notes that 30% of the country is vulnerable to adverse climatic shocks and this is intensified by weak adaptation and coping skills (South Africa, 2011a:x-xi). It is with this in mind that Ziervogel *et al*. (2014:2) argue that the high levels of poverty and inequality amongst the country's population means that the impacts of climate change have the potential to undermine achievement of national development goals as outlined in the country's National Development Plan.

4.4.2.2   *Projected impacts of climate change in South Africa*

South Africa, despite its relatively high level of economic development, will also suffer from the impacts of climate change (van Niekerk *et al*., 2009:18). There is however, growing recognition that the impacts of climate change in the country will not be experienced equally throughout South Africa (South Africa, 2011a:x). There is also consensus amongst scholars and researchers in this field that climate change poses a serious threat to the country's water resources, food security, infrastructure, health, ecosystems services, biodiversity and agriculture to mention but a few (World Wide Fund, 2011:4; Ziervogel *et al.* 2014). On the one hand, rainfall is expected to decrease in the drier parts of the country resulting in longer and more extensive droughts (van Niekerk *et al*. 2009:18). On the other hand, an area such as Gauteng province for example is estimated that as a result of the increase in rainfall intensity, by as much as 23 per cent, the storm water infrastructure of the province would not be sufficient (van Niekerk *et al*., 2009:19). Apart from critical issues of food security in a country with rapid population growth, the country will also have to contend with the

manner in which urbanisation is managed (van Niekerk *et al*., 2009:19). Additionally, climate change is also expected to significantly impact on the coverage of vector-borne diseases such as malaria and rift valley fever necessitating a concomitant expansion of public health initiatives to combat these diseases (South Africa, 2012a:19). From this discussion, it is clear climate change will have a significant impact on the occurrence of disasters in the South African environment. In light of this, the following section briefly explores the interface between DRR and climate change adaptation in the country.

4.4.2.3   DRR and climate change adaptation in the South African context

According to Turnbull *et al*. (2013:10-11), climate change adaptation and DRR share a fundamental goal as both approaches seek to strengthen the resilience of communities to deal with shocks and stresses to hazards and climate change effects. In view of this, and drawing from the increasing body of knowledge on this convergence, Turnbull *et al. (*2013:10-11) identified the following 10 principles (that are applicable across sectors and in different settings) for an integrated approach to DRR and climate change adaptation:

i.   Increase understanding of the hazard and climate change context;

ii.   Increase understanding of exposure, vulnerability and capacity;

iii.   Recognise rights and responsibilities;

iv.   Strengthen participation of, and action by, the population at risk;

v.   Promote systemic engagement and change;

vi.   Foster synergy between multiple levels;

vii.   Draw on and build diverse sources of knowledge;

viii.   Instill flexibility and responsiveness;

ix.   Address different timescales, and

x.   Do no harm.

Within the South African context, the development of climate change adaptation strategies based on risk and vulnerability reduction working together with its neighbours with a view to sharing resources, technology and learning to coordinate a regional response has been identified as a fundamental objective (South Africa, 2012a:16). In this regard, it can be argued that adaptation measures are central to the country's approach to dealing with the threats posed by climate change (Ziervogel, 2014). That said, there is wide scientific recognition that the challenges that the country encounters in terms of climate change, sustainable development and disaster risk must be addressed in an integrated manner (van Niekerk *et al*., 2009:42). In this regard, the White Paper on National Climate Change Response (2012a:24) proposes that the challenges confronting the country from a DRR perspective, South Africa must undertake the following:

i.   Continue to develop and enhance its early warning systems for weather and climate to ensure timely dissemination of such warnings to vulnerable communities;

ii.   Regional collaboration to share early warning systems with regional applications and benefits;

iii. Continue to promote the development of Risk and Vulnerability Centres at universities which will, in turn, support resource poor municipalities;

iv.   Facilitate increased utilisation of seasonal climate forecasts among key stakeholders including but not limited to sectors such as water and agriculture; and

v.   Maintain, update and enhance the South African Risk and Vulnerability Atlas as a tool that provinces and municipalities may use to inform their climate change adaptation planning.

Thus, it is evident that the South African government is committed to addressing climate change and its effects. Initially, climate change was regarded as mainly an environmental problem opposed to a developmental challenge capable of undermining the ability of the country to achieve its national development goals. As stated previously, climate change will impact significantly on the three hydro-

meteorological hazards that South Africa has to deal with. In view of this, it is therefore fundamentally important that DRR planning across all sectors must recognise this reality and ensure that adequate measures are put in place to minimise the adverse impacts. The 10 principles identified above can form a basis for the sector initiatives and measures.

The discussion in this chapter has clearly accentuated the key disaster risks facing South Africa. The thorough knowledge and understanding of disaster risks in South Africa and its key drivers presented in this chapter is essential as it forms the bedrock of effective and efficient DRR. Thus, multi-sectoral policies and practices for reducing disaster risk must be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of people and assets, hazard characteristics and the environment (UNISDR, 2015b:14). In essence, the discussion in this chapter is essential to provide a solid basis and to assist in contextualising the discussion on DRR context within the South Africa environment which is addressed in Chapter 5.

4.5 CONCLUSION

Chapter 4 mainly gave an overview of disaster risks within the South African environment. Firstly, a brief exposition of disaster risks within the SADC region was provided with a view to provide regional context and perspective to disaster risks in South Africa. This discussion revealed that indeed, the SADC region faces a plethora of socio-economic and developmental challenges such as HIV/AIDS, circular migration, urbanisation, poverty, food and water scarcity and climate change to name but a few. This study showed that these factors magnify vulnerability to disasters in the region. This investigation also highlighted that disaster risks in South Africa are inextricably linked to the region and its dynamics. Secondly, this Chapter discussed the South Africa's disaster risk profile in detail as well as the key drivers of disaster risks in the country. It was found that there are three hydro-meteorological hazards i.e. floods, wildfires and drought that the country has to contend with. It also emerged that urbanisation and climate change are some of the key drivers of disaster risks within the South African environment.

From this chapter, it is also evident that a number of government entities are responsible to address the country's disaster risks and for the implementation of DRR initiatives. The following chapter aims to expand further on this by providing the reader with an in-depth investigation of DRR in the South African context.

CHAPTER 5:

DISASTER RISK REDUCTION IN THE SOUTH AFRICAN CONTEXT

"The focus on DRR is based on the understanding that with proper planning of development programmes and integrating DRR in development strategies, the negative effects of development can be reduced, while the positive effects can be enhanced through the reduction of poverty, improvement of human livelihoods and coping strategies and overall reduction of vulnerability"
(UNISDR, 2004:14)

5.1   INTRODUCTION

In his foreword to the United Nations publication entitled Plan of Action on DRR for Resilience, United Nations Secretary General Ban Ki-moon (UN, 2013:3) writes: *"DRR is a top priority as we seek to hold back the tide of rising economic and human losses. To reduce risks from disasters, we must mobilise a broad coalition of partners, from village chiefs to government ministers, from family-run shops to international corporations, from school principals to hospital directors".* Against this backdrop, this chapter aims to provide an understanding of DRR in South Africa with a view to address the research objective of investigating and analyzing existing legal instruments and frameworks governing the function in the country. DRR is viewed as the systematic development and application of policies, strategies and practices to minimize vulnerabilities and risks throughout a society to avoid or limit the adverse impacts of hazards, within the broad context of sustainable development (UNISDR, 2002). In order to achieve the objective as outlined above, this chapter will commence with a brief discussion on the evolution of DRR with specific focus on practices and discourses in post- Apartheid South Africa in order to provide context and perspective to the approach adopted by the post-1994 government in managing disaster risks. Linked to this will be a discussion on key global initiatives that had a fundamental influence on the development of DRR within the South African environment.

Secondly an overview of key legislation relevant to DRR within the South African environment will be addressed. After emphasizing the outline of the evolution of DRR and the basic legislative imperatives, the national institutional and governance

arrangements for the function in the country will be discussed. As highlighted in chapter 4, various agencies are responsible for managing disaster risks in the country and therefore this chapter will conclude by providing an exposition of the nature of DRR within the South African environment. The ensuing section focuses on the development of DRR within the South African environment.

5.2 EVOLUTION OF DRR IN SOUTH AFRICA

The historical development and evolution of disaster risk management within the South African context may be divided into two periods. Firstly, the period comprising the Second World War (1939-1945) and the post-war period and secondly the period after 1945 (van der Westhuizen, 1986:2). In order to give perspective and context to this discussion, a third phase, characterized as disaster management in post-apartheid South Africa, has been added to this evolution. This additional phase is part of the focus for this study. Since the former two phases of this evolution have been well documented by various scholars such as van der Westhuizen and van Niekerk, (van Niekerk, 2005), this chapter will therefore not provide another detailed exposition. This study will focus on DRR discourses in post-Apartheid South Africa with a view to contextualize the approach adopted by the post 1994 government in managing disaster risks.

5.2.1   Disaster Risk Reduction / Management in post-Apartheid South Africa

According to van Niekerk (2005:108, 2006:99) and Zuma *et al*. (2012:128), up until 1994, the Civil Protection Act 67 of 1977 provided the legislative framework for civil protection services while the Fundraising Act), provided the framework for funding for disaster rehabilitation and reconstruction. At this point, the focus of South Africa's

approach to disaster risk management was primarily reactive. This view is shared by Uys (2005:412) who assert that legislation places emphasis on the management of the results of disasters. Like in most countries, focus shifted from reactive to proactive approaches where priority was largely influenced by global initiatives such as the United Nation's International Decade for Natural Disaster Reduction (IDNDR) between 1990 and 2000, the 1994 World Conference on Natural Disaster Relief in

Yokohama and the Rio Earth Summit in 1992 (Uys, 2005:413). The IDNDR was a global call to all members of the United Nations to reconsider their disaster management strategies with a view to put disaster prevention, mitigation and preparedness at the heart of approaches to managing disasters (van Niekerk, 2006:100).

The objective of the IDNDR was to reduce through concerted international action, particularly in developing countries, the loss of life, property damage as well as social and economic disruption caused by natural disasters such as earthquakes, windstorms, tsunamis, floods, landslides, volcanic eruptions, wildfires, pest infestations, drought, desertification and other calamities of natural origin (UNISDR, 1989:161). While the IDNDR focused on the importance of concerted global action and the use of scientific and engineering knowledge to mitigate the effects of disasters, the Yokohama Strategy, adopted in 1994 for a safer World, took this notion further by calling for an accelerated implementation of a Plan of Action and outlining the various actions that must be taken at community, national, regional and international activities to reduce disaster risks (UNISDR, 1989:161; UNISDR, 1994:12).

The following principles, strategy and plan of action were integrated:

i.   Risk assessment is a required step for adoption of disaster reduction policies and measures.

ii.   Disaster prevention and preparedness are of primary importance in reducing the need for disaster relief.

iii. Disaster prevention and preparedness should be considered integral aspects of development policy and planning at national, regional, bilateral, multilateral and international level.

iv.   The development and strengthening of capacities to prevent, reduce and mitigate disasters is a top priority area to be addressed during the IDNDR so as to provide a strong basis for follow-up activities.

v.   Early warnings of impending disasters and their effective dissemination using telecommunications and broadcast services are key factors to successful disaster prevention and preparedness.

vi.   Preventative measures are most effective with participation at all levels, from the local community through to international level.

vii.   Vulnerability can be reduced by the application of proper design and patterns of development focused on target groups, by appropriate education and training of the whole community.

viii.   The international community accepts the need to share the necessary technology to prevent, reduce and mitigate disaster. This should be made freely available and in a timely manner as an integral part of technical cooperation.

ix.   Environmental protection as a component of sustainable development consistent with poverty alleviation is imperative in the prevention and mitigation of natural disasters, and;

x.   Each country bears the primary responsibility for protecting its people, and national assets from the impact of natural disasters (Yokohama Strategy and Plan of Action for a Safer World, 1994; UNISDR, 2002:18).

As van Niekerk (2005:58) contends, these principles provided the foundation on which DRR thinking of the new millennium is premised. These international developments fundamentally impacted upon the approach adopted by South Africa in dealing with disasters thereby giving impetus to the shift towards DRR strategies and methodologies. Another key event that exposed the weaknesses in the country's approach to disaster risk management is the severe floods that occurred in June 1994 on the Cape Flats (South Africa, 2005:1). Following this floods, Cabinet resolved to examine the country's strategies and institutional structures to deal with risk reduction and disaster risk management (South Africa, 1998a). Taking this notion further, van Niekerk (2006:100) proclaims that indeed these flooding incidents gave impetus to the process of developing a comprehensive policy framework for disaster risk management in the country. With this in mind, Pelling and Holloway (2006:18)

postulate that it is possible to identify four distinct stages in the evolution of South Africa's disaster risk management policy and law following the first democratic elections in 1994 i.e. policy re-orientation, legislative process, implementing framework and implementation. A fifth phase outlining the key amendments that have been proposed in the 2014 Disaster Management Amendment Bill has been added. These stages are reflected in the table below:

TABLE 5.1:   Post 1994 evolution of South Africa's disaster risk management policy and law:

	ACTIVITIES	OUTCOMES
I: Policy re-orientation June 1994 –January 1999	Focus on broad stakeholder consultation and policy reorientation through: National discussion paper National policy document	February 1998: Green Paper on Disaster Management January 1999: White Paper on Disaster Management
II: Legislative process February 1999-January 2003	Focus on the legislative process through: Drafting of legislation and public comment Portfolio Committee debate	January 2000: Disaster Management Bill September 2001: Disaster Management Bill [58-2001] May 2002: Disaster Management Bill [B21-2002] January 2003: Disaster Management Act [No. 57 of 2002]
III: Implementing framework February 2003 – April 2005	Focus on developing a national implementing framework through: Drafting of national implementing framework	April 2004: National Disaster Management Framework 1 April 2005: National Disaster Management Framework
IV: Implementation May 2005+	Piloting roll-out of implementation framework and the Act. Following a decade of implementation, research revealed some fundamental discrepancies between ideals espoused in the Act and realities within government. Key constraints identified in the implementation of the Act includes: The absence of focal points for DRR across most sectors hinders effective multi-sector and integrated approach which is espoused in the Act. Improper placement of the function across all spheres of government undermines cross-sector coordination. Inadequate funding especially at local government level.	

	Lack of strong institutional basis. Lack of adequately skilled human resources. Lack of DRR integration in development planning at all levels of government. Unclear definition of role of local municipalities.	

V: Disaster Management Amendment Act, 2015 (Act No 16 of 2015)	Amendment of the Disaster Management Act, 2002 (Act No 57 of 2002).	Key provisions introduced in the Disaster Management Act, 2015 (Act No 16 of 2015) include –
		• Disaster management plans across all spheres of government –
		   o to include expected climate change impacts and risks;
		   o must identify and map risks, areas, ecosystems, communities that are exposed or vulnerable to hazards;
		   o must outline specific measures taken to address the needs of women, children, the elderly and persons with disabilities during the disaster management process;
		   o must provide measures and indicate how it will invest in DRR and climate change adaptation, including ecosystem and community-based adaptation approaches;
		• Inclusion of traditional leaders in disaster management advisory forums across all spheres of government;
		• Provision by all organs of state of a list of measures implemented in order to restore communities and the reconstruction and rehabilitation of infrastructure in a manner that makes those communities less vulnerable to disasters and strengthen their resilience.

Sources: Pelling & Holloway (2006:18); South Africa (2015) van Niekerk (2014)

This policy development process was driven by an Inter-Ministerial Committee (IMC) of Disaster Management and was a clear demonstration of acceptance by the political leadership of the country which was fundamental to the policy development process (van Niekerk, 2006:100). An analysis of both the Green and White Paper reveals that while adequate measures to ensure quick, rapid and effective response to disasters remain essential, the emphasis was on strategies of disaster risks

management within the broad framework of sustainable development and other governmental programmes such as the Reconstruction and Development Programme (RDP) (South Africa, 1998a; South Africa, 1999a). Fundamentally, the White Paper on Disaster Management aimed to integrate DRR into existing and future policies, sector plans and strategies at all government levels as well as in policies and practices of the private sector (Viljoen, 2003:5). The following key policy proposals were made in the White Paper on Disaster Management (South Africa, 1999a:13-14):

i.   The urgent integration of risk reduction strategies into development initiatives.

ii.   The development of a strategy to reduce the vulnerability of South Africans, especially poor and disadvantaged communities to disasters.

iii.   The establishment of a National Disaster Management Centre to undertake the following:

    a.   Ensure that an effective disaster management strategy is established and implemented.

    b.   Coordinate disaster management at various levels of government.

    c.   Promote and assist the implementation of disaster management activities in all sectors of society.

iv.   The introduction and implementation of a new Disaster Management Act which:

    a.   Brings about a uniform approach to disaster management.

    b.   Seeks to eliminate the confusion created by current legislation regarding declarations of disasters.

    c.   Addresses legislative shortcomings by implementing key policy objectives outlined in this White Paper.

v.   The establishment of a framework to enable communities to be informed, alert, self-reliant and capable of supporting and cooperating with government in disaster prevention and mitigation.

vi.   The establishment of a framework for coordinating and strengthening the current fragmented training and community awareness initiatives.

On the basis of this policy, the Disaster Management Act, 2002 (Act No. 57 of 2002) (the Act) was promulgated on 15 January 2003. This Act has an explicit and distinct focus on DRR and also establishes adequate structures necessary for the management of disasters with special emphasis on prevention and mitigation by all spheres of government (South Africa, 2002:2; UNHABITAT, 2014:255; van Niekerk, 2006:101; Viljoen, 2003:5). Detailed analysis of the various provisions of this Act relevant to DRR will be provided in ensuing sections. According to Pelling and Holloway (2006:4), the success of South Africa's DRR legislation was shaped by several preconditions including an enabling and evolving political and legal context, a regional disaster risk context characterized by increasing severity and complexity, a local professional context seeking to align itself with international best practice and a global context that supported local initiatives aimed at reducing disaster risks.

The above arguments clearly indicate that the development of disaster risk management policy was largely influenced by international developments which advocated a paradigm shift from response oriented methodology towards approaches that prioritise DRR. It is also evident that political ownership engendered by institutional weaknesses in managing the 1994 floods in the Cape Flats also gave impetus to the policy development process with a view to creating a modern and comprehensive framework to better manage similar incidents in the future. In short, this process demonstrated a total shift by the South African government to a more proactive based strategy to manage disasters supported by robust institutions and structures across all spheres of government.

Flowing from above discussions, van Niekerk (2014:859) postulates that the Act has been promulgated for over a decade and it is thus possible to analyse the implementation with a view gaps and limitations. As outlined in phase four of Table 5.1, key implementation constraints identified include absence of focal points for DRR across sectors which hinders a multi-sector approach to the function, inadequate funding and lack of adequately skilled human resources. (van Niekerk, 2014). In an attempt to address the identified implementation shortcomings, the South African government commenced a process to amend the Act in 2011-12

(South Africa, 2014; van Niekerk, 2014:859). The fifth stage of Table 5.1 outlines the key proposed amendments that have been identified as necessary to address some of the shortcomings as discussed above.

Having outlined how the policy for managing disasters evolved in the South African environment, the ensuing section provides a summary of selected key legislation that makes provision for DRR measures across the various sectors.

5.3 PRINCIPAL INSTRUMENTS OF LEGISLATION RELEVANT TO DRR IN SOUTH AFRICA

The ability to set out laws and regulations which provide the basis for promoting and enforcing certain rights and obligations of groups and individuals is the fundamental difference between government, the private sector and civil society (UNDP, 2007:12). In the context of governance for DRR, laws set standards and objectives as well as assign mandates and responsibilities to different actors (UNDP, 2007:12). An appropriate policy and regulatory framework is an essential part of risk management and while this is government's responsibility, civil society organisations can do much to influence it (Twigg, 2004:196). A similar view is shared by the UNISDR (2004a:30) which postulates that a good policy provides a multi-sector framework for DRR and institutions for the coordination of government agencies, participation of civil society and collaboration with the private sector and all stakeholders. Thus the development of legislation is a fundamental step in mainstreaming DRR into development (Holloway & Pelling, 2006:3). It is in this context, that the UNISDR (2004a:30) argue that a good policy in disaster risk management should define the institutional arrangements required to drive DRR at all levels of government, allocate roles and responsibilities to all sectors with a view to ensuring integration of DRR in sector programmes and plans, provide overall direction for ensuring optimum utilization of resources and support a multidisciplinary approach to DRR.

5.3.1 An overview of selected DRR legislative instruments

The discussion on legislative and policy framework in South Africa must be viewed against the background provided in the preceding paragraph. Indeed, the country has a well-developed suite of disaster risk management policy and legislation, as well as

other laws relevant to DRR (IFRC, 2011a:25). In essence, South Africa's legislative landscape relating to DRR essentially comprises three tiers i.e. generic DRR legislation, hazard specific and sector specific legislation as highlighted in Table 5.2 (IFRC, 2011a:27). There is firstly a well-developed set of policies and laws dealing specifically with disaster management as a generic functional area. Secondly, there are statutes dealing with specific types of hazard including fires, mining accidents and crowd control at sports and recreational events. Finally, there are laws and policies relating to the environment, the management of water resources, the conservation of agricultural resources, and land use planning which have specific provisions relating to DRR, response and rehabilitation (IFRC, 2011a:27).

While a comprehensive discussion of all relevant legislation will shed more light on the country's legislative framework for DRR, this chapter cannot adequately address these issues. In addition to this, research undertaken by other researchers (IFRC, 2011a; van Niekerk, 2005) has addressed these aspects adequately. In light of this, Table 5.2 provides a summary of important legislative provisions from selected legislation applicable to DRR.

TABLE 5.2   Summary of key legislative provisions pertinent to DRR in South Africa

NAME OF LEGISLATION	DESCRIPTION OF PROVISIONS RELEVANT TO DRR	APPLICABLE / CHAPTER OR SECTION / (S)
Constitution, 1996	Bill of Rights	Chapter 2, specifically section 11, 24,
	Principles of cooperative government and intergovernmental relations	Section 41 (1) (b)
	Objects of local government	Section 152 (1) (d)
Disaster Management Act, 2002 (with special reference to the national sphere of government)	Contents of national disaster management framework	Section 7
	Objective of the NDMC	Section 9
	General powers and duties of the NDMC	Section 15
	Disaster management information system	Section 17
	Disaster management plans and strategies	Section 19
	Prevention and mitigation	Section 20
	Monitoring, measuring performance and evaluating disaster management plans and prevention, mitigation and response initiatives	Section 21
	Annual reports	Section 24
	Preparation of disaster management plans	Section 25
	National contributions to alleviate effects of local and provincial disasters	Section 57

NAME OF LEGISLATION	DESCRIPTION OF PROVISIONS RELEVANT TO DRR	APPLICABLE / CHAPTER OR SECTION / (S)
Fire Brigade Services Act, 1987	Definition of service includes a provision for the preventing the outbreak or spread of a fire	Section 1
	Regulations regarding the safety requirements to be complied with on premises in order to reduce the risk of fire or other danger, or to facilitate the evacuation of the premises in the event of such danger	Section 15 (1) (d)
	Regulations regarding the use, manufacture, storage or transportation of explosives, fireworks, petroleum or any other flammable or combustible substance, gas or any other dangerous substance	Section 15 (1) (e)
National Veld and Forest Fire Act, 1998	Establishment, recognition, duties and functioning of Fire Protection Associations (FPAs). These FPAs must deal with all aspects of wildfire prevention and firefighting.	Chapter 2
	The prevention of wildfires through a fire danger rating system	Chapter 3
	Wildfire prevention through firebreaks	Chapter 4
Spatial planning and Land Use Management Act, 2013	Development principles notably the principles of spatial sustainability and spatial resilience	Section 7
	Preparation of spatial development frameworks	Section 12
Mine and health safety Act, 1996	Objects of the Act	Section 1
	Health and safety at mines	Chapter 2

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NAME OF LEGISLATION	DESCRIPTION OF PROVISIONS RELEVANT TO DRR	APPLICABLE / CHAPTER OR SECTION / (S)
Safety at Sports and Recreational Events Act, 2010	Responsibility for safety and security at events	Chapter two
	Event safety and security planning committee	Section 15
	Functions of event safety and security planning committee	Section 16
	Event safety and security measures	Section 23
Environmental Management Act, 1998	National environmental management principles	Section 2
	Integrated environmental management, general objectives	Section 23
	Duty of care and remediation of environmental damage	Section 28
	Control of emergency incidents	Section 30
National Water Act, 1988	Purpose of Act (specific reference to reducing and preventing pollution and degradation of water resources, promotion of dam safety and managing floods and droughts.	Section 2
	Preventing and remedying effects of pollution	Section 19
	Control of emergency incidents	Section 20
	Dam safety	Chapter 12
Public Finance Management Act, 1999	Use of funds in emergency situations	Section 16 & 25

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Flowing from Table 5.2, it is clear that South Africa has relatively advanced suite of legislation to support DRR. It is also clear that the legislation draws various mandates from the Constitution which is the supreme law of the Republic of South Africa. From this discussion, it can be argued that while the fundamental shift from response oriented approaches to DRR based methodologies was applicable to the development of disaster management policy and legislation, the proactive approach has also largely permeated the legislative instruments across the various sectors. Thus it can be reasoned that the weak institutionalization and implementation of strategies aimed at reducing disaster risks in South Africa is not the result of absence of a supportive and enabling legislative and policy framework.

5.3.2   National Disaster Management Framework

In addition to the legislation outlined above, section 6 of the Act makes provision for the National Disaster Management Framework (the Framework) which must be prescribed by the Minister responsible for the disaster management function. While the Act provides guidance on what disaster risk management should be within the South African environment, the Framework outlines how the objectives of the Act can be reached (Van Niekerk, 2014:861). This Framework must provide a coherent, transparent and inclusive policy on disaster risk management appropriate for the Republic as a whole (South Africa, 2002:14). Detailed exposition of this Framework is provided by van Niekerk (van Niekerk, 2005). In view of this, a brief discussion of this Framework will be provided in this study. Accordingly, this Framework must place explicit emphasis on measures that must be put in place to reduce vulnerability of disaster-prone areas, communities and households (South Africa, 2002:14).

Amongst others, the Framework must guide the development and implementation of disaster risk management envisaged by the Act, establish prevention and mitigation as the core principles of disaster risk management, give effect to the application of cooperative governance on issues concerning disasters and disaster risk management amongst the spheres of government, guide the development and implementation of disaster risk management within national, provincial and municipal organs of state on a cross-functional and multi-disciplinary basis and allocate responsibilities in this regard to different organs of state and provide key performance indicators in respect of the various aspects of disaster risk management (South Africa, 2002:14). This Framework was prescribed by the Minister in 2005 in terms of

the Act and comprises four Key Performance Areas (KPAs) and three supportive enablers required to achieve the objectives set out in the KPAs as outlined in Figure no 5.1 below. According to van Niekerk (2014:861), the rationale behind the division of KPA's and enablers is that enablers are key elements required to be present in each of the KPA in order for them to be effectively implemented and sustained.
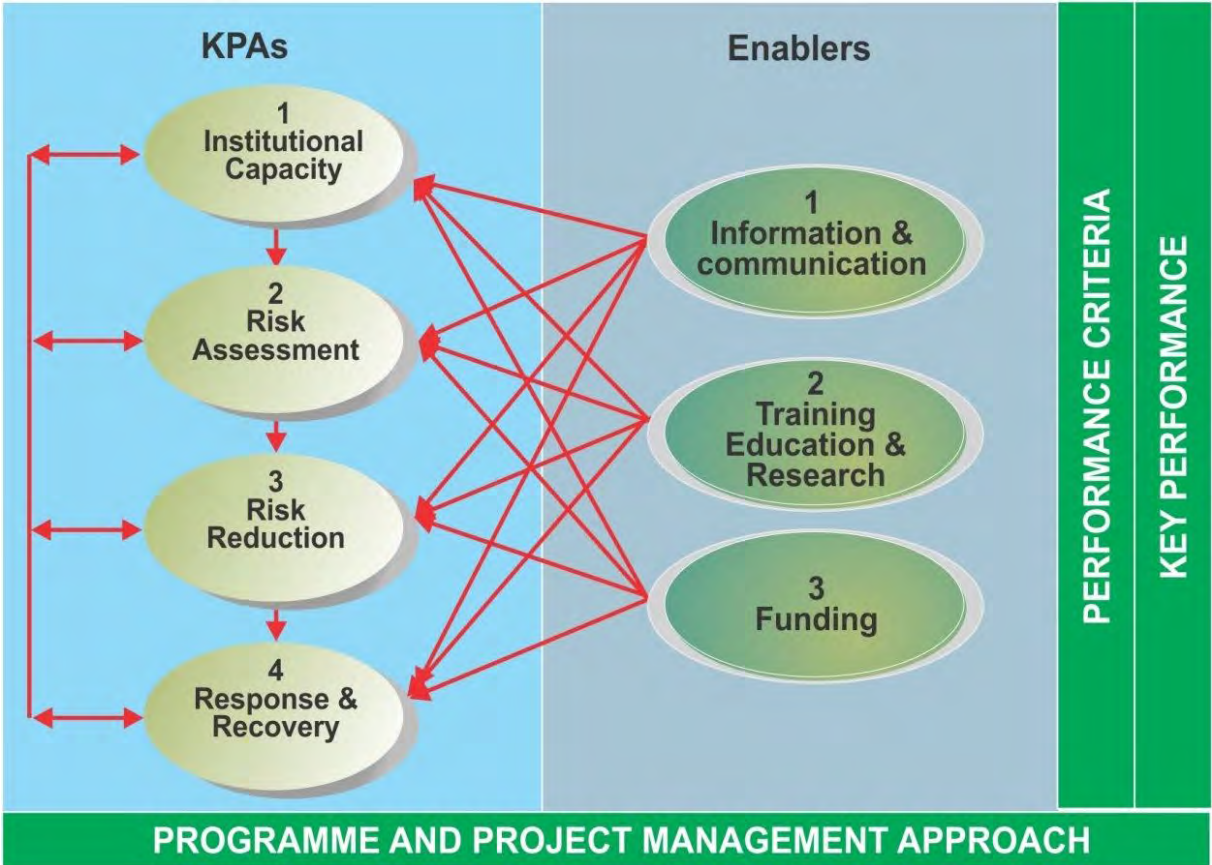
Figure 5.1:   Key Performance Areas and Enablers of the Framework (adapted from South Africa, 2005)

As illustrated in Figure 5.1 above, and in line with the requirements of the Act (alluded to above), the Framework establish prevention and mitigation as fundamental principles of disaster risk management by having a dedicated KPA (KPA 3) focusing on DRR. This KPA introduced disaster risk management planning and implementation within the broad framework of sustainable development with a view to reduce disaster risks (South Africa, 2005:3). Additionally, this KPA further gives specific attention to the planning for and integration of DRR principles into programmes and initiatives of all sectors across the three spheres of government

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(South Africa, 2005:3). Some of the principles espoused in this KPA will be discussed in ensuing sections.

Having outlined the legislative and policy frameworks applicable to DRR within the South African environment, the following section turns attention to the national institutional and governance arrangements necessary to implement this legislation.

5.4 NATIONAL INSTITUTIONAL AND GOVERNANCE ARRANGEMENTS FOR DRR IN SOUTH AFRICA

Although the primary responsibility for disaster risk management in South Africa rests with the government, the Act recognises active participation of all stakeholders, including all spheres of government, the private sector, civil society formations, technical experts, traditional leaders and communities within the context of cooperative governance as critical for the effective implementation of the function (South Africa, 1999a:12; South Africa, 2005:32). Thus the Act calls for the establishment of institutional and governance structures to ensure integration of stakeholder participation as well as to adopt a holistic and organised approach to the implementation of policy and legislation as discussed below (South Africa, 2005:32-33).

5.4.1 Importance of institutional and governance arrangements

The importance of strong and robust institutions at all levels of government to drive the DRR agenda has been widely recognized by scholars and practitioners. It is in this context that the Hyogo Framework of Action 2005-2015 (HFA) resolved, as one of its five priorities for action, to ensure that DRR is a national and a local priority with a strong institutional basis for implementation (UNISDR, 2005:6). This priority for action is premised on the knowledge and recognition that countries with adequate institutional frameworks for DRR have greater capacity to manage disaster risks and to mobilize all sectors of society behind the agenda to reduce disaster risks (UNISDR, 2005:6). Sharing similar propositions, a study by the Food and Agriculture Organisation (FAO, 2008:20) reached related conclusions, noting that national DRR systems and institutions are the driving forces to plan, implement, monitor and to

ensure coordination amongst all stakeholders involved in any phase of DRM within a country.

Flowing from the above discourses, a global review undertaken by the United Nations Development Programme (UNDP) in 2007 emphasized that while governance for disaster risk management must be guided by the same core principles and overall goals as democratic governance, it must strive to make DRR a policy priority, generate political commitment, promote DRR as a multi-sector responsibility, allocate the required resources for DRR to name but a few (UNDP, 2007:8). With regard to the configuration of these institutional structures, Lavell and Maskrey (2013:7) note that over time, the institutional and governance arrangements for DRR have evolved from stand-alone machineries for responding to disasters into more sophisticated institutional systems.

The evolution of institutional structures and systems for DRR within the South African environment must be viewed in this context. In this regard, it is important to highlight that the Act provides for the establishment of structures aimed at ensuring integrated institutional capacity for disaster risk management in the country. These include the Intergovernmental Committee on Disaster Management (ICDM), the National Disaster Management Centre (NDMC) and the National Disaster Management Advisory Forum (NDMAF) (South Africa, 2002:10). In the following sections, each of these important structures will be discussed briefly.

5.4.2   Intergovernmental Committee on Disaster Management (ICDM)

The ICDM must be established by the President and must consist of Cabinet members involved in the management of disaster risk or the administration of other related national legislation, MECs of each province involved in disaster risk management and members of municipal councils selected by the South African Local Government Association (SALGA) (South Africa, 2002:10; South Africa, 2005:8-12). The ICDM is chaired by the Minister responsible for disaster risk management i.e. Minister of Cooperative Governance and Traditional Affairs (COGTA) and is accountable to Cabinet (South Africa, 2002:13). This forum is responsible that appropriate mechanisms and institutional arrangements are established to give effect to cooperative governance, overall coordination of disaster risk management through

establishment of joint standards of practice amongst the various spheres of government and other role players, the provision of advice to Cabinet on disaster risk management issues as well as making recommendations on the establishment of the Framework (South Africa, 2005:13). In addition to this, the Minister may utilize other intergovernmental forums such as the Ministers and Members of the Executive Council (MinMec) to discuss disaster risk management issues (South Africa, 2005:13).

In addition to the ICDM, the Act establishes a disaster management centre within each sphere of government (IFRC, 2011a:28). The ensuing section explores the role of the National Disaster Management Centre.

5.4.3   The National Disaster Management Centre (NDMC)

The location within a government of authority for national policy on disaster risk management can critically influence a country's ability to national and sector development planning and investment to reduce its disaster risk (UNISDR, 2011:90). As van Niekerk proclaims (2006:106), within the South African context, the establishment of the NDMC was the most fundamental aspect of the new disaster management legislation. Taking this notion further, van Niekerk (2005:134) argues that the establishment of the NDMC as the highest administrative executive body for disaster management could be characterised as the genesis of a process to institutionalise the function in the country (van Niekerk, 2005:134). The NDMC is established in terms of section 8 of the Act as an institution within the South African public service (South Africa, 2002:13).

Section 9 of the Act outlines the objective of the NDMC as *"to promote an integrated and coordinated system of disaster management, with special emphasis on prevention and mitigation, by national, provincial and municipal organs of state, statutory functionaries, other role-players involved in disaster management and communities"* (South Africa, 2002:13). Flowing from the discussion above, section 15 of the Act stipulates the general powers and duties of the NDMC as follows:

i.   Must specialise in issues concerning disasters and disaster risk management.

ii.   Must monitor whether organs of state and statutory functionaries comply with the Act and the National Disaster Management Framework.

iii.   Must act as a repository of, and conduit for, information concerning disasters, impending disasters and disaster management.

iv.   May act as an advisory and consultative body on issues concerning disasters and disaster risk management to –

    a.   Organs of state and statutory functionaries;

    b.   The private sector and non-governmental organisations;

    c.   Communities and individuals; and

    d.   Other governments and institutions in southern Africa.

v.   Must make recommendations regarding the funding of disaster risk management and initiate and facilitate efforts to make such funding available.

vi.   Must make recommendations to any relevant organ of state or statutory functionary –

    a.   On draft legislation affecting the Act, the NDMF or any other disaster management issue;

    b.   On the alignment of national, provincial or municipal legislation with the Act and the NDMF;

    c.   In the event of a national disaster, on whether a national state of disaster should be declared;

vii.   Must promote the recruitment, training and participation of volunteers in disaster management;

viii.   Must promote disaster risk management capacity building, training and education throughout South Africa, including in schools, and, to the extent that it may be appropriate, in other southern African states; and

ix.   Must promote research into all aspects of disaster risk management.

In addition to these, the NDMC also play a critical role in the development of disaster risk management plans and strategies by all organs of state and other institutional role players involved in disaster risk management (South Africa, 2002:19). This aspect is discussed in greater detail in upcoming sections. In this regard, the NDMC is also required to provide guidance to organs of state on the integration of prevention and mitigation strategies with national, provincial and municipal development plans, programmes and initiatives (South Africa, 2002:19-20). Furthermore, the NDMC as set out in section 20 of the Act, must provide guidance to all role players on all aspects related to the prevention and mitigation of disasters including ensuring the integration of these measures with development plans, programmes and initiatives (South Africa, 2002:20).

Flowing from these general powers and duties, it is evident that the NDMC is at the heart of disaster risk management in South Africa. It is also clear from these duties that the nature of disaster risk management in South Africa is premised on the assumption that the NDMC is able to facilitate, provide guidance and monitor the implementation of disaster risk management activities in an integrated and coordinated manner. Thus it can be argued that the NDMC plays a central and fundamental role in the effective implementation of the Act. The fact that the NDMC is responsible for developing policy and regulatory frameworks, guiding, facilitating and monitoring the implementation of policies and legislation by the various organs of state means that the success of disaster risk management in South Africa is inextricably linked to the effective functioning of the NDMC.

From the discussion above and consistent with the Yokohama Principle number 10 (alluded to in preceding sections) which states that each country bears the primary responsibility for protecting its people, and national assets from the impact of natural disasters, it is clear that within the South African context, the Act places disaster risk management as a primary function of government. Notwithstanding this proposition, the Act recognises the role played by non-state agencies in disaster management in the country and in view of this, creates advisory forums at all levels of government to facilitate the active participation of all stakeholders.

The ensuing section expands further on this by examining the National Disaster Management Advisory Forum (NDMAF) as an institutional structure of disaster management in the country.

5.4.4   National Disaster Management Advisory Forum (NDMAF)

According to IFRC (2011a:29), the NDMAF is a fundamental pillar of the disaster management institutional framework in South Africa. The NDMAF was established by the Minister responsible for disaster risk management and is chaired by the Head of the NDMC (South Africa, 2005:33). The primary purpose of this forum is to provide a platform for coordination and cooperation amongst role players (both state and non-state actors) involved in disaster risk management (South Africa, 2005:33). Likewise, the IFRC (2011a:29) proclaims that this forum provides the institutional space for consultation and coordination of disaster management activities and programmes amongst a labyrinth of role players at all levels of government. Within the context of the NDMAF, these stakeholders are able to consult one another and coordinate their actions (van Niekerk, 2006:106).

With regard to the linkages between the NDMAF, the NDMC, ICDM and other organs of state, the Act requires the NDMAF to make recommendations concerning the Framework to the ICDM and may provide guidance to any organ of state, statutory functionary, non-governmental organisation or community or the private sector on any matter relating to disaster risk management (South Africa, 2002:10).Similar to the ICDM, the NDMAF also gives effect to the principles of cooperative governance as its composition includes representatives from all spheres of government as well as relevant entities involved in disaster risk management outside government. The NDMAF also plays a role in drafting disaster risk management plans, promoting joint standard of practice, contributing critical information to the directory of institutional role players and participating in programme and policy reviews to name but a few (South Africa, 2005: 34).

Having discussed the institutional and governance machinery for DRR at the national level, the ensuing section examines the multi-sectoral nature of the function in South Africa.

5.5 THE MULTI-SECTORAL NATURE OF DRR IN SOUTH AFRICA

The South African DRR legislative framework recognises and entrenches the multi-sectoral and multidisciplinary nature of the function. This is clearly articulated in the definition of disaster risk management (alluded to in previous sections) which puts emphasis on an integrated and multi-sectoral approach in the process of planning and implementation of measures aimed at reducing the risk of disasters amongst others. From the discussion above on the institutional architecture for DRR in South Africa, it is also evident that these structures are designed to coordinate cross-sectored actions and activities of all role players involved in DRR. More specifically, Section 25 of the Act clearly stipulates the roles and responsibilities of the various sectors in DRR.

5.5.1 DRR roles and responsibilities of national organs of state

Flowing from the discussion above, section 25 of the Act further states that each national organ of state must prepare a disaster risk management plan setting out the following:

i.   The way in which the concept and principles of disaster risk management are to be applied in its functional area;

ii. Its role and responsibilities in terms of the NDMF;

iii. Its roles and responsibilities regarding emergency response and post –disaster recovery and rehabilitation;

iv. Its capacity to fulfill its role and responsibilities;

v.   Particulars of its disaster risk management strategies; and

vi. Contingency strategies and emergency procedures in the event of a disaster, including measures to finance these strategies (South Africa, 2002:23-24).

Furthermore, section 25 requires that each national organ of state must coordinate and align the implementation of its disaster risk management plan with those of other organs of state. In short, the disaster risk management plan of an organ of state must

form an integral part of its planning and must give explicit priority to the core principles of disaster prevention and mitigation (South Africa, 2002:30; South Africa, 2005:91-92). The role and responsibilities of national organs of state are captured succinctly in the Framework which states that: *"Based on the principle of auxiliary (using existing structures and resources), disaster risk management responsibilities must be integrated into the routine activities of the various sectors and disciplines within the relevant organs of state and their substructures"* (South Africa, 2005:23). Additionally, the Framework stipulates that each national organ of state must establish a focal or nodal point for disaster risk management who will also be a representative of the department on the NDMAF (South Africa, 2005:24). Once established, the focal point will be responsible for the following:

i.   Facilitating and coordinating the relevant department's disaster risk management arrangements and planning for DRR, response and recovery;

ii.   Ensuring that such arrangements and plans are consistent with the national disaster risk management framework;

iii. Facilitating the alignment of the arrangements and plans with those of other organs of state and other institutional role players;

iv.   Integrating disaster risk management planning processes with national and provincial initiatives and Integrated Development Plans (IDPs);

v.   Regularly reviewing and updating disaster risk management plans; and

vi.   Ensuring that requests for information from the NDMC are responded to in terms of section 18 of the Act (South Africa, 2005:24-25).

In light of the above legislative requirements, it is important to note that some national departments such as the Department of Agriculture, Forestry and Fisheries (DAFF) have indeed established disaster risk management focal points. Within the context of DAFF, the Directorate: Climate Change and Disaster Risk Management are responsible for coordination of DRR initiatives. The establishment of a dedicated unit responsible for coordinating DRR initiatives and activities of the Department can be regarded as a fundamental achievement for the agricultural sector (Coetzee *et al*., 2013:21). In essence, this unit is responsible for the developing and providing a

national policy framework for climate change and DRR for the sector, ensuring effective planning and implementation of an early warning system in support of associated sector risk management programmes, implementing climate change programmes and adaptation strategies within the sector, preventing production losses by combating migratory pests and diseases as well as coordinating post disaster recovery and rehabilitation (South Africa, 2014b). In 2012, DAFF also developed a sector disaster risk management plan in line with section 25 of the Act which aims to drive the DRR agenda within the sector, establish early warning systems as well as developing strategic partnerships for purposes of (South Africa, 2012d:12).

While the effective functioning of this Directorate can be attributed largely to compliance with the Act and the Framework, legislation administered by the Department has also been utilised to support DRR goals and objectives. This legislation includes the Conservation of Agricultural Resources Act of 1983, Agricultural Pests Act of 1983, Animal Diseases Act of 1984 and the National Veld and Forest Fire Act of 1998. With regard to institutional and governance arrangements to address disasters in the sector, DAFF has established the following structures:

i.   National Agro-meteorological Committee;

ii.   National Agricultural Disaster Risk Management Committee;

iii.   Departmental Working Group on Climate Change;

iv.   National Committee on Climate Change;

v.   Inter-governmental Committee on Climate Change; and

vi.   Participation in the NDMAF (Coetzee *et al*., 2013:22).

The establishment of a disaster risk management focal point by DAFF gives effect to the multi-sectoral nature of the function and enables the sector to develop and implement strategies aimed at reducing risks as well as ensuring that robust response systems are in place to respond rapidly and quickly to disasters affecting the respective sectors. Flowing from the above discourses, van Niekerk (2006:97)

argues that the multi-sectoral nature of disaster risk management in South Africa requires integration and coordination of activities of all role players into a holistic and comprehensive system aimed at DRR. This view is supported by the United Nations Development Programme (UNDP) (2007:15) which argues that disaster risk management is not a separate discipline but a cross-cutting issue that needs to be considered in many areas and sectors and at all levels of polity, society and economy.

Linked to this, the UNISDR (2004b:20) adds that indeed, DRR, as a multi-disciplinary and multi-sectoral endeavour, falls under the programme of diverse institutions. Against this backdrop, DRR policies need to be comprehensive, integrated and balanced across sectors. Effective design and implementation of DRR involve institutional collaboration between various stakeholder interests and require clear assignment of roles, assumption of responsibilities, and coordination of activities (UNISDR, 2004b:20).

As indicated in preceding sections, one of the Framework's Key Performance Area focuses explicitly on DRR. In this context, while the Framework acknowledged the multi-sectoral nature of DRR in South Africa, it identifies the following eight key planning points or requirements that must be applied and documented by organs of state across all spheres of government as well as across sectors when planning DRR initiatives as shown in Table 5.3:

CHAPTER 5: DISASTER RISK REDUCTION IN THE SOUTH AFRICAN CONTEXT

TABLE 5.3: Eight Planning points for DRR projects or programmes

EIGHT PLANNING POINTS FOR DRR PROJECTS OR PROGRAMMES	
Planning point 1	Use disaster risk assessment findings to focus planning efforts
Planning point 2	Establish an informed multidisciplinary team with capacity to address the disaster risk and identify a primary entity to facilitate the initiative
Planning point 3	Actively involve communities or groups at risk
Planning point 4	Address multiple vulnerabilities wherever possible
Planning point 5	Plan for changing risk conditions and uncertainty, including the effects of climate variability
Planning point 6	Apply the precautionary principle to avoid inadvertently increasing disaster risk
Planning point 7	Avoid unintended consequences that undermine risk-avoidance behavior and ownership of disaster risk
Planning point 8	Establish clear goals and targets for DRR initiatives, and link monitoring and evaluation criteria to initial disaster risk assessment findings

Source: South Africa (2005)

From Table 5.3 above, it is clear that scientific and robust risk assessment forms the bedrock upon which all DRR programmes and initiatives flow. It is also evident that while each sector or national organ of state has specific responsibilities for DRR as set out in their respective disaster risk management plans, the NDMC remains at the heart of effective multi-sectoral DRR due to its strategic position to support and guide such activities. Stated differently, effective multi-sectoral DRR is inextricably linked to the optimal functioning of the NDMC to coordinate and provide guidance on such sectored initiatives and programmes. From this discussion, it is also clear that the Framework requires the integration of DRR responsibilities into the routine activities and programmes of the various sectors. While this is the case, the modalities necessary for such integration remains unclear hence this study aims to contribute by proposing a model that will guide such integration into national multi-sectored planning in the country.

5.6   CONCLUSION

Chapter 4 aimed to provide an understanding of DRR within the South African environment. Firstly, a brief exposition on the evolution of DRR in the country was provided with specific focus on DRR discourses in post-Apartheid South Africa. From this discussion, it emerged that the paradigm shift from response-oriented approaches towards risk reduction based methodologies within the South African environment was also influenced by several key global initiatives. An overview of selected key legislation pertinent to DRR also enjoyed attention. This exposition on key legislative instruments for DRR revealed that South Africa has a relatively advanced and comprehensive suite of legislation which creates a supportive and enabling environment for managing disaster risks. The national institutional and governance arrangements for DRR in the country were highlighted and from this discussion, it was evident that while the primary responsibility for DRR in South Africa rests with the government, the legislative framework provides several platforms and mechanisms for active participation by role players outside government.

This chapter explored the multi-sectoral nature of the function within the South African environment. From this exposition, it became evident that the South African legislation presents DRR as multi-sectoral and multi-disciplinary in nature. Cognisance should be taken of the fact that DRR must be integrated into strategic planning and programmes of the various sectors within the South African government. With this in mind, the following chapter will provide an overview of national multi-sectoral planning within the South African government.

CHAPTER 6:
THE DEVELOPMENT OF MULTI-SECTORAL PLANNING IN THE SOUTH AFRICAN GOVERNMENT

6.1   INTRODUCTION

Previous chapters have shown that within the South African context, DRR is a responsibility of all spheres of government. Chapter four revealed that South Africa faces several hazards that pose a threat to lives, livelihoods, property and the environment. It also emerged that urbanisation and climate change are some of the key drivers of disaster risks within the South African environment. Chapter four further stipulated that a number of government entities are responsible to address the country's disaster risks and for the implementation of DRR programmes and initiatives. Chapter five provided an overview of key legislation and institutional structures supporting DRR in the country and from this discussion, it emerged that an integrated and multi-sectored approach in the process of planning and implementation of measures aimed at reducing the risk of disasters is essential. Chapter five further stipulated that for DRR to be successful, it must be integrated into national multi-sectoral planning. This chapter will provide the reader with an understanding of how multi-sectoral planning developed within the South African environment. This chapter addresses the research objective of investigating and analysing how national multi-sectoral planning developed in South Africa.

The chapter starts by giving an overview of the theoretical and practical foundations for the classification of government activities. The state plays a primary role in the implementation of disaster risk and therefore a discussion of the South African state system will be provided. This will be followed by a discussion of the origin and evolution of government departments within the South African environment. The South African government structures will be discussed. The legislative framework, planning instruments and planning cycle processes supporting multi-sectoral planning in South Africa will also get attention. The next section focuses on theoretical and practical principles that underpin the classification of government activities.

6.2 THEORETICAL AND PRACTICAL FOUNDATIONS FOR THE CLASSIFICATION OF GOVERNMENT ACTIVITIES

Various theoretical and practical principles inform the classification of government activities. Below, the concept of departmentalisation and the theoretical and practical considerations as key concepts in the classification of government activities will be discussed.

6.2.1 Departmentalisation

According to Gibson *et al*. (cited by Sokhela, 2014:113), departmentalisation is a process in which an organisation is structurally divided by combining jobs in departments according to a shared basis or shared characteristics. Roux (1997:46-47) share a similar view and maintain that this process entails the establishment of departments to provide specialised functions and services in line with specific needs of society. Thus Sokhela (2014:113) contends that departmentalisation is one of the core elements of the organising process and its aim is to arrange activities to facilitate the achievement of organisational objectives and goals. While there is no single way of departmentalisation applicable to all organisations and all situations, when public executive institutions are established to perform their duties, related government functions which need to be executed can be grouped together to form homogeneously organised units (Robbins, 1976, cited by Roux, 1997:46). Roux (1997:47) argued that the process of departmentalisation entails the classification or grouping of related functions on the basis of a logical categorisation.

Flowing from the discourses above, Peters (2010:139) postulates that indeed various scholars and researchers have grappled with the fundamental question of how to structure the public service in order for it to deliver on its mandate? Botes *et al*. (1992:370-371), De Villiers (1987:88-89), Peters (2010:139), Roux (1997:47-49), Thornhill (1985:47), Thornhill (2012:170), Venter (1989:80-81) argued that the four alternative principles namely, (a) geographical area covered; (b) processes employed; (c) types of persons or things dealt with and (d) purpose served provide a useful foundational basis in the process of organising government departments. Within the South African context, as Botes *et al*. (1992:370) and Roux (1997:46) argued, an analysis of the objectives and functions of existing public executive

institutions reveals that these organisations are structured according to criteria or other foundation informed by the four theoretical principles proposed by Gulick. While these principles largely form the basis upon which government functions are classified, it is important to note that in practice such foundations are not used as the sole basis of organisation (Botes *et al*., 1992:370; Roux, 1997:47). This view is supported by Brynard (1992:370) who added that while the theoretical classification of departmentalisation based on Gulick's principles form a fundamental basis for the structuring of public institutions, in practice, these principles do not necessarily find practical expression as various public organisations are also established in terms of legal requirements.

It is clear that departmentalisation is formed by various theoretical principles or considerations. In view of this, the next section presents a more comprehensive discussion of these theoretical principles with a view to contextualise how government departments are classified within the South African environment.

6.2.2   Theoretical foundations for the classification of government activities

According to Roux (1997:47) and Thornhill (2012:170), when the total sphere of activity of the South African central executive institutions is taken into consideration, the various institutions can be classified according to the principles as outlined below.

6.2.2.1   *Classification according to geographical area / Organisation by area served*

Botes *et al*. (1992:370), Roux (1997:48), Venter (1989:80) argued that organisation by area served arises when several functions are grouped together in a specific geographic area due to various considerations. Communication problems, geographical coordination as well as commonality of political structures can be part of these considerations. In practice, organisations which are established on this basis will render different services to all citizens of a specific locality (Brynard, 1992:370; Roux, 1997:48). Within the South African environment, provincial administrations and local authorities are classic examples of this type of classification (Brynard, 1992:370; Roux, 1997:48). Taking this into account, De Villiers (1987:89) added that

organisations structured in this manner will utilise a variety of processes and strive to achieve different purposes in the process of providing services to those who live in a particular environment or community.

Peters (2010:140) adds that this form of classification is also influenced by the degree of centralisation or decentralisation that is necessary or required to effectively manage a particular territory. With regard to centralisation, Peters (2010:140) maintains that one of the institutional mechanisms to ensure uniformity is through the use of a prefectural system in localities with prefects of the central government responsible for the implementation of national programmes at sub-national levels. While there are variations in the exact ways in which prefectural systems operate, the common thread of these systems in countries such as France, Italy and Japan is that one officer must coordinate and be responsible for public policies delivered in one sub-national area (Peters, 2010:140). The prefectural corps was created by Napoleon and is regarded as his greatest and most lasting administrative achievements (Whitcomb, 1974:1089). The work by Tarrow (1974) and Whitcomb (1974) can be consulted for more on prefectural corps.

According to Roux (1997:48) the primary advantage of this centralised system is that the provision of services is more easily coordinated and controlled as officials responsible for a particular service are also in closer contact with those people who require the service. Notwithstanding this advantage, several disadvantages associated with this system include the inflexibility and a possible autocratic nature of the system (Peters, 2010:141). Roux (1997:48) adds that in the context of a centralised system, strong pressure from interest groups in a certain area can create circumstances where limited resources are inequitably and unjustly allocated. In practical terms, it is often difficult to demarcate geographical areas in such a way that common interests are retained in a particular area (Roux, 1997:48).

In contrast to centralisation, the notion of administrative decentralisation is used widely to minimise the adverse effects of a highly centralised system and for coping with ethnic problems and regional differences in what might otherwise be centralised countries (Peters, 2010:142). For example, in Spain there has been a movement to decentralise administration to ethnic and linguistic areas that have demands for special consideration (Peters, 2010:142). Within the South African environment,

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Brynard (1992:349) identified the following factors as critical when departments are decentralised:

i.   The policy of the government with regards to decentralisation of particular activities must be established. For example, while the affairs of Justice can be decentralised throughout the country, the Department of Foreign Affairs decentralise abroad as opposed to locally;

ii.   Geography and demography impacts on the location of decentralised office as the convenience for community members utilizing the service must be taken into account;

iii. The willingness and ability of workers to serve within specific areas must be taken into account;

iv.   The availability of suitable accommodation and other critical services such as water, transport, electricity and communication infrastructures also plays a vital role when decentralisation is considered;

v.   A determination must be made regarding the extent of control that must be exercised over activities in order to determine the geographical distance between decentralised offices and head office; and

vi.   Legal restrictions on the extent to which decentralisation may take place would also be a primary factor to consider.

Malan (2014:61) argued that the degree of decentralisation among different spheres or levels of government can be described by concepts such as devolution and deconcentration. While devolution implies the transfer of power to lower level authorities which operate in a quasi-autonomous manner within their geographic areas, deconcentration entails the delegation of authority to lower level authorities in order for such authorities to act as agents of implementation in the field (Fox & Meyer, 1995:37; Hague & Harrop, 2013:264; Malan, 201462). Simply put, deconcentration is purely an administrative function denoting a relocation of central government employees from the capital while devolution occurs when central

government grants decision-making autonomy (including some legislative powers usually through the constitution) to a lower level of government.

Gildenhuys and Knipe (2000:239) identified two primary advantages of devolution as (1) it improves the control of voters and (2) it ensures public accountability to a greater extent than political centralization. This resonated with the argument advanced by Fox and Meyer (1995:37) who assert that devolution is attractive because it enhances local citizen involvement, ownership and also engenders identification with the development initiatives driven by local authorities. Notwithstanding these advantages, devolution is not free from disadvantages. In this regard, Gildenhuys and Knipe (2000:239) argued that devolution may obstruct unity of command at the central level and may also undermine the proper execution of national policy through a national strategy. Within the South African context, Malan (2014:62) notes that devolution of functions to provincial and local spheres of governments should take into account the capacity (financial and human resources) to implement the devolved functions. While Malan's observation mainly reflects the dynamics of devolution in post-apartheid South Africa, a similar analysis was made by Cameron (1991:148-149) towards the end of the apartheid era where he argued that objectives of the then devolution policy to local government was undermined by lack of financial and human resources.

From the discussion above, it is evident that organising by area served improves the understanding of the organisation regarding the dynamics that prevails in a particular locality. Logically, this improved understanding should result in improvement in service delivery. It is also clear that where a centralised system is preferred, institutional mechanisms such as a prefectural system can be utilised to monitor performance on the delivery of goods and services at sub-national levels of government. Within the South African context, this prefectural system is closely related to approaches adopted by national departments such as Departments of Water Affairs and Sanitation and Labour who have regions across the country to provide services as well as monitor the implementation of national government policies and programmes at those specific regions.

While a centralised system gives national government strong control of programmes and activities at regional levels, the fundamental challenge associated with this

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system is that powerful interest groups operating in a given area can influence resource distribution and allocation in unjust ways. It also emerged from this discussion that a decentralised system enables an organisation to respond effectively to the peculiar dynamics of a specific area and the extent of decentralisation is influenced by a variety of factors including geography, service availability and legal restrictions. The difficulty associated with retaining common interests in a particular locality also serves as a major disadvantage of this form of classification. This discussion has also accentuated the importance of devolution as a radical form of power dispersal aimed at increasing political accountability. It has also emerged from this discourse that while devolution includes granting of legislative powers, deconcentration is an administrative arrangement which seeks to secure improved efficiency and effectiveness for institutions that operate at a similar level or sphere of government.

Having outlined how organisation by area influence the structuring of organisations, the next section turns attention to organisation by process or by commonality of functions.

6.2.2.2   Classification according to the commonality of functions / Organisation by process

In contrast to organisation by area served as discussed above, government departments can also be organised by process, or by the communality of the processes employed by the members of the organisation and the communality of their professional skills (Botes *et al*., 1992:370; Peters, 2010:143; Roux, 1997:47-48; Venter, 1989:80). Taking this argument further, De Villiers (1987:89) contended that organisations structured in this manner are essentially geared toward performing specific functions not so much toward accomplishing a specific goal in a particular locality. At the heart of this form of classification is the bringing together of those who have similar professional training or who make use of the same or similar equipment in a single department (De Villiers, 1987:89). In its most extreme form, this principle might mean, for example, that all accounting or purchasing activities for government would be concentrated in single agencies, or that all engineers or lawyers would be concentrated in bureaus of engineering or law, and their services provided to other

agencies as required (Peters, 2010:143). Within the South African environment departments such as Education, Health, Justice and Constitutional Development and Home Affairs are some examples of institutions that are classified according to commonality of functions (Roux, 1997:47). Closely linked to this type of classification is the notion of line versus staff organisation structure which was discussed in chapter two of this thesis. While the former includes agencies that directly deliver services to the public, the latter are responsible for coordinating the line agencies and providing central services needed by all of government departments (Roux, 1971:83).

Another possibility for organisation by process is through the use of Corps system which is best developed in France, with engineering and diplomatic services as some examples of this system (Peters, 2010:148). With regard to the advantages of classifying by process, Roux (1997:47) argued that in practical terms, it enabled officials to acquire an in-depth understanding and consensus of opinion about the organisational objectives which have to be pursued. Peters (2010:148) commented that functions that can benefit from organisation by process are those that require (1) technical training or highly professional skills, (2) a high degree of internal commitment and *esprit de corps*, and (3) impartiality and isolation from other sections of the bureaucracy. Notwithstanding this advantage, conflicts are inherent in this system. Government departments are responsible for a variety of diverse functions and it is difficult to demarcate functions in a manner that allows the creation of independent units (Roux, 1997:48).

It is clear from the argument that organizing by process or commonality of functions influenced the structuring of several departments in South Africa. It is also clear that the concentration of personnel with similar professional training and background created an opportunity for in-depth understanding of organisational programmes and activities. The preceding section outlined the dynamics associated with organizing by process where the fundamental factor is the grouping of certain similar skills necessary to deliver a particular service. The next section presents discussion on organisation by clientele or population group.

6.2.2.3 Classification according to client or population group requiring the service / Organisation by clientele

The third possible basis for organisation is the clientele served by the organisation (Botes *et al.*, 1992:371; Roux, 1997:48-49; Venter, 1989:80). Clientele groups who have special needs or whose lifestyles, industries, or other characteristics are considered sufficiently distinctive may justify a separate organisation to address their interests (Peters, 2010:149). This view is supported by Roux (1997:48-49) who postulate that departmentalisation of executive organisations is usually undertaken to ensure provision of services for a specific population group or certain clients within a population group. While during the apartheid era the former *own affairs* Departments such as the various Departments of Education and Culture for White, Coloured, Indian and Blacks population groups are example of classification in terms of these principles, in post-apartheid South Africa, Departments of Small Business, Traditional Affairs and Military Veterans demonstrates the continuing influence of this type of organisation (Roux, 1997:49).

With regard to the rationale for adopting this form of classification, Peters (2010:149) attributes two primary reasons (1) to be able to provide better services for a special set of clients (especially those with political clout) such as veterans, urban dwellers and farmers, (Traditional Leaders within the South African context) and (2) conversely, to assist and to control segments of the population lacking such political clout, such as native Americans and foreign workers. The important fact about both of the justifications for clientele groups is that they result in an organisation that can become an obvious avenue of political influence and bargaining by the concerned clientele (Peters, 2010:149). The advantage of this method of departmentalisation is that the client or population group is always well-informed about which institutions are responsible for taking care of their particular needs (Roux, 1997:49). Additionally, officials also acquire specialised knowledge about the actual needs of a particular client or population group thereby making it possible to take the values of such groups into consideration in policy making (Roux, 1997:49).

Flowing from the foregoing discussion, Peters (2010:149) maintained that this type of departmentalisation usually results in more direct group influence on administration than might be found in other forms of organisation. It is often difficult to distinguish

client-based organisations from area-based organisations (Peters, 2010:150). This form of organisation has a number of possible dangers. It is difficult for an institution organised in this manner to remain detached from its clientele and to be able to administer programmes objectively and in public interest (Peters, 2010:151). Another disadvantage of using this classification criterion is that the inhabitants of a country cannot be divided into such clear-cut categories for all government services (Roux, 1997:49). It may also happen that the needs of a particular population group could be over-emphasised at the expense of others, who due to smaller numbers or even political reasons, cannot exercise the same degree of pressure (Roux, 1997:49). It is thus clear that this principle has informed the creation and structuring of most government departments since the formation of the Union of South Africa in 1909 and in post-apartheid era.

The next section examines the classification of organisation by service to be rendered also known as organisation by purpose.

6.2.2.4   *Classification according to the product or service to be rendered / Organisation by purpose*

The fourth possibility for organizing administration is the principal purpose, or goal, of the organisation (Botes *et al*., 1992:370; Roux, 1997:48). As Peters (2010:151) observed, organisations structured in this manner are not always clearly distinguishable from the others established in terms of the theoretical principles discussed above. For example, is a Department of Agriculture organized on the basis of its major purpose, which is the promotion of agriculture, or is it structured on the basis of a ready-made clientele group which in this case are farmers?(Peters, 2010:151). This type of classification highlights the lack of exclusiveness of this set of categories of studying government structure (Peters, 2010:151). De Villiers (1987:88) mentioned that organisations structured this way are oriented primarily toward accomplishing some specific task. De Villiers (1987:88-89) argued further to illustrate this point by using the Department of Education where apart from education staff, there will also be administrative personnel, architects, engineers, accountants, gardeners, etc all appointed to promote the same purpose which is education. While the four principles discussed above are those advanced by Luther Gulick many years

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ago, within the South African context, Roux (1997:49); Brynard (1992:371) added a fifth principle which entails classification according to the domestic nature of the function as discussed below.

6.2.2.5   *Classification according to the domestic nature of the function*

According to Botes *et al*. (1992:371); Roux *et al*. (1997:49), this type of classification refers to organisations which were established to provide for the needs of other institutions. This view is echoed by Brynard (1992:371) who adds that these institutions were created mainly to serve the needs of other government organisations. Within the South African context practical examples include the Departments of Public Works, Public Service and Administration, Treasury, Government Buyer, Government Garage, Government Printers, Public Service Commission and Auditor General (Brynard, 1992:371; Roux *et al*. 1997:49). This type of departmentalisation is necessary to reduce or eliminate overlapping, duplication, which can be costly and wasteful, and areas which function without control (Brynard, 1992:371). The fundamental objectives of this type of classification in centralised organisational units can be described as follow:

i.   Since the required services can be obtained by domestic departments on a large scale, greater cost savings can be achieved;

ii.   The individual functional departments are free from the worries and bother of undertaking domestic and auxiliary services as an additional responsibility;

iii.   Uniformity and standardization are improved;

iv.   Officials in domestic service departments gain expert knowledge and skills which, in turn, creates job opportunities and career opportunities;

v.   Since services are provided from a centralised auxiliary services department, there is the possibility of improving the quality and standards of products and services; and

vi.   Because auxiliary services are provided by a centralised domestic department, better control over routine matters can be exercised (Roux *et al*. 1997:50).

Despite the various advantages related to the use of domestic auxiliary departments, and even similar sections within existing departments, there is still the possibility that cumbersome procedures may cause delays. While most government organisations in South Africa have some aspects of all the five principles discussed above, there are other factors that play a role in departmentalisation. Brynard (1992:371) identified the following as some of the factors impacting on departmentalisation:

i.   Departmentalisation may take place in a way that avoids overburdening a single Minister;

ii.   It may be necessary to grant a greater degree of autonomy to the organisational unit in order to make its activities flexible;

iii.   Sometimes an institution is specifically created to bring a matter to public awareness, for example a Department of Energy or Tourism or an oil exploration corporation;

iv.   Departments may also be created as a result of the drive and perseverance of a particular Minister, or guiding official, for example state security or sport and recreation;

v.   Since there are only a limited number of Ministers to handle departments, care must be taken not to create too many institutions; and

vi.   The requests or demands of representative interest groups may also have an influence on departmentalisation, leading to the creation of bodies such as a publication council, a national monuments council, a medical and dental council, and an agricultural control board to name but a few.

It is important to note that while present departmentalisation within the South African environment does not necessarily follow only the theoretical principles discussed in previously, it does not lead to wide-spread inefficiency within the government sector (Brynard, 1992:371). Brynard (1992:371) argued that this is because departmental officials regularly investigated functions with a view to combine or abolish (in extreme cases) units that appear to be unnecessary. This section has demonstrated that the classification of government departments is informed by various theoretical principles

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and considerations. The next section presents an overview of practical factors that also shape the classification of government functions and activities.

6.2.3 Practical foundations for the classifications of government functions and activities

While the principles used to classify government functions as described above are mainly of theoretical value, a practical classification pattern of executive institutions as outlined in Table 6.1 below represents a more realistic perspective of the various groups of South African executive institutions which perform government functions (Roux, 1997:50):

Table 6.1: **Practical classification pattern of South African government institutions**

PRINCIPLES	CLASSIFICATION	EXAMPLE
Public service units	Government Departments	Department of Justice; Department of Health
Public Industrial Units	Government Commercial Enterprises	Telkom; Vaccine Research Institute
Corporate Units	Government Corporations	ESKOM; South African Broadcasting Corporation (SABC)
Marketing Units	Agricultural Boards	Maize Board; Meat Board.
Research Units	Research Institutions (government subsidised)	SA Bureau of Standards (SABS); Human Science Research Council (HSRC)
Monetary Units	Financial Institutions	Development Bank of Southern Africa (DBSA)
Quasi-Judicial Units	Arbitration Councils	Industrial Council; Appeal Court on Air Pollution
Professional Representative Units	Professional Councils	SA Nursing Council; SA Medical and Dental Council;
Advisory Units	Advisory Councils	Central Economic Advisory Service

Source: Roux (1997)

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From Table 6.1, it is clear that the establishment of several governmental entities in South Africa are informed by practical considerations. The next section presents a brief discussion on the two main schools of thought regarding the number of government departments in a state.

6.2.4   Views on the number of government departments in a state

With regard to the possible number of government departments in any state, there are mainly two schools of thought namely (1) those in favour of a small number of large departments and (2) those in favour of a large number of small departments (Worral, 1971, cited by Roux, 1997:43). Inevitably, these schools of thought have both positive and negative aspects that must be taken into account. On the one hand, while a small number of large government departments may simplify coordination of activities on a practical level, administration of such departments may be based on assumption and this can have detrimental effect (Roux, 1997:43). On the other hand, where as a large number of small government departments may enable specialisation and practical implementation of democratic principles, the major challenge is the duplication or overlapping of functions which can occur and result in inefficient and ineffective delivery of services to communities by such departments (Hanekom, *et al*., 1986, cited by Roux. 1997:43). With the discussion above as a guiding context, it can be argued that within the South African environment particularly during the 1960s to 1970s, the large number of small departments school of thought was most dominant until the 1980/82 rationalisation programme wherein a small number of large departments was adopted (Roux, 1997:43). Roux (1971:81) added that notwithstanding a small population, compared to countries as the United States of America and France which have significantly bigger populations, South Africa has more state departments.

The preceding sections provided discussion on the theoretical principles and considerations that informs the structuring of government departments. From this discussion, it emerged that within the South African environment, the four theoretical principles proposed by Gulick fundamentally influenced the establishment and structuring of government departments. As stated in preceding sections, the objective of this chapter is to investigate and analyse how national multi-sectored planning developed in South Africa. With this in mind, it is important to note that national multi-

sectored planning occurs within the framework of the South African state. In view of this, it is therefore critical to briefly explore the South African state system with a view to provide context and perspective to the discussion on national multi-sectoral planning in the country.

The fact that government is an instrument of the state, as will be demonstrated in ensuing sections, expects a discussion of the notion of state to clarify the links and relationships thereto. Against this background, this discussion is preceded by a brief overview of the state as a concept and its fundamental characteristics as well as its evolution over the years. This will be followed by a discussion of the primary functions of the state and the separation and distribution of powers within a state.

6.3   THE SOUTH AFRICAN STATE SYSTEM

The state plays a central role in national multi-sectoral planning. Below, the concept of state and its key characteristics and primary functions will be discussed.

6.3.1   The state as a concept

According to van Niekerk (2001:41), the word state derives from the Latin word *stare (*which means to stand) and *status (*a type of condition). With this in mind, van Niekerk (2001:41) asserted that, in its original form, the concept implies a fixed position which is rigid and difficult to change. De Wet (2014:29) adds that while this concept has different names across the globe such as '*l' Etat* in France or *La Stato'* in Italy or the 'State' in South Africa, the state as a legitimate territory which includes an authoritative structure and its citizens have evolved over a long period of time. Since its emergence from the embers of medieval Europe, the state has evolved into one of the most powerful and successful political organisation that humankind has ever witnessed (Hague & Harrop, 2013:21-22). A detailed discussion on the origin of the state is beyond the confines of this chapter and work by Botes *et al.* 1992; Hague and Harrop, 2013 and van Niekerk, 2001 provide useful reference in this regard.

With regard to the definition of the state, Heywood, 1987 (cited by De Wet, 2014:30) postulates that the state is a political association that establishes sovereign jurisdiction within defined territorial borders and exercises authority through a set of

permanent institutions that are recognisably public and are responsible for the collective organising of communal life. This view is shared by van Niekerk (2001:41) who argued that in simple terms, state refers to a group of people living in a given territory under a common legal and political authority. Van Niekerk (2001:41) argued further to define the state as a structure that has the legal right to make binding rules over the citizens within a particular territory. Thornhill (2012:4) concurs with this assertion and maintains that a state refers to (1) a territory, (2) with a population that constitutes a society, (3) which is independent from and not part of another sovereign political entity, and (4) with public institutions to maintain law and order, to provide public services for the maintenance of society, and to promote the general welfare of the population.

From the foregoing discussion and viewed from a political standpoint, the state is closely linked to the position in a given society of certain groups that are in a state of dominance (van Niekerk, 2001:41). De Wet (2014:26) argues that the interpretation of the state as a concept has evolved in a manner representative and reflective of the level of development of a community, its territories and governance structures in a given society. With this in mind, De Wet (2014:29) postulates that, during ancient times, the notion of state largely reflected the characteristics of villages, small settlements and hamlets in contrast with the super powerful states of the twenty-first century. This view is supported by Thornhill and Hanekom (1995:16) who maintain that indeed the role played by the state is influenced by the level of development of a specific state. Figure 6.1 below presents a timeline that indicates various prominent scholars and philosophers of Public Administration who reflected on the definition of the state throughout history.

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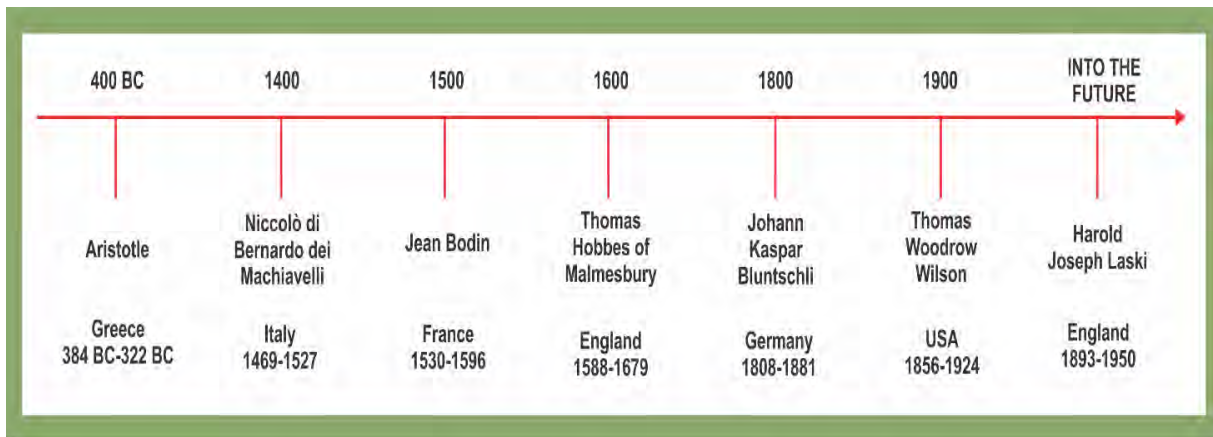
Figure 6.1: A timeline representing various scholars and political theorists who reflected on the definition of a state (adapted from De Wet, 2014)

6.3.2 Key characteristics of a contemporary state

According to van Niekerk (2001:48), the state, throughout its evolution as an institution, has acquired certain specific, distinct and universal characteristics that distinguish one state from another. Table 6.2 provides an illustration of the key characteristics of the contemporary state:

Table 6.2: Key characteristics of the contemporary state

Key characteristics of the contemporary state	
Characteristic	**Description**
Territory	A state is geographically based and bordered. Geographic area is the first and fundamental requirement for categorisation as a state. Focus is not on size but rather on whether territory exists at all.
Sovereignty / independence	To be sovereign means to possess the final and supreme authority beyond which no further legal power exists. Sovereignty implies that the state is recognised by the international community as a sovereign state.
Population	No specific number is required for classification as a state hence numbers varies across states.
Government	The presence of a government is a tangible characteristic of the state. Government refers to the specific occupants of public office possessing the legal right to exercise power and make binding decisions. Government is the mechanism that maintains the state's existence in the international arena. Government is an instrument of the state. Governments may change but states are immortal.

Comprehensive jurisdiction	Jurisdiction must always be comprehensive or 'sovereign' which means that it may be exercised over all members of the state at any time. The state is the only and exclusive association with the power and right to use force as a medium to maintain its authority. Comprehensive jurisdiction or sovereignty also implies internal supremacy within the state's territory and external independence from control by any other political authority or an international organisation.
Legitimacy	The authority of the state is acknowledged both nationally and internationally

Sources: Botes *et al*. (1992:5-9); Cloete (1994:3); Nugent, 2006 cited by De Wet, (2014); van Niekerk (2001:48-50)

From the discussion above, it is clear that the state as an institution has evolved over the years in a manner that is largely reflective of the level of development of a particular society. It is also evident from the key characteristics illustrated in Table 6.2 that a defined geographic area is a fundamental requirement for the state although there is no specific size required for a state to be recognised. From Table 6.2, it is also clear that government is an instrument of the state. Flowing from the discourses above, it can be concluded that the South African state meets all the key requirements of a state. This section has provided an overview of the concept of state, its evolution and its fundamental characteristics. The next section expands further on this by examining the functions of a state.

6.3.3 Functions of the state

All state functions can be divided into four primary categories namely (1) power functions (2) security and protection functions (3) economic functions and (4) redistribution functions (Gildenhuys & Knipe, 2000:51-54; Pienaar & Geldenbloem, 2009:27; Venter, 2011:85). According to Pienaar and Geldenbloem (2009:27), within the South African context, these powers are not limited to the national government but can also manifest themselves at provincial and local government levels as outlined in the discussion below.

6.3.3.1   Power functions

Power functions are state functions which primarily involve the maintenance and projection of power of the state and tend to reside at the national level of government (Pienaar & Geldenbloem, 2009:27; Venter, 2011:85). Within the South Africa environment, these functions largely fall within the spheres of the Departments of Foreign Affairs (now International Relations and Cooperation), Defence, Trade and Industry as well as Justice and Constitutional Development (Gildenhuys & Knipe, 2000:51; Pienaar & Geldenbloem, 2009:27). Diplomacy, military strength and economic power are linked with the ability of the state to maintain and project its power within and across its borders for various purposes including but not limited to deterrence, securing influence over world events, defending strategic interests to name but a few (Venter, 2011:86). In essence, power functions are exclusively performed by national government (Pienaar & Geldenbloem, 2009:27).

6.3.3.2   Security and protection functions

These functions relate to the basic human need of protection (Pienaar & Geldenbloem, 2009:27). This includes protection from foreign aggression, and protection from criminal activity by law enforcement agencies and crime prevention services like the South African Police Services (SAPS). It also includes aspects such as the management of the judicial system and administration of justice as well as the employment of prisons to rehabilitate and separate criminal elements from society which is a function of the Department of Correctional Services (Pienaar & Geldenbloem, 2009:27; Venter, 2011:86). The protection of the natural and artificial environment from exploitation also falls within the security and protection functions of the state and under the jurisdiction of departments such as Environmental Affairs, Water Affairs, Agriculture, Forestry and Fisheries and Health (Venter, 2011:86). Within the South African context, protection functions are spread throughout all three spheres of government with functions such as defence and policing located at the national sphere, disaster risk management across all spheres, while services such as ambulance services, paramedical services, fire brigades and traffic control operate at the provincial and local levels respectively (Venter, 2011:86).

6.3.3.3   Economic functions

Venter (2011:86) argues that at the heart of economic functions is the creation of wealth for the country. Venter (2011:87) argues further to add that while wealth creation methods vary from one country to another, there are certain basic goods and services such as provision of basic infrastructure, the development and promotion of a sound industrial and technological base that are usually provided by government. Within the South African context, these basic services are provided by the departments such as Water Affairs, Transport, Economic Development, Trade and Industry. It is important to note that certain economic functions are also delegated to companies such as Eskom to provide electricity to local authorities, provinces on aspects such as the granting of gambling licences and local authorities through local economic development initiatives (Venter, 2011:87).

6.3.3.4   Redistribution functions

According to Pienaar and Geldenbloem (2009:29), the redistributive functions of government are primarily concerned with the provision of welfare and social services such as health, human settlements, education, old age pensions, etc. These functions are fundamental as they enable the general populace to acquire minimum survival requirements and the potential for development necessary to achieve high standards of living (Pienaar & Geldenbloem, 2009:29). Within the South African environment, Venter (2011:88) claims that most redistributive functions are provided for by national government departments such as Education, Health, Social Development from the point of policy and budget although implementation takes place at the provincial level.

As from the discussion above, it is clear that the state is responsible for the execution of functions that are essential for the socio-economic development and protection of society. It is also evident that while the national sphere of government is largely responsible for most of the functions, sub national spheres (provinces and municipalities) also have specific mandates that must be executed within the context of cooperative government. Having discussed the roles and responsibilities of a state, the next section expands further on this by considering the separation and

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distribution of powers within a state which is regarded as a fundamental requirement for the effective functioning of the modern state.

6.4   SEPARATION AND DISTRIBUTION OF POWERS

The separation of powers among the executive, legislative and judicial branches (called *trias politica*) is one of the fundamental principles underlying the modern democratic state (Botes *et al*., 1992:24; Cameron & Stone, 1995:5; Gildenhuys & Knipe, 2000:7; van Niekerk, 2001:56). The modern design of the *trias politica* can be traced to the constitutional theory of John Locke (1632-1704) (Kahn *et al*., 2011:3; Mojapelo, 2013:37). In clearly advocating for the division of government functions into legislative, executive and judicial, John Locke wrote in his second treaties of Civil Government as follows:

> "*It may be too great a temptation for the humane frailty, apt to grasp at powers, for the same persons who have power of making laws, to have also in their hands the power to execute them, whereby they may exempt themselves from the law, both in its making and execution to their own private advantage*" (Locke, cited by Mojapelo, 2013:37).

Although this doctrine was developed by John Locke, it is the French philosopher and Jurist, Charles Louis de Secondat, better known as Baron de Montesquieu (1689-1755) who is widely credited with the formulation of the doctrine of separation of powers (Mojapelo, 2013:37; Mphaisha, 2014:103; Roux *et al*., 1997:268). According to Mojapelo (2013:38), Montesquieu's idea eventually evolved into a norm consisting of four fundamental principles:

i.   The principle of *trias politica*, which simply requires a formal distinction to be made between the legislative, executive and judiciary components of the state authority;

ii.   The principle of separation of *personnel*, which requires that the power of legislation, administration and adjudication be vested in three distinct organs of state authority and that these organs must be staffed with different officials and

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employees such that a person serving in the one branch of state authority is disqualified from serving in any of the others;

iii.   The principle of the separation of *functions* which requires that every organ of state authority be entrusted with its appropriate functions only. This essentially means that the legislature ought to legislate, the executive to confine its activities to administration of state affairs whereas the judiciary must restrict itself to the function of adjudication, and

iv.   The principle of *checks and balance*, which represents the special contribution of the United States to the doctrine of separation of powers, and which stipulates that a state organ be entrusted with specific powers intended to keep a check on the exercise of functions by others with a view to upholding the equilibrium in the distribution of powers.

The fundamental principle underlying this doctrine is that legal political powers are too overwhelming to be entrusted to a single person or institution in a state (Hicks *et al.*, 2011:53). The *trias politica* doctrine has been applied in most states, including South Africa, for the past centuries (Botes *et al.*, 1992:24). This doctrine is premised upon a belief that the traditional tripartite division of state authority into legislative, executive and judicial functions as described by Montesquieu, endorses the widely accepted principles of democracy, by preventing all despotic power from being vested in a single body (Hutchins, 1952 cited by Botes *et al.*, 1992:24; Gildenhuys & Knipe, 2000:95; Kahn *et al.*, 2011:3; Roux *et al.*, 1997:268). This view is supported by Taljaard *et al.* (2011:21) who postulate that the fundamental purpose of this doctrine is to fragment government power in a manner that avoids concentrating too much political power in a single institution. Therefore, the primary objective of this doctrine is to prevent the abuse of powers by the different branches of government (Cameron & Stone, 1995:5; Mojapelo, 2013:38). Pienaar and Geldenbloem (2009:20) added that at its most extreme, the doctrine holds that there should be complete separation between the three branches of the state in order to protect freedom and prevent dictatorship. While theoretically the doctrine outlines institutional independence in which there should be no overlap of personnel between the

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branches, practically it implies institutional interdependence in the form of shared power to ensure institutional checks and balances (Taljaard *et al*., 2011:21).

Van Niekerk (2001:57) mentioned that within the South African environment, the separation of powers is enshrined in the Constitution. This view is shared by Mojapelo (2013:39) in arguing that while the Constitution does not refer in explicit terms to the separation of powers, the doctrine may be regarded as an unexpressed provision that is implied in or implicit to the Constitution. This is informed by the constitutional principle that stipulates that there shall be a separation of powers between the legislature, executive and judiciary with appropriate checks and balances to ensure accountability, responsiveness and openness (Hicks *et al*., 2011:53; Mojapelo, 2013:38; van der Waldt & Helmbold, 1995:27). Figure 6.2 provides a graphic illustration of the separation of the legislative, executive, and judicial powers of government as well as the organisation of government functions in line with this separation:

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SEPERATION OF POWERS	SPHERES OF GOVERNMENT / GOVERNMENT HIERARCHY		
	NATIONAL GOVERNMENT	**PROVINCIAL GOVERNMENT**	**LOCAL GOVERNMENT**
LEGISLATIVE AUTHORITY	• **PARLIAMENT:** – National Assembly – National Council of Provinces (CABINET MINISTERS)	• **PROVINICAL LEGISLATURE:** (EXECUTIVE COUNCIL)	• **COUNCIL:**
	SECTION 42-82	SECTION 104-124	CHAPTER 7
EXECUTIVE AUTHORITY	• **CABINET MINISTERS AND BUREAUCRACY:** – Departments (Administrations) – Director General Public Officials	Nine Provinces • **EXECUTIVE COUNCIL AND BUREAUCRACY (MECs):** – Departments (Administrations) – Director General – Public Officials	284 municipalities • **CHIEF EXECUTIVE OFFICER (CEO):** – Departments (Administrations) – Strategic Executives (Heads of Departments) – Public Officials
	SECTION 83-102	SECTION 125-141	CHAPTER 7
JUDICAL AUTHORITY	**CONSTITIUTIONAL COURT**	**SUPREMECOURT OF APPEAL** CHAPTER 8	**HIGH COURT** → **MAGISTRATES AND OTHER COURTS**

Figure 6.2:   Matrix of separation of powers and spheres of government (adapted from Jonker, 2001)

From Figure 6.2, it is clear that the *trias politica* doctrine has fundamentally influenced the structure of the South African state. In this regard, it is also evident that the Constitution has also been largely influenced by this doctrine. Furthermore, as outlined in Figure 6.2, it is clear that while each branch of the state has specific

responsibilities, the three branches must work together for the effective governance of the state. Mojapelo (2013:37) maintains that within the constitutional framework the meaning of the terms legislative, executive and judicial authority are of importance:

i.   Legislative authority is the power to make, amend and repeal rules of law;

ii.   Executive authority is the power to execute and enforce rules of law; and

iii.   Judicial authority is the power, if there is a dispute, to determine what the law is and how it should be applied in the disputes.

According to Cameron and Stone, (1995:6), Gildenhuys and Knipe, (2000:156), Kahn *et al*. (2011:3), Mojapelo, (2013:39) and van Niekerk, (2001:56), in most cabinet systems including South Africa, complete separation of powers is impossible. As outlined in Figure 6.2, in South Africa the legislature (Parliament) consists of the National Assembly, the National Council of Provinces (NCOP), and the members of the Cabinet (Hicks *et al*., 2011:53; van Niekerk, 2001:56). From this arrangement, it is clear that Cabinet members also form part of legislature making true *trias politica* impossible to achieve (Mojapelo, 2013:39; van Niekerk, 2001:57). Furthermore, in South Africa, on the one hand, Section 84 of the Constitution empowers the executive branch to refer bills back to Parliament if it is not satisfied and on the other hand, Parliament can dissolve the executive through a majority vote of no-confidence in the Cabinet in terms of Section 102 (van Niekerk, 2001:57). The Constitutional Court also has powers to declare legislation unconstitutional if it is in direct conflict with the Constitution in terms of section 172 (Hicks *et al*., 2011:53). Notwithstanding this mutual interference, the basic principle of separation of powers is maintained (van Niekerk, 2001:57).

In light of the above, it is therefore clear that like in most modern states, the separation of powers doctrine forms the basic infrastructure upon which the South African state rests. As illustrated in Figure 6.2 above, it is also evident that while each branch of the state has specific responsibilities, cooperation and interdependence are fundamental for the effective functioning of the state. Several sections of the Constitution (1996) provide the respective duties and responsibilities of each branch

of the state. In essence, it can be argued that the *trias politica* has played a fundamental role in the development of constitutionalism within the South African environment (Botes *et al*., 1992:25). Having discussed the importance of separation of powers within a state, the following section turns attention to the evolution of departments within the South African state.

As outlined in preceding sections, the objective of this chapter is to explore the development of multi-sectored planning in the South African government. In view of this, a discussion on the origin and evolution of departments in South Africa is therefore essential to understand how multi-sectored planning developed in the country.

6.5   THE EVOLUTION OF DEPARTMENTS IN SOUTH AFRICAN CIVIL SERVICE

Throughout the years, the state was required to perform an increasing number of services and to provide a number of products to meet society's needs (Cloete, 1988:123). As demonstrated in the discussion above, these services had to be delivered by the state since they were essential for the overall wellbeing of the society and could not be effectively rendered by individuals or by private organisations (Cloete, 1988:123). In order for the state to perform these services and to provide these products, suitable institutions had to be created and the work involved had to be divided into units which could be allocated to individual political office bearers and chief officials (Cloete, 1988:123). Inevitably, this division of work resulted in the establishment of state departments which became the traditional institutions for the provision of public goods and services at the central level of government (Cloete, 1988:123).

Using the above as a guiding context, Cloete (1988:123) defined a state department as an organisational unit entrusted with (1) a specific function or a number of related functions, (2) one or more specialised fields of work, (3) a specific population group or (4) the public functions to be performed by the state in a particular geographic area. Cameron and Stone (1995:6) identified the key characteristics of a state department as (1) it is entrusted to a specific executive political office-bearer, via a

Minister or a provincial administrator, (2) a chief official (e.g. Director–General) (DG) who is a permanently appointed member of the public service (as defined in Act 111 of 1984), and who serves as the head of the department under the continuous control of the executive political office bearer, (3) the DG is accountable to the Minister who can be called to account in the meetings of the relevant legislature and (4) the officials serving in the state department under the leadership and control of the DG are members of the Public Service. In this study, the evolution of departments within the South African state will be traced back to the formation of the Union of South Africa on 31 May 1910. Since this evolution was impacted upon by various factors over the years, it is of critical importance to provide an overview of key developments in the history of the state that had an impact on departments. Table 6.3 provides the key milestones in the evolution of departments within the South African state system:

Table 6.3:   Evolution of departments within the South African state system

YEAR	KEY MILESTONE IN THE EVOLUTION OF STATE DEPARTMENTS IN SOUTH AFRICA
APPROACHES FOLLOWED DURING THE PERIOD OF THE UNION OF SOUTH AFRICA	
1909	The colonies of the Cape of Good Hope, Natal, Transvaal and Orange Free State united in a legislative union under the name of the Union of South Africa in terms of the South Africa Act, 1909 (SA Act). Public institutions of the Union were largely based on those which had been established in the four colonies. Section 14 of the SA Act, 1909, provided for the creation of state departments headed by Ministers.
1910	Establishment of the Union of South Africa and colonies became provinces of the Union. Executive authority of the Union was vested in the British Monarch in terms of the SA Act. Most powers of the Monarch were however exercised by the Governor-General with the advice of the Executive Council (EC) of the Union. The EC consisted of Ministers who were heads of state departments. With the formation of the Union, provision was made for the establishment of 13 executive departments due to prevailing circumstances in addition to the four provincial administrations/colonies. The majority of these departments had their origin in the following: • The primary needs necessary to ensure the continued existence of the community (primary needs comprise inter alia protection of the community against attacks from hostile countries (Defence), the maintenance of internal order (justice), promotion of the production and distribution of food (Agriculture), the promotion of trade and industries (Mining and Industry); • The rendering by the state of a variety of essential services to the community, for example the departments of Posts and Telegraph and Education; and • The need for institutional or domestic services to enable state departments to execute their functions more efficiently and effectively, for example centralised domestic institutions such as the Department of Public Works.

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YEAR	KEY MILESTONE IN THE EVOLUTION OF STATE DEPARTMENTS IN SOUTH AFRICA
1910	• A commission of investigation (also called Re-organisation Commission) was appointed on 10 August 1910. The rationale for this commission was to avoid duplication of work and to promote uniformity in work methods and procedures. The Commission was to investigate and report on the following matters: ❖ The proper distribution of state departments and sub-departments under the control of the various Ministers; ❖ The definition of the duties to be performed by each department or sub-department, and their relationship to one another with a view to prevent duplication and minimise overlapping of work; ❖ The establishments required for the efficient conduct of the work of the various departments or sub-departments; and ❖ Generally, any matters connected with, or incidental to, the amalgamation, reorganisation and constitution of the establishments necessary to conduct the business of the Union and Provincial Governments.
1912	Reorganisation Commission submitted its report and recommendations. This was followed by the Public Service Act, 1912. At this point, Parliament recognised that determining organisational arrangements for the provision of public services is a complex activity requiring appropriate expertise. Provision was therefore made for the establishment of the Commission for Administration (previously Public Service Commission), which was equipped to provide expert advice to government on matters such as the creation or abolition of departments, sub-departments, branches or offices, the transfer of functions from one department to another or from a department to any other body or vice versa.
1937	The Department of Welfare (DoW) was established in response to the notion of modern welfare state which was prevalent during this time. The DoW was responsible for matters pertaining to protection and adoption of children, combating social ills such as juvenile delinquency and alcoholism, provision of support to the blind and those in need of care as well as establishment and management of child institutions and labour colonies. During this era, the following factors also contributed to the increased scope of state activities: ❖ Technological progress – the progress made with internal combustion engine and aviation necessitated the establishment of a Department of Transport; ❖ Population increase – Department of Immigration; ❖ Urbanisation – Department of Health and Community Development; ❖ Social and cultural development – Department of Planning; Coloured Affairs; Indian Affairs; Black Administration and Development; ❖ Economic and industrial development – Department of Trade and Industries; ❖ Crises and disasters which may affect the community, for example, war, depression, drought; and ❖ Conservation – Departments of Water Affairs and Forestry

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YEAR	KEY MILESTONE IN THE EVOLUTION OF STATE DEPARTMENTS IN SOUTH AFRICA
APPROACHES FOLLOWED AFTER THE SOUTH AFRICA, CONSTITUTION, 1961	
1961	The Union of South Africa was replaced by a Republic in terms of Section 1 of the Constitution of the Republic of South Africa, 1961 (Act 32 of 1961). While this Constitution was not fundamentally different from the SA Act, 1909, it had a significant impact on the nature of public activities resulting in increase in the number of public executive institutions.
1977 -1979	Due to increasing scope of governmental activities, exacerbated by the subsequent problems resulting in terms of coordination and control of government departments, Cabinet accepted a programme of systematic rationalisation of public executive institutions. As part of this programme, the Civil Service Commission made extensive analyses of the numerous functions of public organisations and presented key recommendations to the government. Based on the report of the Commission, the number of central executive institutions was reduced to 22. This rationalisation programme was informed by the following external and internal environmental factors: **External factors** ❖ Subversive political, economical and military attacks on the country necessitated different types of governmental measures and new services; ❖ Changes in the needs of the different population groups; ❖ Factors such as the energy crisis, technological development and environmental conservation challenges. **Internal factors** ❖ Proliferation of government institutions led to coordination problems, increase in state expenditure and underutilisation of human resources; ❖ Personnel problems which involved recruiting and retaining sufficiently skilled staff for the provision of government services; ❖ Questions which emerged from the volume and complexity of the legislative requirements, for example, in 1979, more than 2 080 Acts were in force with over 16 000 Regulations and Proclamations. In essence, the rationalisation programme resulted in a smaller number of government departments to perform the executive functions, a decrease in the number of quasi-autonomous government institutions (also known as parastatal institutions) and a clear division between the functions of government departments and parastatals being maintained without undermining efficient liaison necessary between these organisations.

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YEAR	KEY MILESTONE IN THE EVOLUTION OF STATE DEPARTMENTS IN SOUTH AFRICA
THE POLITICAL REFORMS OF 1983/84	
1983 - 1984	While the rationalisation programme resulted in a smaller and more efficient public service, the implementation of the 1983 (Act 110 of 1983) in September 1984 resulted in an apparent departure from the objectives of rationalisation. This Constitution introduced a three-chamber Parliament to perform the legislative functions consisting of a House of Assembly (Whites), House of Representatives (Coloureds) and a House of Delegates (Indians). Additionally, the Constitution also provided for a division between own and general affairs. The net effect of these constitutional changes on the macro-organisational structure of the country's public sector was that 22 government departments increased to 26 departments for general affairs and twelve departments for own affairs, in 1987. In practice, the total number of central government departments increased to 38 excluding the various provincial, regional, municipal and parastatals.
THE POLITICAL REFORMS OF 1993/94	
1993	Promulgation of a transitional Constitution, 1993 (Act 200 of 1993). This Constitution provided for a Public Service Commission and a unified South African Public Service, functioning on the basis of democratic values. It also abolished the three-chamber Parliament and the division between general and own affairs and led to the consolidation of the existing 38 departments at central government level into 26 departments (excluding entities such as the Central Economic Advisory Service, Central Statistical Services, Office of Public Enterprises and South African Revenue Services). This Constitution also made provision for nine provincial or regional authorities which replaces the four former provinces. These provinces are Eastern Cape, Northern Cape, Western Cape, Free State, KwaZulu Natal, Mpumalanga, Northern Province (now Limpopo), North West and Gauteng. These provinces include the former independent states namely, Transkei, Bophuthatswana, Venda and Ciskei as well as the former self-governing territories of Gazankulu, KaNgwane, KwaNdebele, KwaZulu, Lebowa and Qwaqwa.
APPROACHES FOLLOWED POST THE 1994 POLITICAL REFORMS	
1994	Promulgation of the Public Service Act (PSA) which repealed earlier public service Acts and established a single public service for SA within national and provincial spheres of government. The PSA provided for the incorporation of the civil services of the Self-Governing Territories and TBVC States into a unified single service. Chapter II of the PSA made provision for the establishment of the Public Service Commission (PSC). The PSC may make recommendations regarding (a) the establishment or abolition of departments, the functions of departments, etc. (b) the establishment or abolition of sub departments, branches, offices or institutions.
	White Paper on Reconstruction and Development (RDP) dealt with public sector restructuring. This White Paper was the first statement of Government policy with a bearing on the rationalisation of public administration. Rationalisation and integration to form a single unified public service started during this year.
1995	White Paper on Transformation of the Public Service (WPTPS) described the need for transformation and provided the vision and mission. Amongst others, the WPTPS called for the urgent establishment of a Presidential Review Commission (PRC) to carry out a comprehensive review of the structure and functions of the public service and its statutory bodies including the Public Service Commission

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YEAR	KEY MILESTONE IN THE EVOLUTION OF STATE DEPARTMENTS IN SOUTH AFRICA
1996	Adoption of the 1996 Constitution by the Constitutional Assembly. Chapter 3 and 10 of the Constitution deal with aspects related to the public service.
1996	PRC was established to inquire into structures and functions of public service and its statutory bodies, conduct an internal audit and review of each ministry, department, and provincial administration concerning its objectives, structure, function, staffing and related matters.
1998	The PRC made a number of recommendations for the reconfiguration of ministries, departments, organisational components and agencies. In essence, the PRC proposed the disestablishment of some departments and proposed replacement by reconfigured ministries and departments.
2009	The new administration that came into office in 2009 reconfigured some existing departments and introduced new departments resulting in a total of 43 national sector departments.
2014	Further adjustments were made and new departments were created mainly by hiving off existing departments bringing the total number of departments to 46.

Sources: Botes *et al*. (1992); Carstens (2000); Cloete (1988); Levin (2009); Picard (2005); Roux (1971); Roux *et al*. (1997); South Africa (1983); South Africa (1994); South Africa (1995); South Africa (1996) South Africa (1998); Thornhill (2002); van der Waldt & Helmbold (1995); Venter (1989); Venter (1996)

From the discussion, it is evident that the evolution of departments within the South African environment was influenced by several factors. It is also clear that the state had to perform specific services and this entailed the division of work into various state departments. It also emerged that the creation of departments throughout the history of South Africa was also influenced by various internal and external environmental factors. This is consistent with the arguments advanced in Chapter two on the interface between General Systems Theory (GST) and organisational effectiveness. Within the context of closed and open systems, it can be argued that the South African state is an open system and took into account changes in its operating environment. It is also important to note that crises and disasters were amongst the key factors that led to increased scope of state activities. Political reforms also significantly impacted on the evolution of state departments in a manner

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that further illustrate that as an organisation, the South African state recognised the importance of consistently interacting with its environment as outlined in Chapter two of this study.

Having outlined the evolution of departments within the South African environment, the following section expands further on this by exploring the various government structures and how these institutions support planning by the different state departments. This is essential to provide a foundation to the discussion of the development and implementation of multi-sectored planning within the South African state.

6.6   THE SOUTH AFRICAN GOVERNANCE STRUCTURES

South Africa is a constitutional democracy and an investigation of structures established to ensure effective government cannot be provided outside the context of the Constitution. With this in mind, the following section will explore the constitutional foundations for the establishment of these structures.

6.6.1   Constitutional foundations of South African governance structures

According to Mello and Maserumule (2010:285), South Africa is a strongly decentralised unitary state with key federal characteristics. The preamble of the Constitution of the Republic of South Africa, 1996 (hereafter referred to only as the Constitution) affirms this by stating that "*the people of South Africa, through their elected representatives, adopted the Constitution of 1996 as the supreme law of the Republic to, amongst others, build a united and democratic South Africa to take its rightful place as a sovereign state in the family of nations*" (Mello & Maserumule, 2010:285). This means that the unitary nature of South Africa as a state is a consequence of people's preferences on the ideological organisation of the state (Mello & Maserumule, 2010:285). Kahn *et al*. (2011:29) as well as Mello and Maserumule (2010:285) argue that notwithstanding the fact that South Africa is constitutionally founded as a unitary state, federal imperatives are inherently embedded in its system of government. Section 1 of the Constitution (South Africa, 1996a:3) states that the Republic of South Africa is one, sovereign, democratic state founded on the following values:

i. Human dignity, the achievement of equality and the advancement of human rights and freedoms;

ii. Non-racialism and non-sexism;

iii. Supremacy of the constitution and the rule of law; and

iv. Universal adult suffrage, a national common voter's roll, regular elections and a multi-party system of democratic government, to ensure accountability, responsiveness and openness.

Furthermore, Section 2 states that the Constitution is the supreme law of the Republic and law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled (South Africa, 1996a:3). Moreover, Section 40 (1) of the Constitution states that in South Africa, government is constituted as national, provincial and local spheres of government which are distinctive, interdependent and interrelated (South Africa, 1996a:19). In this regard, it is important to note that the notion of a sphere denotes a vision of a non-hierarchical government in which each government sphere has equal status, is autonomous and possesses constitutional freedom within which to define and express its mandate (Kahn *et al*., 2011:64). In sharp contrast to a sphere, Malan (2014:62) argues that levels or tiers of government refers to a multilevel government in which similar institutions or organisations are repeated at national, regional and local levels supported by the assumption that one level or has more status than the others (implying a hierarchical relationship). Malan (2014:62) is of the opinion that spheres are not hierarchal but are rather distinctive yet interrelated as outlined in Table 6.4 which presents the characteristics of the South African system of government:

Table 6.4:   Characteristics of the South African government system

Distinctive	Means that the Constitution allocates specific functions and powers to each sphere of government which then has the final decision making power on those matters (refer to Schedules 4 and 5 of the Constitution, 1996)
Interrelated	Means that the exercise of autonomy by a sphere is related to functions performed by another sphere of government (example, health is assigned to all spheres)
Interdependent	Means that each sphere must exercise its authority to promote the common good of the country by cooperating with other spheres, that is by noting the effects of its operations on the functions of other spheres

Source: Malan (2005)

It is clear from Table 6.4 that the Constitution envisages a state that supports interaction and cooperation between the three spheres of government in line with the principles of co-operative government and intergovernmental relations (Malan, 2014:62). In this regard, it is important to differentiate between cooperative government and intergovernmental relations. While cooperative government is about a partnership government and represents the basic values that governs all activities and aspects of government, intergovernmental relations can be regarded as the means through which the fundamental values of cooperative government may be given institutional and statutory expressions and this may be inclusive of executive or legislative functions of government (Kahn *et al*., 2011:65-66; Malan, 2014:57).

Section 41 (1) of the Constitution (1996a) set out the principles of co-operative government and intergovernmental relations that requires all spheres of government to –

i.   Preserve the peace, national unity and the indivisibility of the Republic;

ii.   Secure the well-being of the people of the Republic;

iii.   Provide effective, transparent, accountable and coherent government for the republic as a whole;

iv.   Be loyal to the Constitution, the Republic and its people;

v. Respect the constitutional status, institutions, powers and functions of government in the other spheres;

vi. Not assume any power or function except those conferred on them in terms of the Constitution;

vii. Exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and

viii. Co-operate with one another in mutual trust and good faith by –

    a. Fostering friendly relations;

    b. Assisting and supporting one another;

    c. Informing one another of, and consulting one another on, matters of common interest;

    d. Coordinating their actions and legislation with one another;

    e. Adhering to agreed procedures; and

    f. Avoiding legal proceedings against one another.

While the Constitution provides for three spheres of government, it also recognises that for the country to prosper, all these spheres must work together within the context of cooperative government. In this regard it is also evident that where applicable the three spheres must plan jointly to ensure an integrated approach particularly on concurrent functions. As outlined in preceding sections, the objective of this chapter is to investigate and analyse how national multi-sectored planning developed in South Africa. In view of this research objective, notwithstanding the fact that the South African state has three primary branches in line with the *trias politica* doctrine as discussed in preceding sections, this study will focus on the executive branch of the state due to its central role in national multi-sectored planning within the framework and context of South Africa.

While a more in-depth discussion on the strategic role by the executive in national multi-sectored planning will be provided in the sections that will deal with strategic planning by various departments within the country's governance framework, this section will provide an overview of the national executive structures and their role in multi-sectored planning.

6.6.2   National executive authority

In terms of Section 83 of the Constitution, the President is the head of the national executive (Cabinet) and must uphold, defend and respect the Constitution (South Africa, 1996a). Section 84 of the Constitution states the powers and duties of the President. Section 85 of the Constitution requires the President to exercise this executive authority together with the other members of Cabinet by (1) Implementing national legislation except where the Constitution or an Act of Parliament provides otherwise, (2) Developing and implementing national policy, (3) Coordinating the functions of state departments and administrations, (4) Preparing and initiating legislation; and (5) Performing any other executive function provided for in the Constitution or in national legislation (South Africa, 1996a).

It is important to note that Cabinet is established in terms of section 91 of the Constitution and consists of the President, as head of the Cabinet, a Deputy President and Ministers (South Africa, 1996a). Members of Cabinet serve at the pleasure of the President and may be replaced by the President for reasons such as poor or non-performance, or not giving effect to government's policies (Mphaisha, 2014:91). The fundamental task of Cabinet is to govern the country (Cloete, 1996:82-84; Mphaisha, 2014:92; van der Waldt & Helmbold, 1995:66). It has also been argued that, at a practical level, Cabinet members (Ministers) are appointed to direct and oversee the administration of state departments (Cameron & Stone, 1995:6; Mphaisha, 2014:64; Thornhill, 2012:62). This view is supported by Thornhill and Hanekom (1995:28) who point out that Ministers are responsible for the supervision of the implementation of policy in state departments which are administratively headed by Directors-General (DGs).

Thornhill (2012:65) notes that as the most senior political office bearer of a state department, a Minister is expected to be (1) an initiator in order to ensure that his or

her department reports on the suggested alternative policy proposals, (2) an evaluator who ensures that the department outlines the positive and negative features of the various political proposals with a view to ensure that the full implications of such proposals are fully appreciated and understood, and (3) a leader capable of motivating the officials of the department to work effectively and diligently in the implementation of approved policies and achieving the set objectives. With regard to accountability, Cabinet members are collectively and individually accountable to Parliament for the exercise of their powers and the performance of their functions (Jonker, 2001:73; Thornhill & Hanekom, 1995:28). Stated differently, Ministers, as political heads, are accountable for all departmental acts and omissions regarding their portfolios (Mphaisha, 2014:92-93).

6.6.3   Establishment of national coordination structures

The new Government of National Unity (GNU) established in 1994 following South Africa's first and historic democratic elections adopted the Reconstruction and Development Programme (RDP) to respond to the challenges of apartheid legacy and reorient society towards a common purpose of building a new democratic country (South Africa, 1995:3). In this regard it was generally accepted that the public service as a key component of the executive arm of government (as discussed in preceding sections) will play a decisive and fundamental role and that to execute this role effectively, public service will need to be transformed into a coherent, representative, competent and democratic instrument for implementing government policies and meeting the needs of all South Africans (South Africa, 1995:3).

With this in mind, the GNU introduced the White Paper on the Transformation of the Public Service (WPTPS) in 1995 with the primary aim of establishing a policy framework to guide the introduction and implementation of new policies and legislation aimed at transforming the South African public service. Amongst others, the WPTPS called for the urgent establishment of a Presidential Review Commission (PRC) to carry out a comprehensive review of the structure and functions of the public service and its statutory bodies. This included the Public Service Commission, focusing in particular on (1) the division of roles and tasks between central and provincial authorities (2) an internal audit and review of each ministry, department, office and agency concerning its objectives, structure, function, staffing, and

financing and lastly (3) a review and revision of the system, routines and procedures of planning, budgeting and financial execution (to be undertaken in partnership with the Ministry of Finance), with a view to increasing public sector accountability (South Africa, 1995:25).

The PRC was subsequently established in 1996 and amongst its key findings it identified lack of coordination at the centre of government or the Office of the President which should be the core and apex of the entire system of governance in South African (South Africa, 1998c:12-13). In respond to this finding, Cabinet established the cluster system in 1999 which consisted of Cabinet Committees performing related functions with a view to foster an integrated approach to governance that seeks to improve government planning, decision making and service delivery (Sokhela, 2014:116; South Africa, 1998c:30-31). In this context, Sokhela (2014:116) point out that the primary objective of clusters is to ensure effective coordination of all government programmes at national and provincial spheres respectively. In essence, the main functions of clusters are to (1) ensure alignment of government wide priorities, (2) facilitate and monitor the implementation of priority programmes and (3) provide a consultative platform on cross-cutting priorities and matters being taken to Cabinet (Sokhela, 2014:117). The ensuing section presents the composition of the clusters at Ministerial level.

6.6.3.1 *Ministerial clusters*

Ministerial clusters are chaired by Cluster Coordinating Ministers and are composed of Cluster Ministers and DGs as depicted in Table 6.5:

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Table 6.5: **Ministerial Clusters**

Cluster	Chairing Minister	Participating Departments
Infrastructure Development	Chair: Minister of Transport Deputy: Minister of Public Enterprises	• Communications • Cooperative Governance and Traditional Affairs • Economic Development • Energy • Environmental Affairs • Finance • Human Settlements • Public Works • National Planning Commission • Transport • Water and Sanitation
Economic Sectors and Employment	Chair: Minister of Rural Development Deputy: Minister of Science and Technology	• Agriculture, Forestry and Fisheries • Communications • Economic Development • Finance • Higher Education and Training • Labour • Mineral Resources • Public enterprises • Rural Development and Land Reform • Science and Technology • Tourism • Trade and Industry
Governance and Administration	Chair: Minister of Home Affairs Deputy: Minister of Public Administration	• Cooperative Governance and Traditional Affairs • Home Affairs • Justice and Constitutional Development • Finance • Public Service and Administration • Police • Performance Monitoring and Evaluation
Human Development	Chair: Minister of Basic Education Deputy: Minister of Health	• Arts and Culture • Basic Education • Health • Higher Education and Training • Labour • Science and Technology • Sport and Recreation

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Cluster	Chairing Minister	Participating Departments
Social Protection and Community Development	Chair: Minister of Social Development Deputy: Minister of Public Works	• Cooperative Governance and Traditional Affairs • Environmental Affairs • Human Settlements • Labour • Public Works • Rural Development and Land Reform • Social Development • Transport • Women, Youth, Children and People with Disabilities
International Cooperation, Trade and Security	Chair: Minister of Defence and Military Veterans Deputy: Minister of International Relations and Cooperation	• Defence and Military Veterans • Environmental Affairs • International Relations and Cooperation • Finance • State Security • Tourism • Trade and Industry • Water and Sanitation
Justice, Crime Prevention and Security	Chair: Minister of Justice and Constitutional Development Deputy: Minister of Police	• Correctional Services • Defence • Home Affairs • Justice and Constitutional Development • Police • State Security

Source: South Africa (2009a)

The Ministerial Clusters in Table 6.5 above are supported by corresponding clusters of DGs as outlined below.

6.6.3.2   *Forum of South African Directors-General (FOSAD)*

In 1998 the South African government established the Forum of South African Directors-General (FOSAD) which operates like the Cabinet of DGs through providing a consultative forum on cross-cutting issues across all clusters (Kahn *et al*., 2011:80; Pienaar & Geldenbloem, 2009:19; Sokhela, 2014:119). It is imperative that reports (especially on cross-cutting issues) that serve in Cabinet are referred to this forum for consideration and inputs (Sokhela, 2014:119). FOSAD Clusters are chaired by the DG in the Presidency and co-chaired by the lead department and are constituted by the national and provincial DGs as well as the Chief Executive Officer

of the South African Local Government Association (SALGA) (Kahn *et al.*, 2011:80). With regard to composition, FOSAD clusters are similar to the Ministerial clusters already outlined.

6.6.4   Challenges of coordination

According to Bouckaert *et al*. (2010:13), coordination can be regarded as one of the oldest problem facing the public sector. Bouckaert *et al.* (2010:14) argue that by their nature, governments are inherently multi-organisational and this makes coordination mandatory to ensure an integrated approach to the provision of goods and services. This resonates with the argument advanced by Luther Gulick (1937) in Chapter two where it was argued that if subdivision of work is inescapable, coordination becomes mandatory in order to achieve defined objectives. Within the South African context, the National Development Plan (NDP) noted that all spheres of government are faced with the challenge of improving coordination (South Africa, 2012b:429). In most instances, departments pursue competing objectives and there are gaps where no department takes responsibility or areas where efficiency could be improved if departments drew on each other's strengths and mandates (South Africa, 2012b:429).

According to this discourse, it is clear that South Africa has adequate institutional structures to support multi-sectored planning. It is also evident that while Cabinet is primarily responsible for governance and providing strategic direction for the country, both Ministerial and FOSAD clusters play a fundamental role in ensuring alignment of government programmes in a manner that enhances integrated planning which is essential for effective service delivery. These structures also play a key role in coordinating the work of various government departments.

Having outlined the national institutional structures that play a primary role in ensuring integrated planning by the various government departments, the logical progression is to examine the framework for multi-sectored planning in South Africa.

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6.7   FRAMEWORK FOR MULTI-SECTORAL PLANNING IN SOUTH AFRICA

As discussed in Chapter three, strategic planning as a management tool was initially developed for the private sector and has now been successfully adapted for utilization in the public sector taking into account the political context and particular characteristics of public organisations (Muller, 2014:210). Muller (2014:210) is of the opinion that the need for the application of strategic planning in the public sector in general, given the developmental challenges of the current South African context specifically, is not just an option but an imperative (Muller, 2014:210). In Chapter three an overview of strategic planning theory is given. It includes a detailed discussion of the Bryson strategic planning model which is particularly adaptable to public organisations.

As demonstrated in Chapter three, the identification of organisational mandates is a critical step in strategic planning especially for public sector organisations. In view of this, the next section examines the legislative framework for multi-sectoral planning within the South African environment.

6.7.1   Legislative framework for multi-sectored planning in the South African government

The Framework for Strategic Plans and Annual Performance Plans (APPs) issued by the National Treasury in terms of the mandates set out in section 215 and 216 of the Constitution forms the basis for strategic planning by the various sectors on both national and provincial levels (South Africa, 2010b:1). According to this Framework, each department's activities must be founded in the various legislative mandates that the sector is directly responsible for implementing, managing or overseeing (South Africa, 2010b:1). The Framework requires strategic plans to give effect to departmental or agencies 'statutory responsibilities while also reflecting the broad strategic outcomes of government (South Africa, 2010b:1). While this Framework is applicable to national and provincial departments as well as public entities inclusive of constitutional institutions within the local government sphere, the principal strategic planning instrument which guides and informs all planning, budgeting, management and decision making is the Integrated Development Plan (IDP) which a municipality

must develop as stipulated in Chapter five (5) of the Municipal Systems Act, 2000 (Muller, 2014:221). A detailed discussion of IDP processes is beyond the confines of this study. See van Niekerk (2006) for a detailed discussion on the IDP and its linkages with DRR at the local government sphere.

In order to provide the necessary legal basis for the implementation of this Framework, National Treasury issued Regulations in terms of the Public Finance Management Act (PFMA), 1999 (Act No 1 of 1999) that requires institutions to:

i.   Produce and table a Strategic Plan with a five-year planning horizon, outlining the planned sequencing of projects and programme implementation as well as associated resources implications;

ii.   Produce and table an APP including forward projections for a further two years, consistent with the Medium Term Expenditure Framework (MTEF) period, with annual and quarterly performance targets, where appropriate, for the current financial year and the MTEF;

iii. Identify a core set of indicators needed to monitor institutional performance;

iv.   Adopt a quarterly reporting system, including submission of agreed information to executive authorities, the Presidency or Premier's Offices, the relevant treasury and Parliamentary portfolio committees; and

v.   Ensure that there is alignment of reporting between the Strategic Plans, APPs, budget documents and annual and quarterly reports (Muller, 2014:221; South Africa, 2007:112; South Africa, 2010b:2).

The Accounting Officer (DG) is responsible for the preparation of the strategic plan for his or her department which must:

i.   Cover a period of at least three years and must be consistent with the institution's published medium term expenditure estimates;

ii.   Include specific constitutional and other legislative, functional and policy mandates that indicate the output deliverables for which the institution is responsible;

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iii.   Include policy developments and legislative changes that influence programme spending over the MTEF period;

iv.   Include the measurable objectives, expected outcomes, programme outputs, indicators (measures), and targets of the institution's programmes;

v.   Include details of proposed acquisition of financial assets or movable capital assets, planned capital investments and rehabilitation and maintenance of physical assets;

vi.   Include details of proposed acquisitions of financial assets or capital transfers and plans for the management of financial assets and liabilities;

vii.   Include multi-year projections of income and projected receipts from sale of assets;

viii.   Include details of Service Delivery Improvement Programme;

ix.   Include details of proposed information technology acquisition or expansion in reference to an information technology plan;

x.   For departments, includes the requirements of Chapter 1, Part III B of the Public Service Regulations of 2001; and

xi.   Include details of specific plans that the executive authority, Parliament or the relevant provincial legislature may direct the institution to report on (South Africa, 2007: 5).

The DG must ensure submission of the strategic plan to Parliament together with the department's APP in order to facilitate discussion of the department's budget vote (South Africa, 2007:5). While strategic plans reflect broad strategic outcomes of government, these strategic plans must also give effect to the legislative mandates that the department is responsible for implementing or managing (South Africa, 2010b:1). From the foregoing discussion, it is clear that the PFMA is the primary legislative instrument regulating strategic planning by sector departments. It is also evident that planning by national sector departments must take into account work

done by other spheres of government within the context of the intergovernmental planning system.

Having outlined the legislative instruments supporting strategic planning by national sector departments, the next section turns attention to instruments that were used to institutionalize this process in the South African government.

6.7.2 Institutionalisation of strategic planning in the South Africa government

The South African government recognises that effective strategic planning by national sector departments is essential for effective delivery of services and for the impactful implementation of government programmes. To this end, the government has adopted various tools and instruments to institutionalise and guide strategic planning by all government departments. Amongst these planning instruments is the National Planning Framework which will be discussed next.

6.7.2.1 The National Planning Framework

During the late 1990s, the democratic government identified several major weaknesses in the way the state functioned. These included the lack of alignment between the different planning cycles in government, weak coordination both across national departments and between the different spheres of government and the imperative of emphasising a more integrated approach to policy formulation, planning and implementation (South Africa, 1998c:17-18; South Africa, 2001:1; South Africa, 2008a:14). In response to these challenges Cabinet approved a National Planning Framework (NPF) in July 2001 for implementation across all spheres of government (South Africa, 2001:2). In essence, the NPF is a mechanism to facilitate intergovernmental planning with the focus on (1) the need for greater cooperation within and across the three spheres of government at a strategic level in planning and implementation, (2) the need for more substantive intergovernmental engagement on strategies and plans, (3) the need to build a greater understanding of the developmental role of local government across all spheres of government; and (4) finding effective mechanisms for the voice of local government in provincial and national planning processes (South Africa, 2008a:14).

It can therefore be argued that the NPF, including the detailed planning cycle, is a key tool of government to foster integrated planning across departments and the three spheres of government. Stated differently, the NPF was introduced to prevent a situation where the planning cycle of one department may skew the formulation and implementation of policy (South Africa, 2008b:107). In this regard, it can be argued that the overall purpose of the NPF is to align government's planning cycles and procedures and to ensure that policy and planning inform budgetary processes (South Africa, 2003:45). Government sets its policy priorities based on the mandate it receives from the electorate and these must find practical expression in policies and programmes, which are implemented by the various sector departments (South Africa, 2003:45). In short, departments (national and provincial) must develop their programmes based on the policy priorities of Cabinet (South Africa, 2003:45). As illustrated in Figure 6.3, the NPF defines the cycles of policy strategising, programme development, budgeting, monitoring and evaluation and public communication of the issue.
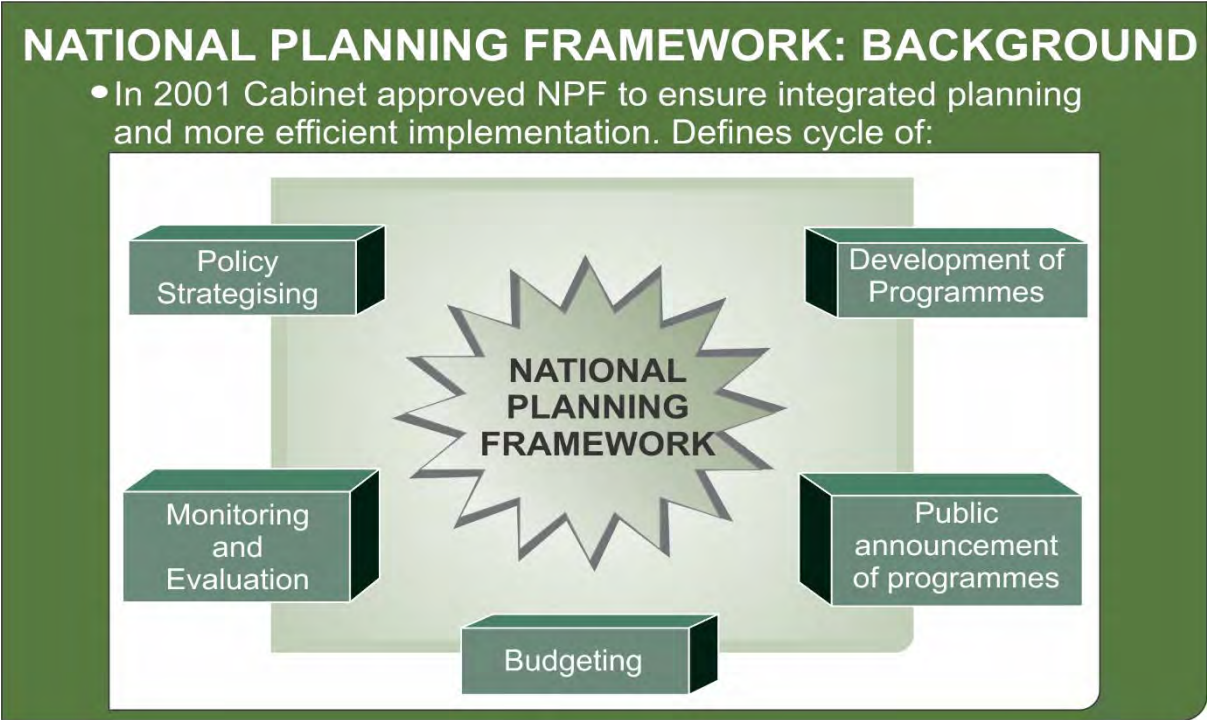
Figure 6.3:   National Planning Framework (adapted from South Africa 2001)

From Figure 6.3, it is clear that the NPF is designed to integrate and synchronise strategic policy processes with the budgeting cycle. It is also evident that the NPF

links the electoral, parliamentary and budgeting cycles with a view to ensuring that all planning throughout government is integrated and informed by Cabinet policy decisions (South Africa, 2003:34). The NPF includes a sequence of activities that culminates each year with a Medium Term Strategic Framework (MTSF) (will be discussed in greater detail in ensuing sections) and its design is underpinned by the following guiding principles:

i.   The overall strategy of government derives from the Constitution and the electoral mandate. It is this mandate which informs the MTSF, a broad programme of government for the 5-year mandate period;

ii.   Cabinet and the Executive Councils in provincial and local government set government policy and take responsibility for its implementation;

iii.   Optimum impact of government programmes requires coordination and integration in both policy development and implementation. In line with the principles of cooperative governance, this should take place horizontally among departments and vertically across spheres;

iv.   There should be deliberate flow between strategising, policy determination, programme development and detailed project implementation supported by a monitoring and evaluation system;

v.   The strategic and policy positions of government should inform the budgeting process. The MTSF which operates over the electoral mandate period informs the MTEF which has a shorter 3-year cycle;

vi.   In order to optimally utilise the limited resources available, the overall strategy and the programmes and projects deriving from it should reflect priorities and phases in implementation. This means that government should weigh trade-offs and develop ways of sequencing programmes to realise the strategic goals;

vii.   Medium-term plans are reviewed annually in order to bring on board new developments. This implies that the multi-year cycles will overlap and so will the planning and monitoring processes dealing with immediate and medium-term issues; and

viii. DGs, Heads of Departments (HODs), Municipal Managers and Chief Executives of public entities are critical to the implementation of government programmes (South Africa, 2001:3).

From the discussion it is clear that the alignment of plans horizontally across national sector departments and vertically between the three spheres of government is critical to ensure an integrated approach to planning by government as a whole. It is also evident that the NPF as a planning instrument provides a coherent framework for such intergovernmental planning. In essence, the NPF is designed to integrate strategic policy processes with the budgeting cycle. The NPF also plays a critical role in aligning different planning cycles in government. The next section expands further on this by examining planning cycle processes.

6.7.2.2 *Planning cycle processes*

The planning cycle represents a continuous process of planning, implementation and review (South Africa, 2001:6; South Africa, 2008b:108). It also relates to medium-term priorities and immediate programmes, one flowing sequentially into the other (South Africa, 2008b:108). Planning by local government informs that of provincial governments which in turn must feed into planning by various sectored departments at national level as illustrated in Figure 6.4.
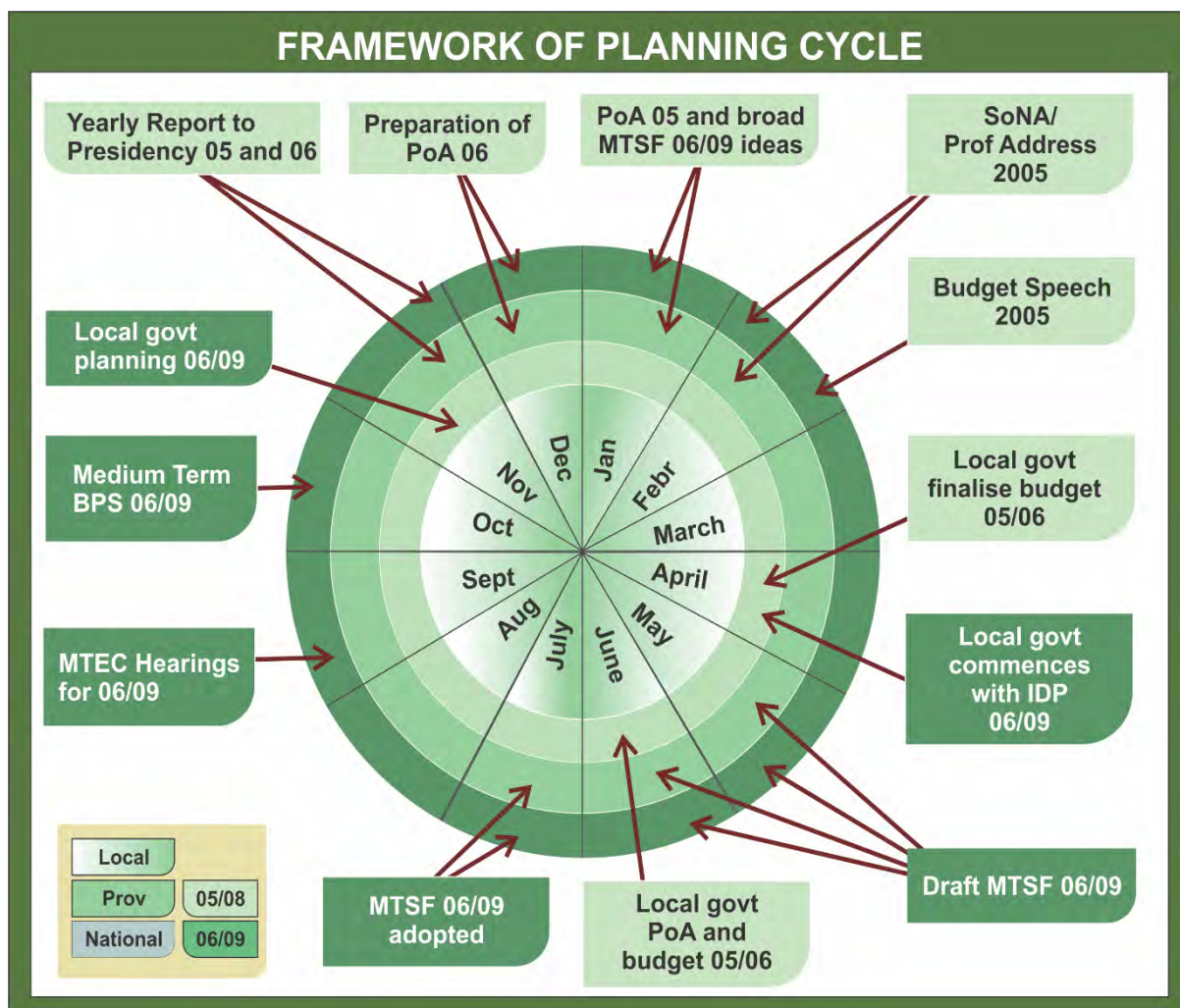
Figure 6.4: Framework of planning cycle (adapted from South Africa, 2001:6)

It is evident from this that the planning cycle can be characterised as a continuous process of planning, implementation and review (South Africa, 2001:6). As depicted in Figure 6.4, it is also clear that the planning cycle is an annual event with departmental planning exercise commencing in September or October of each year when departments and provinces normally review progress and plan for the next year and the medium term (South Africa, 2003:45). During this stage departments develop short, medium and long-term priorities and also match such planning against the previous year, informed by the election mandate, the State of the Nation Address (SONA) as well as the key policy direction set by Cabinet (South Africa, 2003:45). DGs of each department must ensure that this stage of the process is completed by the end of October (South Africa, 2010b).

During November, DG clusters consider the materials received from their member departments in consultation with the relevant cluster coordinating Ministers and this culminates in submission to FOSAD which is expected to synthesise the reports and produce a draft Medium Term Strategic Framework (MTSF) which forms the basis for the January *Lekgotla* (South Africa, 2003:48). Drawing from the draft MTSF, Cabinet makes decisions regarding key policy priorities and expenditure adjustments necessary to achieve the strategic priorities of government (South Africa, 2003:48). Upon completion of the January *Lekgotla*, Cabinet releases the final MTSF which is subsequently communicated to the nation in February through the President's SONA, State of Provinces Address (SOPA) as well as the Budget Speech (South Africa, 2003:48). Figure 6.5 provides a graphic representation of planning by the national sphere of government.
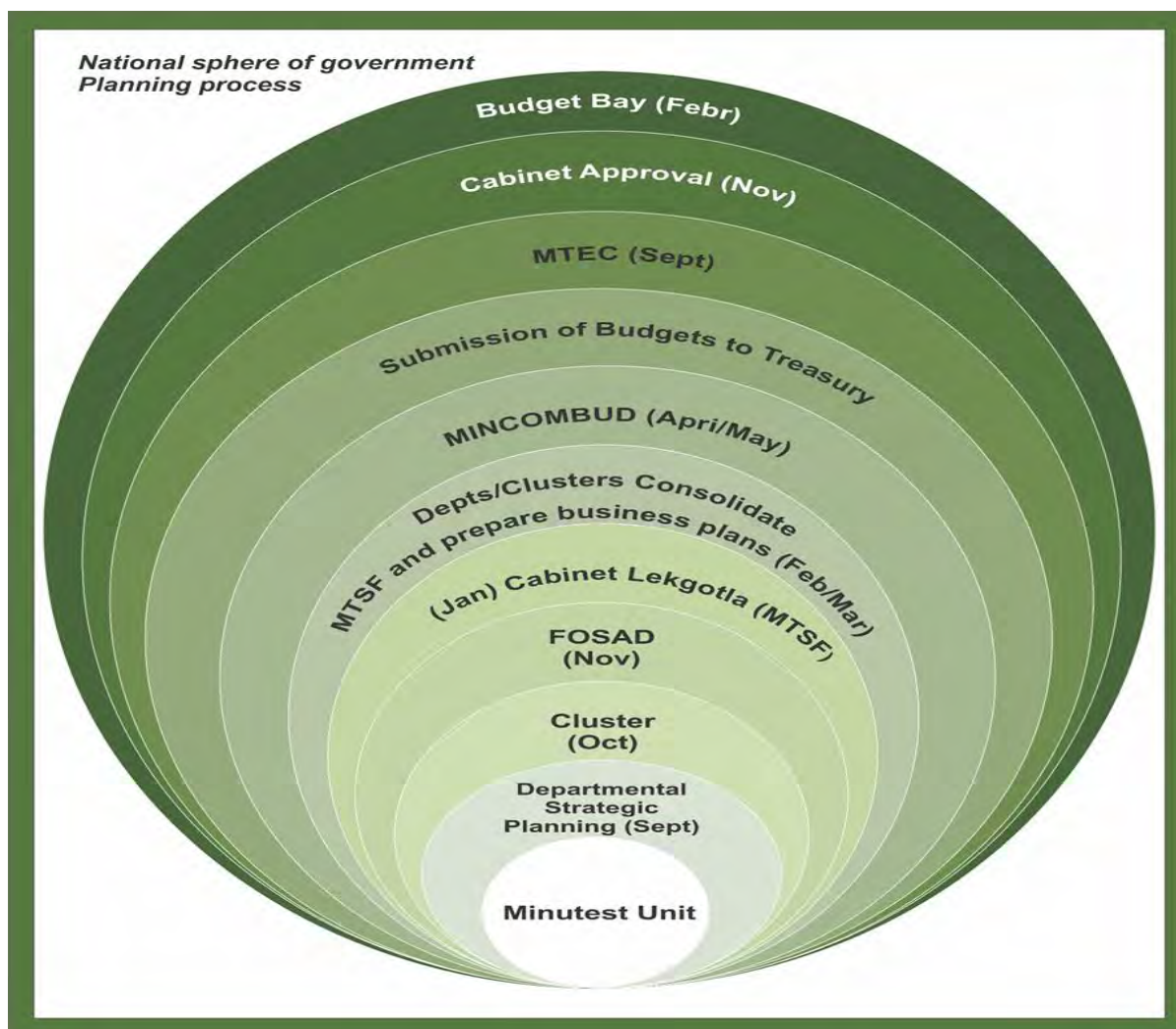
Figure 6.5: National sphere of government planning process (adapted from South Africa, 2003:47)

From the foregoing discussion, it is clear that the South African government has adopted a robust framework to support strategic planning which is also aligned to budgeting processes. It is also evident that Cabinet and FOSAD through its clusters play a key role firstly in setting policy direction from which multi-sectored planning must flow and secondly to ensure integration of plans by the various sectors and spheres. Flowing from discourses above, it is clear that all planning instruments recognise the fundamental importance of intergovernmental planning. It is therefore critical to ensure alignment between the plans of the three spheres of government as discussed below.

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6.7.2.3 Linkage between national, provincial and local government planning frameworks

The primary tool to ensure alignment of planning by all spheres of government is the MTSF (South Africa, 2003:45). Figure 6.6 illustrates the linkages between the policy priorities of government and planning by all spheres.
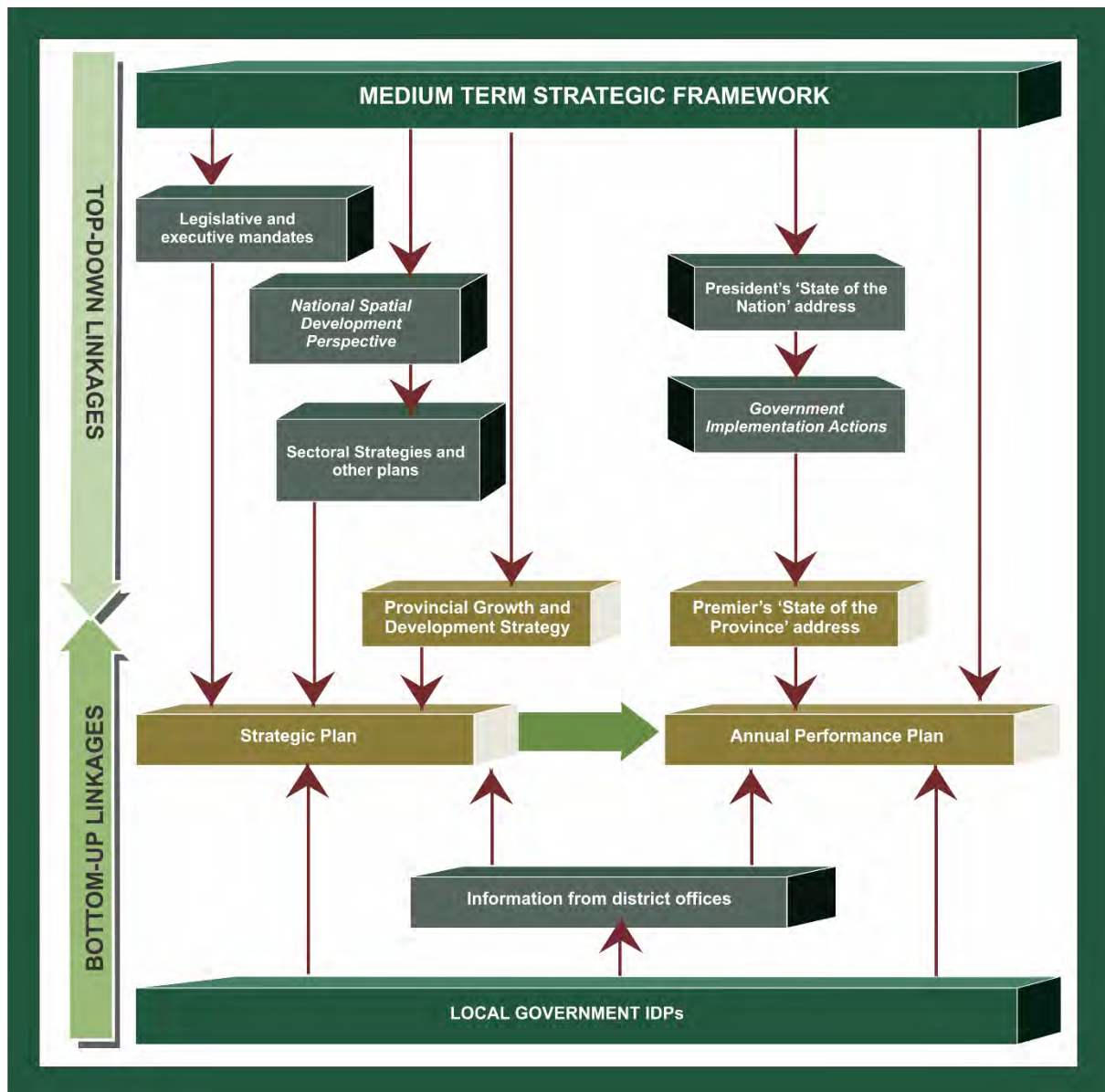
Figure 6.6: Links to planning frameworks and other plans (adapted from South Africa, 2010b:4)

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As depicted in Figure 6.6, the MTSF is the strategic plan of government for the electoral term which provides a framework to link plans of all spheres of government (South Africa, 2014c:4). The MTSF reflects the commitment made in the election manifesto of the governing party, including the commitment to implement the NDP, it (MTSF) also sets out the actions government will take and targets to be achieved (South Africa, 2014c:4). The 2014-19 MTSF is the first to follow the adoption of the NDP in September 2012 and therefore the MTSF now becomes a five year building block towards the achievement of the vision and goals of the NDP to bring greater coherence and continuity to the county's planning system (South Africa, 2014c:4-5). In short, the MTSF is the key mechanism for achieving alignment between medium and short term planning (Dicks, 2014). The MTSF is a product of intensive multi sphere planning process and aims to ensure policy coherence, alignment and coordination across government plans as well as alignment with budgeting processes (South Africa, 2014c:5). Stated differently, the MTSF provides a framework for prioritizing and sequencing government programmes and development initiatives for the next five years (South Africa, 2014:5). Table 6.6 provides the priority outcomes of the 2014 – 2019 MTSF.

Table 6.6:   2014-2019 MTSF priority outcomes

Quality basic education	A long and healthy life for all South Africans
All people in South Africa are and feel safe	Decent employment through inclusive growth
A skilled and capable workforce to support an inclusive growth path	An efficient, competitive and responsive economic infrastructure network
Vibrant, equitable, sustainable rural communities contributing towards food security for all	Sustainable human settlements and improved quality of household life
Responsive, accountable, effective and efficient local government	Protect and enhance our environmental assets and natural resources
Create a better South Africa and contribute to a better Africa and a better world	An efficient, effective and development-oriented public service
A comprehensive, responsive and sustainable social protection system	A diverse, socially cohesive society with a common national identity

Source: South Africa (2014c)

With regard to alignment of MTSF priorities with national multi-sectoral planning, the MTSF must be incorporated into the plans and programmes of national and provincial departments, municipalities and public entities (South Africa, 2014c:14). As outlined in Figure 6.6, sector departments must also consider the analysis provided by the National Spatial Development Perspective (NSDP). The NSDP provides the geographic or spatial foundation of the intergovernmental planning system through an analysis of the spatial distribution of economic activity, infrastructure, natural resources, population distribution as well as service delivery (South Africa, 2008b:121). Stated differently, the NSDP uses spatial data to show areas of high development potential and informs both the Provincial Growth and Development Strategy (PGDS) (Levin, 2009:960). Viewed in this context, the NSDP can be regarded as a critical instrument for policy coordination with regard to the spatial implications of infrastructure programmes within the three spheres of government (South Africa, 2006:ii).

6.7.2.4   *Core elements of planning documents*

According to Muller (2014:218), strategic planning within the South African government largely follows six general steps with the notable exception that the situational analysis is done before and informs the vision statement. The strategic planning methodology adopted by the South African government resonates with the Bryson model which was discussed extensively in Chapter three of this study. Figure 6.7 illustrates the hierarchy of relationship between planning concepts:

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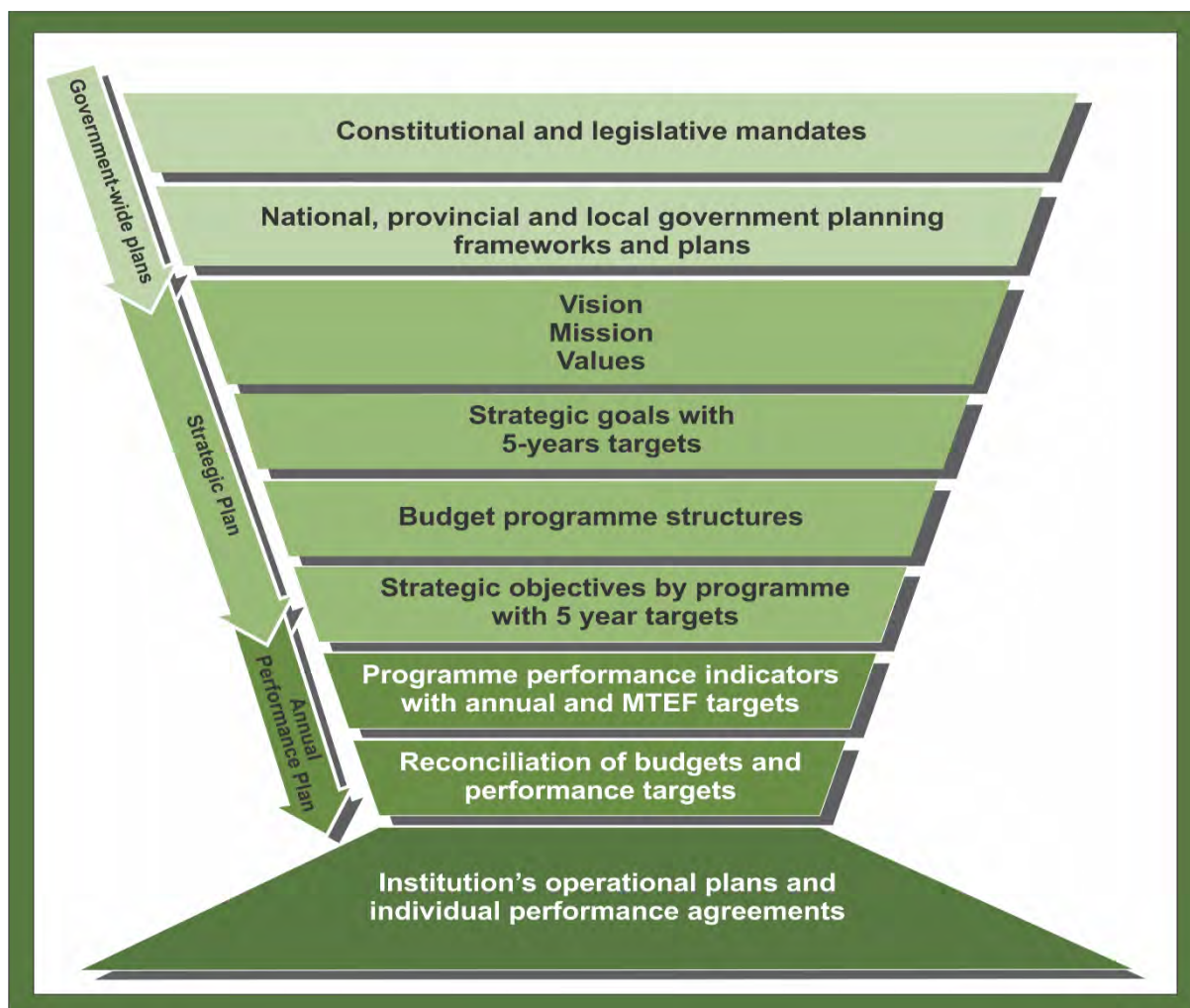
Figure 6.7: The hierarchy of the relationship between planning concepts (adapted from South Africa, 2010b:12)

Chapter three has an in-depth discussion of how an organisation develops its vision, mission and value statement as part of its strategic planning process. From Figure 6.7, it is clear that constitutional and legislative mandates form the basis for strategic planning by national and provincial departments. This is consistent with the argument advanced in Chapter 3 where it was indicated that the identification of organisational mandates (formal and informal) is a critical step in strategic planning by public sector or governmental agencies. Within the South African context, values of government departments should define a citizen-oriented approach for delivering services in line with the *Batho Pele* (People First) principles.

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From Figure 6.7, it is also clear that once an organisation has defined its vision, mission and value statement, it must define its strategic outcome oriented goals which are essential to identify areas of institutional performance that are critical to the achievement of the mission (South Africa, 2010b:13). While these strategic goals must challenge the organisation, they must remain realistic and achievable and must focus on impacts rather than outcomes (South Africa, 2010b:13). In essence, a strategic goal must be formulated as a statement of intent that is specific, measurable, achievable, relevant and time-bound (SMART) (South Africa, 2010b:13). These strategic goals usually span at least five years and an organisation must exercise discipline in choosing such goals to avoid the danger of prioritising everything (South Africa, 2010b:13). Flowing from the strategic goals, an organisation must develop a budget programme and sub-programme structure that is linked to the key areas of service delivery responsibility within the context of its constitutional and legislative mandates (South Africa, 2010b:13). From Figure 6.7, it also clear that an organisation must also develop SMART strategic objectives which should articulate clearly what an organisation intends doing to ensure achievement of the strategic goals (South Africa, 2010b:13). Each objective should be formulated as a performance statement outlining a performance target that an organisation can achieve by the end of the period of the strategic plan (South Africa, 2010b:14).

Inevitably, as outlined in Figure 6.7, an organisation is required to identify a set of programme performance indicators and targets in its APP to monitor its performance on an ongoing basis. The organisation must consult its key stakeholders in the process of identifying performance indicators and must ensure that these (indicators) are reliable, well defined, verifiable, cost effective and appropriate with baseline information and targets expressed in terms of actual numbers (South Africa, 2010b:14). An organisation is also expected to set targets relating to the budget year and the MTEF in respect of the strategic objectives and programme performance indicators contained in its APP and these annual targets must be broken into quarterly targets (South Africa, 2010b:14). In the final analysis, operations plans of the organisation as well as individual performance agreements of staff are informed by these planning documents (South Africa, 2010b:12). Figure 6.8 provides detailed information on the structure and content of strategic plans and APPs.
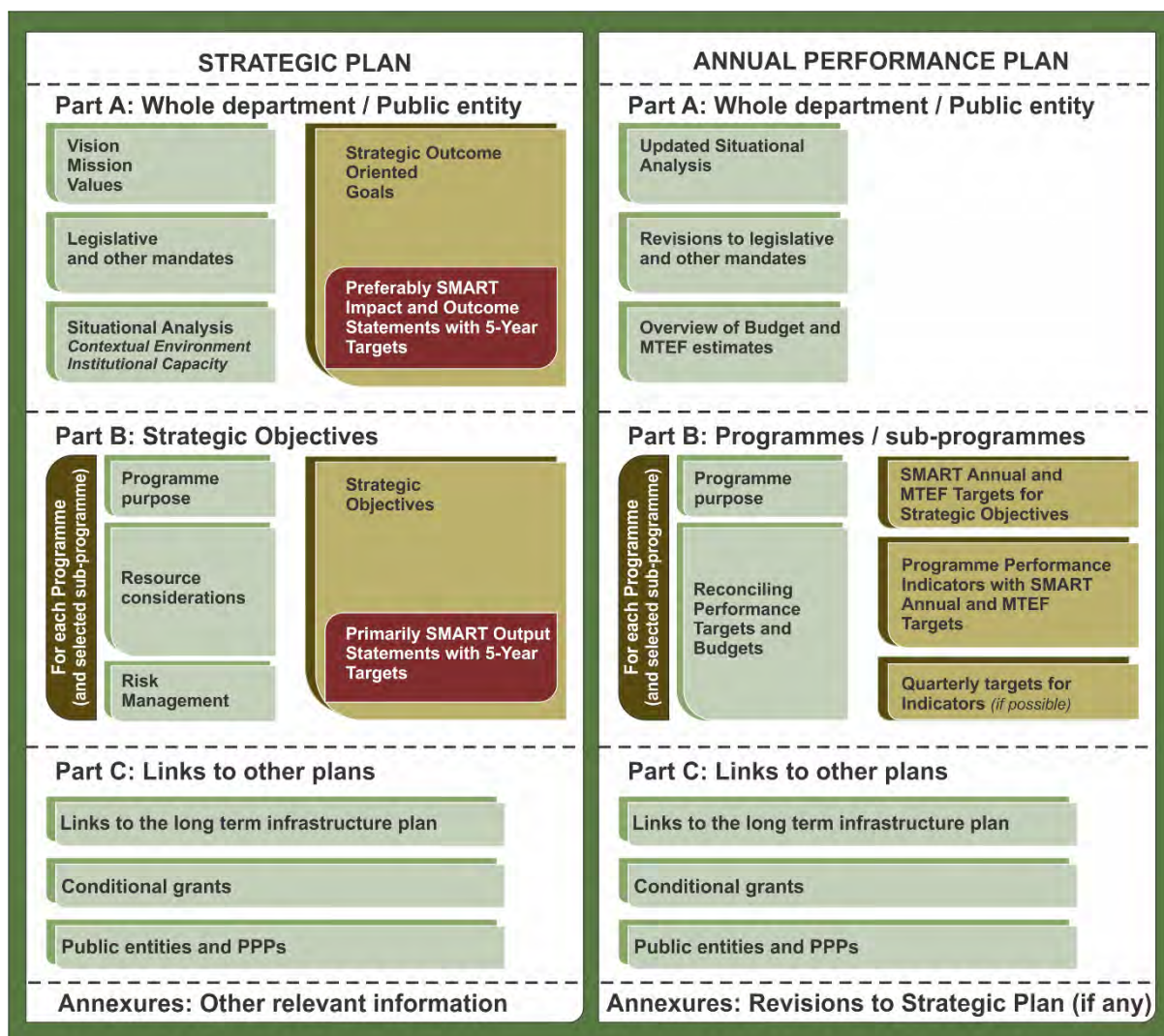
Figure 6.8: Structure and content of Strategic Plans and APPs (adapted from South Africa 2010b:11)

From Figure 6.8, it is clear that an organisation's strategic plan must focus on issues that are strategically important, informed by legislative and constitutional mandates as well as by Performance Agreements between the President and Ministers and Service Delivery Agreements agreed to in terms of the broad strategic outcomes (South Africa, 2010b:11). As is evident from Figure 6.8, Part A of the strategic plan focuses on a strategic overview of the sector and the department and outlines the organisation's vision, mission, values and strategic outcome oriented goals it (the organisation) aims to achieve over a five-year period (South Africa, 2010b:11). While Part B outlines strategic objectives and the resource implications as well as the risks that must be managed to achieve them, Part C deals with the links to other relevant

plans such as the long-term infrastructure plans and conditional grants to name but a few (South Africa, 2010b:11). **See Annexure B for generic guide for the strategic plan.** In contrast to the strategic plan which spans a period of five years, the APP outlines the specific performance targets that the organisation will aim to achieve in the budget year and the next two years of the MTEF in pursuing the strategic goals of the strategic plan (South Africa, 2010b:12-13). **See Annexure C for the generic guide for the APP.**

In light of the discussion above, it is clear that the South African government has created robust and theoretical sound strategic planning frameworks. It is also evident that each national sector department must take into account the constitutional and legislative mandates in the process of developing a strategic plan. The fact that a strategic plan forms the basis for the allocation of resources to each national sector department means that for DRR to be successful, it must be integrated in national multi-sectoral planning. This section outlined the frameworks for multi-sectoral planning, the ensuing section examines the linkage between strategic planning and budgeting.

6.7.2.5   *Linkage between multi-sectoral planning and budgeting processes*

According to Muller (2014:225), there is consensus that plans and budgets should be integrated to enhance operational efficiency. Taking this argument further, Muller (2014:225) maintains that SMART and affordable plans are those that take into account the budget constraints. Scarce budgetary resources should be allocated to government priorities as outlined in the strategic plan of the each department (Muller, 2014:225). There should be a clear link between national vision and annual departmental priority-setting and budgeting processes (Muller, 2014:225). Within the South African government environment, the PFMA provides a clear and comprehensive legislative framework for the integration of planning and budgeting processes (Muller, 2014:226). The PFMA and its Regulations creates a fiscal framework in which five-year strategic plans are cascaded down into APPs containing projected service delivery targets and corresponding financial projections over the MTEF as discussed above. Figure 6.9 shows the link between the various

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accountability documents, performance agreements and oversight processes as well as the link to future planning.
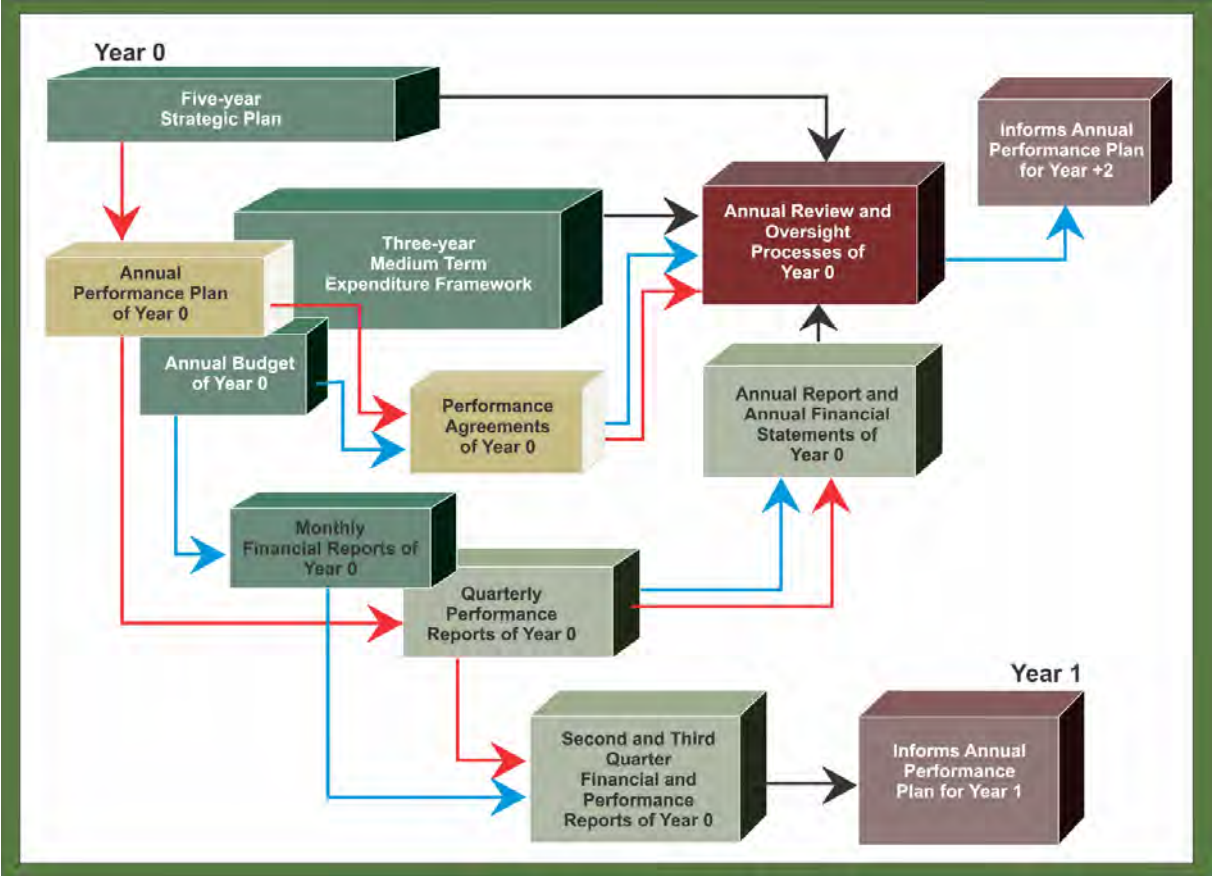
Figure 6.9: Planning, budgeting and reporting timeframes for national departments (adapted from South Africa, 2010b:10)

From Figure 6.9 above, it is clear that the five-year strategic plan, three-year MTEF and the APP forms the basis upon which resources must be allocated to various programmes within a department. it is also clear that the DG of each national department must report monthly, quarterly and annually on the financial and performance reports of the organisation to appropriate oversight structures involving the executive authority (Minister), the Public Accounts Committee (PAC) and the relevant Parliamentary Portfolio Committee. Lessons learned in the implementation of the APP in one year must be taken into account in the planning and budgeting processes for the following year.

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Having outlined the frameworks that forms the basis of strategic planning by national government departments in South Africa, the ensuing section turns attention to some of the challenges facing strategic planning in the country.

6.8 STRATEGIC PLANNING CHALLENGES WITHIN THE SOUTH AFRICA GOVERNMENT

According to Muller (2014:229), South Africa has made significant progress since the 1990s to institutionalise and mainstream strategic planning in the public sector. Notwithstanding this advancement, Muller (2014:229) identified challenges that continue to beset as follows:

i.   Strategic planning should be integrated into management processes rather than being seen as an additional responsibility;

ii.   The fundamental philosophy of letting managers manage which underpins effective strategic management requires that traditional tiered bureaucratic structures adapt to a more fluid and planning friendly style;

iii. Effective service delivery due to strategic planning cannot be guaranteed as the requisite skills and capacity across different spheres of government might be lacking or insufficient;

iv.   The organisational culture might not support effective integration of strategic planning and budgeting due to the inherent tension between strategic thinking's transformational outlook and the budgeting's control perspective;

v.   Managers often experience challenges in translating strategic goals into SMART objectives making it difficult to measure performance in financial terms;

vi.   Within the context of a decentralised governance system similar to South Africa, strategic management is complex as it entails the integration of planning and budgeting vertically across spheres of government and horizontally across sectors in the spirit of cooperative governance;

vii. The impact of strategic planning is affected by the dissemination of the strategic plan within an organisation hence a department must prioritise communication of the strategic plan once the process is finalised;

viii. Adequate financial management information is geared towards ensuring control and compliance rather than support the planning dimension of budget management and its links with strategic planning; and

ix. Appropriate communication of the national vision as an agreed set of national priorities in the form of a clear, coherent and integrated statement of overall public sector policy goals is important particularly in decentralised governance systems like South Africa to cascade linkages between strategic and operational planning and budgeting within departments across spheres and sectors to the lowest level of service delivery in line with the principle of subsidiarity appropriately.

The discussion of these challenges clearly accentuate the importance of regular review of approaches and frameworks adopted by government to support this process.

6.9   CONCLUSION

This chapter aimed to provide the reader with an in-depth investigation of how multi-sectored planning developed within the South African government. Firstly, an overview of theoretical and practical foundations that underpin departmentalisation was provided. From this discussion, it was demonstrated that departmentalisation within the South African context was and continues to be influenced by these theoretical principles. Secondly, this chapter aimed to explain the South African state system. It was found that the separation of powers doctrine fundamentally influenced the structure of the South African state. The evolution of departments in South Africa also enjoyed attention. The national executive structures and the role these structures play in fostering national multi-sectoral planning were also discussed. Lastly, the framework for multi-sectored planning in South Africa was explored. It was found that South Africa has a comprehensive and enabling legislative framework within which multi-sectoral planning must be undertaken.

It also emerged from this discussion that strategic planning is the basis for resource allocation hence DRR initiatives must be integrated into national multi-sectoral planning. Exploring and examining international models for integrating DRR with national multi-sectored planning is crucial to determine the indicators and performance criteria to be incorporated in into the proposed model. The analysis of international models will be the focus of the following chapter.

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CHAPTER 7:

THE INTERNATIONAL DRR: A COMPARATIVE ANALYSIS OF MODELS FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING

7.1   INTRODUCTION

Chapter 4 and Chapter 5 of this study have outlined that DRR is primarily a responsibility of all spheres of government within the South African environment. Furthermore, Chapter 5 has shown that for DRR to be successful, it must be integrated into national multi-sectored planning. Building on this, chapter 6 provided the reader with an understanding of how multi-sectoral planning developed within the South African environment. This chapter addresses the research objective of exploring and examining international models for integrating DRR with national multi-sectoral planning. In view of the research objective, this chapter is arranged in five broad sections. In setting this scene, the chapter opens by analysing key international instruments that have guided the uniform implementation of DRR over the last two decades (1994 to 2016).

With this in mind, it is important to note that Chapter 5 highlighted that the paradigm shift in the manner in which countries were managing disasters (from reactive to proactive) was precipitated largely by global initiatives such as the United Nation's International Decade for Natural Disaster Reduction (IDNDR) which started in 1990. While noting the importance of the IDNDR in shaping disaster management globally as discussed in chapter 5, this chapter will examine how the Yokohama Strategy and Plan of Action for a Safer World (1994), Hyogo Framework for Action (2005) and the Sendai Framework for DRR (2015) address the integration of DRR in national multi-sectoral planning.

Secondly, this is followed by a discussion of the various models or strategies that are utilised by Brazil, Russia, India and China (BRIC) to integrate DRR in national multi-sectoral planning. Since countries within the BRIC are utilised in this study to draw lessons and good practice for South Africa, the chapter briefly discussed the origin, formalisation, evolution and structure of the BRICS in order to provide context and

enable the reader to understand this platform for cooperation. This will be followed by a discussion of each country within the BRIC and this analysis will be based on three major focus areas viz. overview of disaster risk profile, legislative framework and institutional arrangements for DRR and finally, mechanisms or models for integrating DRR in national multi-sectoral planning. A summary of the findings will also be provided and finally, conclusions from the chapter are drawn.

7.2   ANALYSIS OF GLOBAL DRR INSTRUMENTS

The Yokohama Strategy for a Safer World was adopted in 1994 and called for the accelerated implementation of measures that will reduce disaster risks as discussed below.

7.2.1   Yokohama Strategy and Plan of Action for a Safer World

The Yokohama Strategy recognised that disaster prevention, mitigation, readiness and relief benefits from the implementation of sustainable development policies hence it is important that countries must incorporate them in their development plans and also efficient follow-up measures at the community, national, sub-regional and international levels (UNISDR, 1994:2). In this context, the Yokohama Strategy asserts that prevention contributes to lasting improvement in safety and is essential to integrated disaster management (UNISDR, 1994:2). Bearing this in mind, the Yokohama Strategy adopted several principles as discussed in Chapter 5 of this study. With specific reference to the principles dealing with or related to integration of DRR in multi-sectoral planning, the Yokohama Strategy acknowledges that disaster prevention and readiness should be considered integral aspects of development policy and planning at national, regional, bilateral, multilateral and international levels (UNISDR, 1994:5).

Furthermore, the Yokohama Strategy recognised that some patterns of consumption, production and development have the potential for increasing vulnerability to natural disasters particularly of the poor and socially marginalised (UNISDR, 1994:6). Like most strategies, the Yokohama Strategy (1994:10) adopted a plan of action and the actions that are related to the integration of DRR in national multi-sectoral planning are (1) incorporate DRR in socio-economic development planning based on risk

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ANALYSIS OF MODELS FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING

assessment and (2) consider the possibility of incorporating in their development plans through the conducting of environmental impact assessments with a view to reducing disaster risks. From this discussion, it is clear that the Yokohama Strategy recognised the importance of integrating measures that seek to reduce disaster risks in development planning. The Hyogo Framework for Action took this notion further as will be evident in the next section. It is important to note that while the Hyogo Framework was discussed in broad terms in Chapter 5, this section will specifically focus on measures related to the integration of DRR in national multi-sectoral planning initiatives.

7.2.2 Hyogo Framework for Action

The Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters was adopted at the World Conference on Disaster Reduction held from 18-22 January 2005 in Kobe, Hyogo, Japan (UNISDR, 2005:1). With regard to the integration of DRR in planning and development programmes, the HFA was more explicit in that it acknowledged that efforts to reduce disaster risks must be systematically integrated into policies, plans and programmes for sustainable development. The HFA recognised that sustainable development, poverty reduction and DRR are mutually supportive objectives (UNISDR, 2005:1). Drawing on the Yokohama Strategy, the Conference resolved to pursue the following expected outcome for the next 10 years:

> *The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries.*

To attain this outcome, the Conference resolved to adopt three strategic goals which included the more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with special emphasis on disaster prevention, mitigation, readiness and vulnerability reduction (UNISDR, 2005:3). With regard to the integration of DRR in development and planning initiatives, the Conference acknowledged that an integrated, multi-hazard approach to DRR should be factored into policies, planning and programming related to sustainable development (UNISDR, 2005:4). Table 7.1 presents an analysis of how

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the HFA's Priorities for Action addresses integration of DRR into planning and development initiatives:

Table 7.1: **Analysis of how Hyogo Framework for Action's Priority for Action address integration of DRR into planning and development initiatives**

Priority for Action	Reference to DRR integration in development and planning
Ensure that DRR is a national and a local priority with a strong institutional basis for implementation	Integration of DRR into development policies and planning at all levels of government, including in poverty reduction strategies and multi sector policies and plans.
	Supports the creation of multi sectored national platforms to facilitate coordination across sectors.
	Allocation of resources for the development and implementation of DRM policies, programmes, laws and regulations on DRR in all relevant sectors.
	Governments should demonstrate the strong political determination required to promote and integrate DRR into development planning.
Identify, assess and monitor disaster risks and enhance early warning	Establish institutional capacities to ensure that early warning are well integrated into governmental policy and decision-making processes.
Use knowledge, innovation and education to build a culture of safety and resilience at all levels	Promote the integration of DRR as an intrinsic element of the United Nations Decade of Education for Sustainable Development (2005-2015).
	Develop training and learning programmes in DRR targeted at specific sectors.
Reduce the underlying risk factors	Disaster risks related to changing social, economic, environmental conditions and land use are addressed in sector development planning and programmes.
	Promote the integration of DRR in climate change adaptation

Priority for Action	Reference to DRR integration in development and planning
	Integrate DRR planning into the health sphere, promote the goal of "hospitals safe from disasters".
	Mainstream disaster risk considerations into planning procedures for major infrastructure projects.
	Incorporate disaster risk assessment into rural development planning and management.

Source: UNISDR (2005)

From this discussion, it is evident that the Hyogo Framework for Action recognises that systematic integration of DRR into plans and programmes for sustainable development is vital and necessary for a country to reduce disaster risks. Additionally and building on the Yokohama Strategy, this framework is explicit on the importance of mainstreaming disaster risk considerations into planning for key infrastructure projects through disaster risk assessments. This section has briefly outlined how the Hyogo Framework for Action addresses the integration of DRR in planning and development, the next section examines the Sendai Framework for DRR which is the successor instrument to the Hyogo Framework for Action which was adopted at the Third United Nations Conference in Sendai, Japan, during March 2015.

7.2.3   Sendai Framework for DRR

The Sendai Framework for DRR 2015-2030 is the new global instrument to manage disaster risk, adopted at the Third UN World Conference on DRR in March 2015 (UNISDR, 2015b). The Sendai Framework for DRR is the successor instrument to the HFA. Indeed, this Framework was developed to build on and ensure continuity with the work carried out by countries and other stakeholders under the auspices of the HFA, as well as other previous instruments such as the *International Strategy for Disaster Reduction* of 1999, the *Yokohama Strategy for a Safer World* of 1994, and the *International Framework of Action for the International Decade for Natural Disaster Reduction* of 1989 (UNISDR, 2015a). The Sendai Framework moves from the premise that effective disaster risk management contributes to sustainable development (UNISDR, 2015b:9). The Sendai Framework further recognises that

DRR practices need to be multi-hazard and multi-sectoral, inclusive and accessible in order to be efficient and effective (UNISDR, 2015b:10). The expected outcome and goal of the Sendai Framework over the next 15 years are:

"The substantial reduction of disaster risk and losses in lives, livelihoods, and health and in economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries."

The Sendai Framework for DRR recognises that this outcome requires the strong commitment and involvement of political leadership in every country at all levels as well as the creation of the necessary conducive and enabling environment (UNISDR, 2015b:12). The Sendai Framework for DRR has three goals which are (1) preventing the creation of risk, (2) the reduction of existing risk, and (3) the strengthening of resilience of people and assets to withstand residual risk (UNISDR, 2015b:11). It affirms that disaster risk can be better managed through initial processes and that disaster risk management is not a sector in and of itself (UNISDR, 2015b:6). In this regard, the Sendai Framework for DRR puts forward a disaster risk management paradigm that must be applied across international and national agendas and sectors (UNISDR, 2015:6). In essence, the Sendai Framework for DRR aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across sectors.

Furthermore, the Sendai Framework for DRR introduces seven global targets to assess global progress towards expected outcome. While these global targets serve as guidance for developing national and local strategies and plans of action, they also contribute to strengthen accountability in disaster risk management (UNISDR, 2015b:11). This is an important innovation put forward by the Sendai Framework compared to the HFA. The Sendai Framework introduces 13 principles to guide states and all other stakeholders involved in DRR, namely:

i. Each state has the primary responsibility to prevent and reduce disaster risk, including through international, regional, sub-regional, trans-boundary and bilateral cooperation. This principle articulates that DRR is a priority for the state and as such must be reflected in legislation, policies, strategies, plans, programmes, investments and organisational measures;

ii.   DRR requires that responsibilities be shared by central governments and relevant national authorities, sectors and stakeholders, as appropriate to their national circumstances and government;

iii. Managing the risk of disasters is aimed at protecting persons and their property, health, livelihoods and productive assets, as well as cultural and environmental assets, while promoting and protecting all human rights, including the right to development;

iv.   DRR requires an all-of-society engagement and partnership;

v.   DRR and management depends on coordination mechanisms within and across sectors and with relevant stakeholders at all levels;

vi.   While the enabling, guiding and coordinating role of national and federal State Governments remain essential, it is necessary to empower local authorities and local communities to reduce disaster risk;

vii. DRR requires a multi-hazard approach and inclusive risk-informed decision-making based on the open exchange and dissemination of disaggregated data including sex, age and disability;

viii. The development, strengthening and implementation of relevant policies, plans, practices and mechanisms need to aim at coherence, as appropriate, across sustainable development and growth, food security, health and safety, climate change and variability, environmental management and DRR agendas. The "coherence" in question concerns sectors' objectives and capacity to prevent and reduce disaster risk both in their respective business and in their combined and cumulative implementation;

ix.   While the drivers of disaster risks may be local, national, regional or global in scope, disaster risk have local and specific characteristics that must be understood for the determination of measures to reduce disaster risk;

x.   Addressing underlying disaster risk factors through disaster risk-informed public and private investments is more cost-effective than primary reliance on post-disaster response and recovery, and contributes to sustainable development;

xi. In the post-disaster recovery, rehabilitation and reconstruction phase, it is critical to prevent the creation of and to reduce disaster risk by "Building Back Better" and increasing public education and awareness of disaster risk;

xii. An effective and meaningful global partnership and the further strengthening of international cooperation, including the fulfilment of respective commitments of official development assistance by developed countries are essential for effective disaster risk management; and

xiii. Developing countries, middle-income and other countries facing specific disaster risk challenges, need adequate, sustainable and timely provision of support, including through finance, technology transfer and capacity building from developed countries and partners tailored to their needs and priorities, as identified by them (UNISDR, 2015b, 13-14; UNISDR, 2015c, 12-14).

This section has provided an overview of the Sendai Framework, its expected outcome and goals as well as the principles that provide guidance to states and other role players involved in DRR. The next section expands further by exploring the Sendai Framework's Priority Areas for Action and how these address integration of DRR in national multi sectored planning.

7.2.3.1 *Sendai Framework's Priority Areas for Action*

While building on the HFA, and in exploring the expected outcome and strategic goals, the Sendai Framework for DRR identified a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas:

Priority 1: Understanding disaster risk;

Priority 2: Strengthening disaster risk governance to manage disaster risk;

Priority 3: Investing in DRR for resilience; and

Priority 4: Enhancing disaster readiness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.

With specific reference to integration of DRR in national multi-sectoral planning and programmes, Priority 2 acknowledges the importance of mainstreaming and integrating DRR within and across sectors and review and promote the coherence and further development, as appropriate, of national and local frameworks of laws, regulations and public policies (UNISDR, 2015b:17). While affirming that mainstreaming and integration of DRR is fundamental, Priority 2 of the Sendai Framework for DRR puts forward a renewed paradigm to achieve it, which includes:

i.   Definition of roles and responsibilities as well as incentives to ensure and facilitate active participation by all stakeholders, including institutions, through appropriate regulatory instruments of a binding and voluntary nature;

ii. An enhancement of coordination in disaster risk management across institutions which is instrumental to stimulate coherence in implementation across agendas and foster a multi-hazard and multi-sector understanding of disaster risk;

iii. The recognition of the need to establish or strengthen the institutional framework at national and local levels, including compliance mechanisms;

iv. The adoption of national and local DRR strategies and plans and public reporting on their implementation;

v.   The further strengthening of action at local level through the continued empowerment of local authorities and enhanced partnerships among institutions, the private sector and civil society, including volunteers; and

vi. The institutionalisation of debates within the relevant executive and legislative institutions concerning the development and implementation of strategies, plans and laws and aimed at exercising oversight, monitoring and reporting on progress (UNISDR, 2015c:15-16).

It is clear from this discussion that the Sendai Framework for DRR recognises the multi-sectoral nature of DRR which requires strong commitment and ownership of political leadership across all levels. With regard to mechanisms for integrating DRR in planning initiatives, the Sendai Framework for DRR acknowledges that every sector is required to manage the risk related to its business area and needs to do so

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in collaboration with other sectors with a view to jointly manage potential and cumulative disaster risks. The importance of institutional arrangements, definition of roles and responsibilities, enhancement of coordinating mechanisms to stimulate coherence in implementation across agendas to foster a multi-hazard and multi-sector understanding of disaster risks were identified within the Sendai Framework for DRR as vital for effective integration of DRR in multi-sectoral planning.

Having contextualised how the various global DRR instruments addressed issues related to integration of DRR in national multi-sectoral planning initiatives, the next section specifically explores models and or strategies to achieve this integration from within Brazil, Russia, India and China (BRIC). Notwithstanding the fact that South Africa is a member of the BRICS, these countries were preferred to other countries that may have better disaster management systems due to the following reasons to name but a few:

i.   Comprehensive DRR Legislative and policy frameworks which supports the integration of measures to reduce disaster risks in national multi-sectoral planning;

ii.   Robust institutional mechanisms to drive integration of DRR in sectoral planning;

iii.   Disaster risks that are largely similar to those faced by South Africa and are significantly impacted upon by rising urbanisation which result in high population density and the occupation of ecologically fragile zones such as floodplains; and

iv.   The importance of political leadership and ownership for successful integration of DRR in national multi-sectoral planning in countries such as India where the country's disaster management authority is headed by the Prime Minister as well as Russia which has a stand-alone ministerial department dealing with emergencies and disasters.

7.3   ANALYSIS OF MODELS FOR INTEGRATING DRR INTO NATIONAL MULTI-SECTORAL PLANNING WITHIN THE BRICS

While the focus of this Chapter is on models/ strategies utilised by the BRIC countries to integrate DRR in national multi-sectoral planning initiatives, it is however important to provide a brief background and overview of how and why the BRIC was established as a platform for cooperation by these countries. This is imperative as it will enable the reader to better understand and contextualise the subsequent discussion of measures to integrate DRR in national multi-sectoral planning initiatives.

7.3.1   Background of BRICS

The BRIC acronym, which stands for Brazil, Russia, India and China (BRIC) originated in a Goldman Sachs Paper by Jim O'Neill entitled *Building Better Global BRICs (2001)* as part of an economic study to forecast global economic trends over the next half-century (Degaut, 2015:1; Duggan, 2015:11; Singh & Dube, 2014:3). The key finding of this study was that the BRIC countries collectively would play an increasingly significant role in the global economy (Singh & Dube, 2014:3). While O'Neill's central idea was formed by the individual economic trajectory of these four rapidly expanding grouped by common features, it was however not intended to create an analytical classification or to imply formal diplomatic alliance. These findings were concretised by another Goldman Sachs paper in 2003 entitled *Dreaming with BRICs: the path to 2050* which revealed that over the next 50 years, Brazil, Russia, India and China – the BRICs economies could become a much larger force in the world economy (Singh & Dube, 2014:5). Furthermore, it also emerged that in less than 40 years, the BRICs' economies together could be larger than the G6 in US dollar terms (Singh & Dube, 2014:5). Having briefly outlined the background of the BRIC acronym, the next section briefly explores the origin and formal establishment of the BRIC block.

7.3.2 Origin and formalisation of the BRIC

While the BRIC acronym as a concept emerged for the first time in 2001 as outlined above, there was no specific move to formalise the group during the next few years after the term was coined (2001-2006), (Singh & Dube, 2014:6). The first move towards formalisation took place in September 2006 when the first meeting of the BRIC Foreign Ministers took place, as a side event to the 61st UN General Assembly in New York (Degaut, 2015:2). This event was followed by another side event of the Foreign Ministers of the BRIC during the 62nd UN General Assembly in New York during September 2007 (Duggan, 2015:17; Morazan *et al*., 2012:6). While they were several meetings held between representatives of these countries including the BRIC Heads of State of Government meeting in July 2008 and the Finance Minister's meeting in November 2008, it was the Foreign Ministers who decided at their third meeting to boost co-operation between the four countries on various fronts and through various mechanisms (Rewizorski, 2015:11; Singh & Dube, 2014:6-7). Although at this point, the broad objective was that the BRICs would champion issues on behalf of developing countries in international forums to advocate a more legitimate, representative and symmetrical international order (Degaut, 2015:3). It is with this in mind that Duggan (2015:11) characterised the BRICs as a new force in defining the rules of the games of global governance.

The move towards formalisation of the group was concretised when the BRIC leaders held their first meeting on 16 June 2009 in Yekaterinburg, Russia (Bohler-Muller & Kornegay, 2013:xxii). This summit focussed on the 2008 financial crisis, global development issues and the mechanisms to further strengthen the BRIC collaboration (Duggan, 2015:17). Informed by this, the summit declared the need to establish a more democratic and multipolar world based on rules of international law, equality, mutual respect, cooperation, coordinated actions as well as collective decision making of all states (Bohler-Muller & Kornegay, 2013:xxii; Singh & Dube, 2014:7). While South Africa did not feature in O'Neill's initial configuration, it was included into the group in 2010 and this resulted in the expansion of the acronym from BRIC to BRICS and since then, the new acronym has symbolised the collective economic power of Brazil, Russia, India, China and South Africa (Bohler-Muller & Kornegay, 2013:xxii; Duggan, 2015:16; Morazán, 2012:6). Balkaran (2013:119)

argues that the inclusion of South Africa into this bloc was seen as a natural outgrowth of the country's post-apartheid foreign policy trajectory which gave priority to Africa. While South Africa does not have the population, size of economy or long-term potential of the other four founding members, its entry into this economic block can be traced to its active global diplomacy and strategic regional influence (Kornegay, 2011, cited in Balkaran, 2013:119).

7.3.3   Evolution and present structure of BRICS

The BRICS forum has evolved and expanded after formalisation (Singh & Dube, 2014:8). With regard to demographic and economic progress, in 2010, BRICS countries collectively accounted for more than 40% of the world population and approximately 30% of the land mass (Balkaran, 2013:119; Rewizorski, 2015:3). The BRICS economies if viewed collectively over the last two decades have emerged as a force to be reckoned with after moving from a share of a little over 10% of the world GDP in 1990 to more than 25% recently (Balkaran, 2013:119). The increasing importance of BRICS for the global economy is reflected by various economic and demographic indicators such as (1) their increasing share in global GDP, (2) share in world trade, (3) trade openness and increasing foreign exchange reserves and (4) their foreign direct investment (FDI) inflows and outflows (Singh & Dube, 2014:9). From the discussion above, it is evident that the BRICS countries with over 40% of the world population collectively play a significant role in the global economy. In line with the primary objective of this chapter, the next section will explore aspects related to the integration of DRR into national multi-sectoral in the BRICS countries excluding South Africa. This discussion is important to identify lessons and good practice that could inform a model for integrating DRR in national multi-sectoral planning in South Africa which is the primary aim of this study.

Bearing in mind the focus of the study, a review of DRR systems and mechanisms for integrating DRR into national multi-sectoral planning in each of the four BRIC countries is provided in the next section. Firstly, the discussion will focus on the disaster risk profile of each country in order to understand the disaster risk dynamics that the various countries are contending with. Preceding discussions have revealed the importance of having strong and robust regulatory and institutional systems and in view of this, a brief analysis of existing legislative framework and institutional

arrangements for DRR in each country will be presented. Then, the focus will shift to the mechanisms and or models for integrating DRR in national multi-sectoral planning in each country. This will be followed by a brief discussion of lessons learned from strategies to integrate DRR in national multi-sectoral planning in each country or the lack thereof.

The section concludes with a summary of the key findings emanating from an analysis of models or mechanisms to integrate DRR in national multi-sectoral planning within the BRIC countries. The countries are discussed in alphabetical order.

7.3.4   Brazil

Brazil is the world's fifth largest country in terms of area and population with 202 million inhabitants (Soriano & Hoffman, 2015:50; UNDP, 2005; UNEP, 2014:8). The political and administrative organisation of the Federative Republic of Brazil comprises the Union (represents the Federal Government), 26 States, the Federal District and 5,565 municipalities which are all autonomous (self-organisation) (Brazil, 2010:29; Deutschland, 2015). Brazil is divided into five geographical regions: North, Northeast, Midwest, Southeast and South (IFRC, 2012a:16).

7.3.4.1   An overview of disaster risk dynamics in Brazil

While high magnitude earthquakes, tsunamis and hurricanes are not part of Brazilian history, floods, landslides and droughts are routine (GFDRR, 2014:13; UNEP, 2014:11). According to data from EM-DAT (2007), there were 150 records of disaster during the period 1900-2006 in Brazil and the most frequent types of disasters were gradual and sudden floods (59%), followed by landslides (14%). This observation is supported by a study of the Swiss Re (2011:2) which states that river and flash floods together with landslides have been a constant risk in Brazil throughout its history. The regions of Brazil most affected by flooding are the Southern, South-eastern and North-eastern regions (De Araujo & Rosa, 2014:117; GFDRR, 2014:13). According to Swiss Re approximately 19 million people (9,4% of the total population) are exposed to river flood risks while about 6,4 million (6,9 % of the total population) are exposed to flash flood risks (Swiss Re, 2011:2). The North and the Northeast region of Brazil

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falls within a semi-arid zone and is therefore exposed to droughts (De Nys, 2015:2; GFDRR, 2014:13; IFRC, 2012a:19; Mendiondo, 2015; Sena *et al*., 2014:10736). Drought impacts and associated emergency response actions come at a high cost to society, although the exact numbers are difficult to verify (De Nys, 2015:2). With regard to the impact of drought on human lives, Sena *et al.* 2014:10738 revealed that between 1960 and 2013, 612 drought events led to 2.19 million deaths and 2.14 billion affected persons. In this regard, De Nys (2015:3) argued that the reactive approaches that have largely defined Brazilian drought management to date need to be substantially reformed. In essence, droughts, floods and landslides are the most prevalent hazards in Brazil and while their occurrence and impacts do not adversely affect the national economy, at the local level these hazards jeopardise local development and imposes a heavy burden on the lives of poor and vulnerable communities (GFDRR, 2014:13; UNEP, 2014:11).

The uneven distribution of wealth with the richest 2 million citizens holding the same proportion of household income as the poorest 80 million inhabitants is also reflected in the way that disasters affect the population (IFRC, 2012a:19; Soriano & Hoffman, 2015:50). In Brazil, this distribution is more associated with geo-environmental than with the socio-economic characteristics of the regions affected, since slum areas, pockets of poverty and a lack of urban planning are present in most Brazilian cities (IFRC, 2012a:16-18). The high population density in urban areas is the primary determinant of vulnerability to hazards in the country driven mainly by poor land use and planning that characterises cities in Brazil (GFDRR, 2014:10). This observation is supported by Araujo and Rosa (2014:118); Soriano and Hoffman (2015:52) who postulate that urbanisation has resulted in the occupation of Permanent Preservation Areas (PPAs), and other environmentally vulnerable areas such as floodplains without appropriate land use planning. A Study by the IFRC (2012a:19) suggest that the poor sector of the population is much more likely to be affected by disasters than wealthier sectors, not least because of the fact that low income families are much more likely to live in disaster-prone areas. Soriano and Hoffman (2015:53) concludes in this regard that disasters particularly those induced by landslides and flooding in certain urban areas are socially built.

Another important aspect worth noting is that the general popular belief in the country is that Brazil is free from spectacular disasters such as earthquakes, tsunamis and volcanic eruptions (Farber, 2012:3; GFDRR, 2014:13; Oliveira, 2015; Soriano & Hoffman, 2015:49). This interpretation is largely due to its geographic location which is not prone to hazards such as earthquakes, volcanic eruptions and tropical cyclones (Soriano & Hoffman, 2015:49). Notwithstanding this popular belief, the Brazilian Atlas of Natural Disasters shows an increase of 268% in disasters over the last ten years (Soriano & Hoffman, 2015:49).

Having outlined the disaster risks dynamics facing Brazil, the next section turns attention to the regulatory and institutional mechanisms to manage disaster risks in the country. As Manyena *et al*. (2013:1786) argue, disasters have become a policy problem of global and local concerns requiring effective legislative frameworks disaster laws serve a number of critical functions. They set out clear roles and responsibilities among agencies and the various levels of government establish funding and accountability mechanisms and regulating private behaviour that might increase disaster risks (IFRC, 2012a:4). Bearing this in mind, the next section explores the regulatory and institutional framework for DRR in Brazil.

7.3.4.2 Legislative framework and institutional arrangements for DRR in Brazil

7.3.4.2.1 Legislative and policy framework

The Brazilian legal system is still adapting to the new issues arising from disasters (Farber, 2012:3). Like in most countries, the 1988 Constitution of Brazil forms the basis upon which all legislation including those related to disaster risk management flows from as discussed below.

i. 1988 Constitution

The legal mandate for managing disaster risks within the Brazilian context flows from the Constitution. Article 21 of Chapter 2 of Brazil's 1988 Constitution states that the Union shall have the power to "plan and promote permanent defence against public disasters, especially droughts and floods, and that it falls exclusively within the

competence of the Union to legislate on civil defence and national mobilisation (Brazil, 2010:30; Deutschland, 2015). While sub-national and local level authorities can also enact legislation on civil defence, experience has demonstrated that they tend to replicate federal legislation at these levels (IFRC, 2012a:24). The Constitution further places the responsibility to execute civil defence activities upon the military fire brigades in addition to their duties defined by law. The dominant interpretation of this assignment has been that these refer to disaster response actions but does not rule out other factors from undertaking civil defence actions especially those related to DRR (IFRC, 2012a:24).

In accordance the Constitution, Law 12,340/2010 is the primary legislative instrument regulating disaster management in the country as outlined below.

ii.   Law 12,340/2010

Law 12,340/2010 is the main legal authority on disaster management and covers, among other issues, the National System of Civil Defence (SINDEC) with objectives to plan, articulate and coordinate civil defence actions throughout the country (IFRC, 2012a:24). In terms of this Law, the disaster management system is to be made up out of bodies and entities of the public administration of the Union, of states or provinces and the Federal District, and of municipalities, together with civil society organisations in charge of civil defence actions. This law largely deals with compensatory aspects of managing disasters and regulates among other issues, the obligatory allocation of money from the Union to administrative entities (states and the Federal District but most notably municipalities) in order to assist victims in reconstruction efforts towards reaching a state of normality (IFRC, 2012a:25).

Another critical policy dealing with DRR is the National Policy of Protection and Civil Defence (NPPCD).

iii.   National Policy of Protection and Civil Defence (NPPCD)

The NPPCD was approved and sanctioned in April 2012 and it involves the actions of prevention, mitigation, preparation, response and recovery (Soriano & Hoffman, 2015:53). In terms of the NPPCD, cities vulnerable to disasters must do the following:

- Map areas susceptible to landslides, flooding, geological and hydrological processes;

- Develop a Contingency Plan of Protection and Civil Defence;

- Develop a work plan   and services implementation to reduce disaster risks;

- Ensure that control and supervision mechanisms are in place to avoid construction in areas susceptible to landslides, flooding and other related hazards (Soriano & Hoffman, 2015:53).

Another important legal standard is the Presidential Decree 7,257 of 04 August 2010.

iv.   Decree 7,257/2010

While this law primarily focuses on response to and recovery after disasters, it makes some important references to DRR (IFRC, 2012a:26). One such example is that it defines preventative actions as " aimed at reducing the occurrence and intensity of disasters, through identification, mapping and monitoring of risks, threats and vulnerabilities, including capacity building of the society in civil defence among other activities established by the Ministerial department of National Integration." An analysis of disaster law and emerging issues in Brazil by Farber (2012:3) concludes that Brazil's legal system is still adapting to new ways of managing disasters which places DRR at the heart of all activities.

v.   Law 12,334/20102010

Law 12,334/2010 is another related legal instrument which supports DRR. While this law sets the national policy for Dam Safety and provides for broad public participation in the process through access to information and mechanisms for social participation, as well as publication of reports on regular security of dams, it also outlines the general lines for an education and communication on dam safety (IFRC, 2012a:27). This law seems to provide an interesting model on the subject. Another related legislative instrument is the land management code which resides within the municipal realm of legislative power. This land management code order municipalities with over 20 000 inhabitants to adopt a Master Plan, which is to be

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approved by the city council, and which is considered the basic instrument on urban development and expansion policy (IFRC, 2012a:27).

Flowing from the discourse above, it is clear that Brazil does not have a unified and comprehensive legislative framework for DRR. As a result roles and responsibilities of different role players relating to DRR are not clearly defined. Having outlined the legislative framework for DRR in Brazil, the next section explores the institutional and governance mechanisms for DRR in this country.

7.3.4.2.2   *Institutional and governance framework for DRR*

The Ministerial department of National Integration (MNI), notably through its National Secretariat of Civil Defence (NSCD) is the main body directly assigned the tasks relating to DRR, being the overall coordinator of the National Civil Defence System (IFRC, 2012a:23). Brazil's National Civil Defence System (SINDEC) was organised in 1988, reviewed in 1993, updated through Decree No.5., 76 of 17 February 2005 and amended by later legislation. The MNI was established in 1999 to lead regional development efforts, including strategies for integrating economies, implementation of the Northeast Development Fund and the Amazon Development Fund, the creation of processes for monitoring and evaluating integration projects, and a focus on the cross-cutting issues of civil defence, drought and water works, irrigation policy and general public work (De Nys, 2015:4). The Ministerial department of Cities (MOC) was created in 2003, having, as one of its flagship initiatives, the action to support the prevention and eradication of risks in settlements within the framework of the Urbanisation, Regularisation and Integration of Precarious Settlements programme (De Nys, 2015). It offers support especially to municipalities through the articulation of a set of actions aimed at reducing risks in urban areas. Among the support activities conducted by the MOC are:

i.   Training of municipal technicians, especially on risk identification, assessment, prevention and management;

ii.   Financial support to municipalities to produce their own Municipal Plan on Risk Reduction, which includes risk diagnosis and has to be compatible with Federal

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Programmes on slum upgrading and land regularisation (providing land titles to poor families occupying certain areas), and

iii. Financial support for municipalities to undertake projects in areas identified as disaster prone areas, such as corrective structural measures aiming to contain slopes (De Nys, 2015).

This section has demonstrated that Brazil's institutional arrangements recognise that while DRR is a cross-cutting function, it is an essential component of sustainable development. The placement of SINDEC within the Ministerial department of Integration which is responsible for leading regional development efforts strategically locates DRR issues within development planning in the country. Bearing this in mind, the next section turns attention to the mechanisms or models for integrating DRR in national multi sectored planning within the Brazilian environment.

7.3.4.3 Mechanisms/ models for integrating DRR in national multi-sectoral planning in Brazil

Traditionally, Brazil's disaster management approach was disaster response oriented mainly due to its civil defence background (Araujo & Rosa, 2014:118). While a paradigm shift from response oriented to DRR approaches was precipitated by the HFA, it was the 2011 flood disaster in Rio de Janeiro State that is widely considered to have been the paradigm shifting point in managing disaster risks in the country (Araujo & Rosa, 2014:119; GFDRR, 2013:6; Soriano & Hoffman, 2015:49; UNEP, 2014:13). Following this disaster, and in order to advance the DRR agenda, Brazil recognised the importance of adopting a multi-sectoral approach in order to comprehensively manage disaster risks facing the country (GFDRR, 2013:6).

With regard to some of the initiatives or projects that seek to integrate DRR in planning within sectors the GFDRR conducted a study in 2013 on incorporating disaster risk management of the transport sector in Brazil. This study was undertaken in the city of Sao Paulo in which the inclusion of DRM practices aims at both reducing possible effects from disasters occurrence as well as ensuring the development of a more resilient sector (GFDRR, 2013:12). This originates from a thoughtful interaction among three fields i.e. transport, environment and disaster risk management

targeting structural and non-structural measures respectively (GFDRR, 2013:16). Figure 7.1 shows the interface between the three fields.
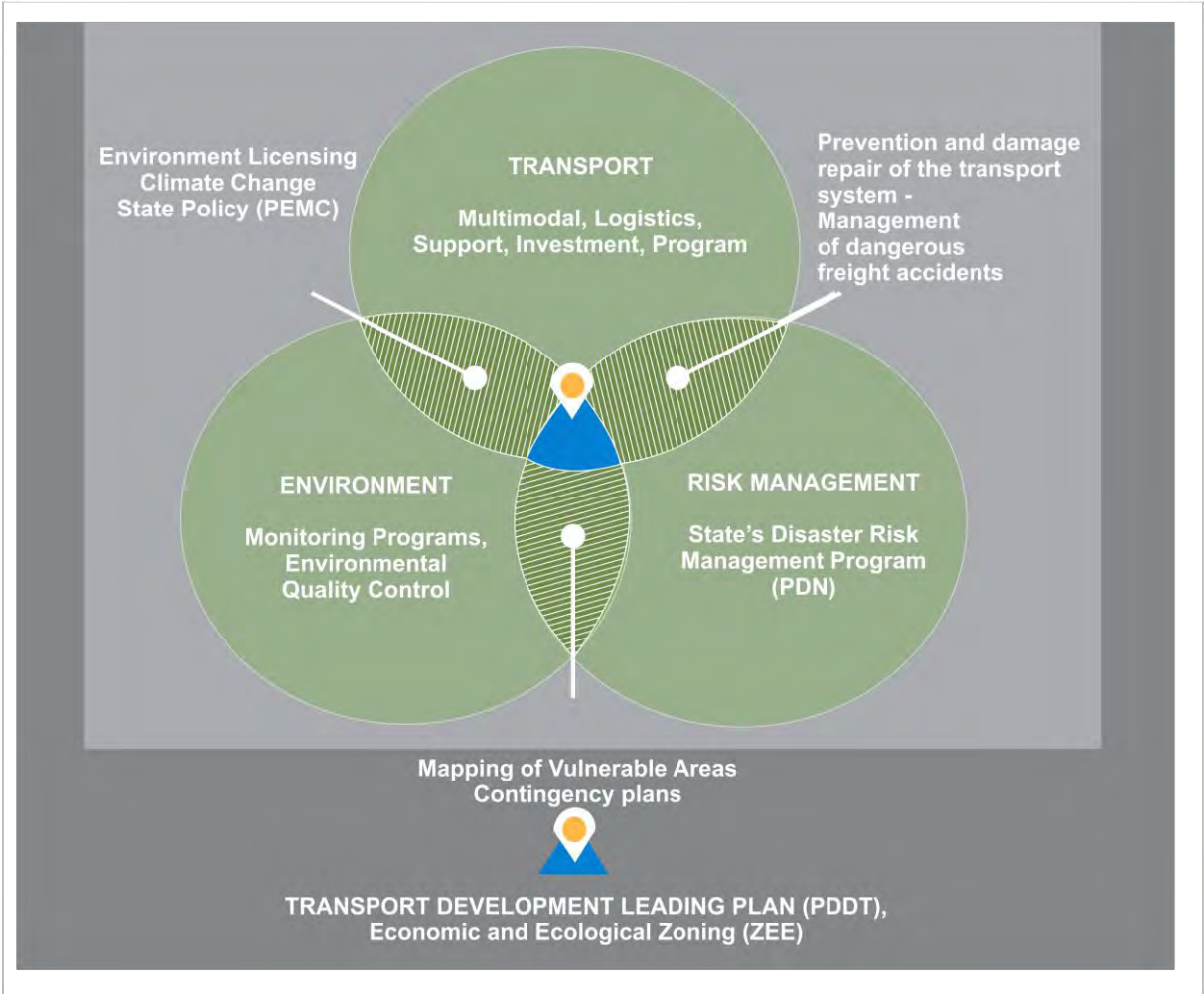
Figure 7.1: Interface between three fields i.e. transport, environment and DRM targeting structural and non-structural measures respectively (adapted from GFDRR, 2013:16)

Within the context of disaster risk management and taking into account the overlaps between the mentioned three fields, the study aimed to use cutting edge hydrological and geotechnical engineering modelling to map risks and identify vulnerable areas as well as support the implementation of the State Natural Disasters Prevention and Geological Risk Reduction Programme (PDN) (GFDRR, 2013:16). The study noted that risk mapping information are key inputs for the transport sector to both identify and reduce risks while the PDN programme goes beyond and can positively impact

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different sectors and protect infrastructures (GFDRR, 2013:16). Two key activities were identified:

i. To improve the State capacity to mainstream DRM in transport planning and programme execution through studies, small works and the acquisition of goods including:

    a. Mainstreaming disaster and climate change risks in the State's Transport Masterplan, comprising the assessment of the sector's vulnerability to disasters, potential socio-economic impacts for the State, and developing an integrated disaster response plan for the transport sector; and

    b. Reviewing technical specifications for road design with a view to integrate DRM linked to climate variability and for maintenance and operation practices to improve resiliency of road infrastructure exposed to mapped risks.

ii. Tso enhance DRM policies and institutional capacity with focus to strengthen the State's overall DRR capacity, fostering management initiatives through studies and the acquisition of goods and to support the implementation of the PDN, including through:

    a. Mainstreaming DRM practices at planning level, through supporting the design of DRM frameworks (risk identification, mitigation, readiness, financing), improving comprehensive conceptual and practical understanding of hazards, vulnerabilities and risks (including linked to climate change), assessing socioeconomic impacts of specific disasters as well as designing management tools for the resettlement of populations located at immitigable high-risk areas.

    b. Improving policies and procedures to better respond to disasters through the development of early warning systems, methodologies, information and knowledge (GFDRR, 2013).

In order to monitor the implementation of the project, a set of two indicators were prepared i.e. (1) improved monitoring of climate risk factors measured by the road

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extension monitored with automatic stations and (2) increased number of municipalities in the Sao Paulo Metropolitan region with a conducted disaster risk mapping. The project noted that among the key critical infrastructure in the state of Sao Paulo is a complex highway network which connects the coastal region and the Port of Santos to the Sao Paulo metropolitan region (GFDRR, 2013:19). It is estimated that while around 25% of the country's Gross Domestic Product (GDP) depends on this highway network, a quarter of all Brazilian exports as well as 40% of agricultural business depend on this critical transport infrastructure (GFDRR, 2013). In view of the strategic importance of this transport infrastructure, a special Technical Assistance Project (TAP) was designed within the operation with a view to improve the readiness of transit authorities and road users to both manage the risks and respond to extreme events (GFDRR, 2013:19). In this regard, the GFDRR (2013:19) noted that the TAP has potential to become a pioneer approach for DRR in the transport sector in Brazil. The proposed framework seeks to improve the integration between geo-technical or meteorological monitoring and highway management and operation in order to ensure the adoption of structural measures to reduce identified risks. Furthermore, to support the adoption and improvement of non-structural measures and procedures in traffic management in case of disaster occurrence (GFDRR, 2013:19). The GFDRR (2013:29) noted that global experience indicates that mainstreaming disaster risk management in sectored levels is only successful when the proper motivations and needs are clearly identified so business as usual practices can be incorporated with disaster risk management components. The study also noted that without proper engagement from the targeted sector and the definition of clear methodologies, the development of disaster risk management practices can potentially become a theoretical endeavour (GFDRR, 2013:29). Furthermore, growing interdependencies among different sectors such as transport, health, environment, etc and greater exposure of critical infrastructures point to the urgent need to frame disaster risk management under a multi-sectoral and multi-disciplinary approach (GFDRR, 2013:29).

The MNI and the MOC undertake physical interventions through structural engineering works with a view to reduce disaster risks (IFRC, 2012a:34). These two Ministerial departments financially support municipalities to map their disaster risks. In Brazil, the Ministerial department of Planning adopts multi-year plans every four

years and since 2004 and the approved guidelines have included programmes specifically designed to track DRR and response policies while prior to that, only civil defence appropriations were included in the multi-year plans (GFDRR, 2014:24). The focus on anticipatory aspects of managing disaster risks as opposed to response-oriented approaches of the past was precipitated by the 2011 Rio de Janeiro State flash floods and landslides (GFDRR, 2014:24). This has also led to increased budget allocations for DRR which reflects that the Federal Government recognises the importance of the function (GFDRR, 2014:24). The development of flood vulnerability atlas based on a single methodology and applicable in all states which allows Brazil to identify the hotspots for floods and rank them is another important tool for national planning (De Oliveira, 2015). The next section provides an overview of challenges and opportunities for integrating DRR in national multi-sectoral planning within the Brazilian environment.

7.3.4.4 *Challenges and opportunities for integrating DRR in national multi-sectoral planning*

The discussion on Brazil's disaster risk profile, legal and institutional systems as well as strategies to integrate DRR in national planning has revealed that the country's regulatory framework is still evolving and adapting to anticipatory mechanisms of managing disasters as opposed to compensatory methodologies which were a primary feature of Brazil 's civil defence system. The general belief that the country is not prone to disasters such as earthquakes and tsunamis which is prevalent among Brazil's population contributes somewhat to weak political ownership for disaster risk management in the country.

Although these challenges exist, the project which was driven by the Global Facility for Disaster Reduction and Recovery (GFDRR) to integrate DRR in the transport sector in the country can be regarded as a pioneer that many countries, including South Africa, can learn from. The mainstreaming of disaster and climate change risks in the State's Transport Masterplan (as part of this project) which includes an assessment of the sector's vulnerability to disasters and an analysis of potential socio-economic impacts for the state is good practice which South Africa's Department of Transport at both national and provincial levels can draw lessons from

in its endeavour to reduce disaster risks. The indicators that were identified to monitor the implementation of this project i.e. (1) improved monitoring of climate risk factors and (2) increased number of municipalities in the Sao Paulo Metropolitan Region with a conducted disaster risk assessment and mapping demonstrates that vertical coordination between the different spheres of government is essential for effective integration of DRR in sector planning and programmes. Lastly, the development of flood vulnerability atlas based on a single methodology and applicable in all states which allows Brazil to identify high risk areas for floods is another important lesson that South Africa could learn from particularly taking into account the fact that flooding is one of the three main hazards facing the country as discussed in chapter four.

Having explored the disaster risk profile, regulatory and institutional systems, some strategies to integrate DRR in national multi-sectoral planning in Brazil as well as lessons applicable to South Africa, the next section turns attention to similar aspects within the Russian environment.

7.3.5   Russia

The dissolution of the Soviet Union in December 1991 transformed Russia into a set of independent states with the Russian Federation (RF) being the largest in terms of both territory and population (Akimov & Porfiriev, 2012:64). In terms of the Constitution, Russia consists of 83 units of two main types, (1) national which includes 21 republics, four autonomous districts and one autonomous region and (2) administrative areas including nine territories, 46 regions as well as two federal cities, Moscow and St Petersburg (Hague & Harrop, 2013:146). Russia occupies the greater part of Eastern Europe and Northern Asia and its territory covers above 17 million square kilometres (Russia, 1994:4). Inevitably and given its vastness, Russia is prone to a number of natural and anthropogenic hazards.

7.3.5.1   *An overview of disaster risk dynamics in Russia*

Russia is a vast country and has the largest land in the world that extends from the Baltic Sea to the Pacific Ocean (Hague & Harrop, 2013:146). This territory is remarkable for diverse natural conditions and comprises several geographical zones

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and natural areas with about 120 000 rivers running on its land (Russia, 1994:4).This country is prone to destructive impacts of various geophysical, geological, hydro-meteorological and cryopedological hazards as depicted in Table 7.2 (Russia, 2004; Russia, 2005). Russia is also located in a seismically active area with about 20 % of its territory vulnerable to earthquakes (Russia, 1994:4). During the 20th century, a total number of strong earthquakes recorded in this country exceeded 1400 although only 40 of these caused socio-economic losses primarily because of low economic development in most seismically active territories located in the Asiatic part of Russia (Russia, 2004).

Table 7.2:   Major natural hazards in Russia

Hazard	Location	Number of population affected (approximately)
Floods	Western Russian Rivers, Siberia, Ural and Far East	9 million
Earthquakes	Northern Caucases, Southern Siberia, Area of Baikal Lake, Kamchatka, Kuril Islands	12,5 Million
Uragans Wind storms	European part of the Volga Valley, Ural, Siberia, Far East, Sakhalin, Kamchatka	65 million
Landslides Mudflows Slope collapses	Kamchakta Sakhalin Kuril Islands	3 million
Tsunami	Kamchakta Sakhalin Kuril Islands	0.4 million
Desertification	Southwestern Russia, the Volga Valley, Southern Ural and Siberia	40 million
Avalanches	Northern Caucases, Khibin Mountains, Altay, Southern Ural and Siberia	20 million
Forest and peat fire	35% of the territory	20 million

Source: Russian Federation (1994)

From Table 7.2 it is evident that earthquakes are among the most destructive and dangerous hazard facing Russia with the Kamchatka Peninsula being the area most

prone to seismic activity (Russia, 1994:5). Kamchatka and the Kuril Island present another dangerous geophysical phenomenon, namely, volcanic eruptions with an average of an eruption once every one and half years (Russia, 1994:5). Additionally, droughts are considered the most large-scale and prolonged hazard in Russia and occur each 2 to 3 years in the Volga area and the Northern Caucasus and less frequently, each 3 to 5 years in the central Chernozem area as well as Eastern Siberia (Russia, 1994:6). Like in most countries, floods cause most damage and are most frequent than other hazards (Russia, 1994:6). Russia is also prone to tsunamis which pose great threats to the population along the Pacific Ocean area (Russia, 1994:7). The vulnerability of Russia to hazards is exacerbated by the economic utilisation of lands that are prone to floods, tsunami, volcanic eruptions (Russia, 1994:4). Mindful of these disaster risks, Russia has developed various regulatory instruments and established robust institutional arrangements as presented below.

7.3.5.2 *Legislative framework and institutional arrangements for DRR in Russia*

The radical political change in the former Soviet Union in the second half of the 1980s coincided with a set of major emergencies, disasters and catastrophes, the 1986 Chernobyl radiation accident and 1988 Armenian earthquake disasters being the most devastating (Akimov & Porfiriev, 2012:63). This specific combination of circumstances facilitated and accelerated drastic changes within the existing national civil defence system (Akimov & Porfiriev, 2012:63). The next section expands further on the regulatory framework for DRR in Russia.

i. Legislative and policy framework

The Russian Federation has adopted a variety of laws and policies relating to disaster risk management and all these regulatory instruments draw their mandate from the country's Constitution (Russia, 2004). This viewpoint is reiterated by Akimov and Porfiriev (2012:66) in argument that by 2010, the body of emergency and disaster laws in Russia included more than fifty federal laws, over 20 decrees by the country's President, some 300 federal regulations and over 1,000 regional Acts

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passes by legislatures of the Federation's entities. Table 7.3 outlines some of the key legislation related to DRR:

Table 7.3:   Key disaster risk management legislation

Name of legislation	Reference to DRR
Federal Law 68-FZ of 21 December 1994 "On Community and Area Protection against Natural and Technological Disasters"	This Law forms the core of disaster management laws in Russia. This Act provides organisational and legal rules throughout the country, providing protection to communities, industrial and social assets as well as within the broader environment against natural and anthropogenic hazards
Decree of the President of the Russian Federation 1515 of 23 October 2008 entitled "On a Federal Public Institution 'National Crisis Management Centre'	This Decree established the Integrated Prevention and Response (EPARIS) of the government of the Russian Federation
Federal Law 123-FZ of 22 July 2008 entitled "Technical Regulations on Fire Safety Requirements"	The Technical Regulation forms the basis of fire safety legislation covering all fire safety activities ranging from settlement design to specific facilities, buildings and products as well as introducing standards for fire safety and fire protection. Also regarded as a major step within the legal framework for fire safety and protection in Russia as it consolidated over 150 000 fire safety requirements from 2000 binding documents into a single federal law.
Legal norms of the Federal Law "on Communication" adopted in 2003	It creates a mechanism for authorised state bodies to utilise the communication networks and means for early warning purposes during disasters

Sources: Akimov & Porfiriev (2012); European Union (2013); Russia (2004)

In addition to the legislation outlined in Table 7.2 above, Russia's disaster risk management system is supported by a variety of other relevant laws and policies which provides a holistic framework for effective management of disaster risks facing the country. These legislation and policies include the following amongst others:

a.   Law of the Russian Federation on Safety, 1991;

b.   Presidential Decree (PD) No. 794 on Single State System of Preventing and Eliminating Emergency Situations, 1992;

c.   Federal Law (FL) No. 68 on Protecting the Population and Territories from Emergency Situations, 1994;

d.   Order of the Ministerial department of Emergencies of Russia No. 200 which provided for the basic roles and functions of the Ministerial department of Emergencies, 2003;

e.   Code of Administrative Law Infringements of the Russian Federation provided sanctions for non-compliance to the requirements of the norms and rules on preventing and eliminating emergency situations, 2001;

f.   Law on Fire Safety, 2004;

g.   Law on Radiation Safety of the Population; and

h.   Law on Safety of Water-development Projects (Akimov & Porfiriev, 2012:66-70; Russia, 2004).

It can be argued that key features of Russia's emergency and disaster risk management legal system are federalisation or centralisation. This is mainly due to a higher degree of policy centralisation in the disaster management sector that ordinarily should exceed that in routine economic and social conditions on the one hand and these tendencies are also informed by the geographic peculiarities of the country with its vast territory spreading east to west through nine different time zones on the other hand (Akimov & Porfiriev, 2012:66). Furthermore, a gradual shift towards DRR is also evident from the laws and policies that Russia has put in place to manage disaster risks. Having outlined the regulatory framework which Russia has put in place, the next section explores the institutional systems that the country has established to coordinate DRR.

iii.   Institutional arrangements for DRR in Russia

The Ministerial department of Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM) also known as the Ministerial department of Emergencies (ME) is responsible for the implementation of disaster management policies (Russia, 2004). EMERCOM was set up by decree of

the President of the Russian Federation on January 10, 1994 (Akimov & Porfiriev, 2012:67). The national structure for coordinating and executing DRR is the single state system of preventing and eliminating emergency situations (RSES), which was established in 1992 (Russia, 2004). The primary objective of the RSES is to master coordination of all state agencies, institutions and enterprises in order to ensure improvement in how Russia manages the tasks of preventing and eliminating disasters (Russia, 1994:9). The RSES integrates management bodies, forces, federal bodies, local administrations and organisations to protect the population and territories from emergency situations (Russia, 2004). The key activities of the RSES are as follows:

a.   Prevention of accidents, and adverse impacts of natural hazards;

b.   Reduce losses and damage from emergency situations;

c.   Eliminate emergency situations;

d.   Emergency rescue operations;

e.   Reduce disaster risks; and

f.   Support relief and rehabilitation activities (Russia, 2004).

The RSES consists of territorial and functional subsystems as depicted in Figure 7.2 below:

Figure 7.2: National structure for coordinating DRR in Russia (adapted from Russia, 2004)

As shown in Figure 7.2, both territorial and functional subsystems and their elements operate at five basic levels which correspond to those making and implementing decisions with respect to the severity of the disaster (Akimov & Porfiriev, 2012:73). These include (1) federal level which covers the entire territory of the Russian Federation (2) regional level covering the territory of several subjects of the Russian Federation (3) territorial level covering the territory of a subject of the Russian Federation (4) local level covering the territory of a district or town settlement and (5) object level covering the territory of an economic object (Akimov & Porfiriev, 2012:74; Russia, 2004). While functional systems of the RSES on the one hand are based on management bodies, powers and means of ministerial departments and departments

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that have their own specific tasks in the field of counteraction of emergency situations, territorial systems on the other hand are created in the subjects of the Russian Federation for prevention and elimination of emergency situations within their territories (Akimov & Porfiriev, 2012:74; Russia, 2004). In total, the territorial subsystem is comprised of more than 5000 elements in 83 members of the Russian Federation, with over 1000 of these in urban areas and major cities and the rest in towns, hamlets and villages in rural areas (Akimov & Porfiriev, 2012:73).

At the federal level, the EPARIS coordinating bodies include the Interdepartmental Commission for Emergency Prevention and Response, composed primarily of the deputy ministers and directors of the 16 federal ministerial departments and agency responsible for disaster policy (Akimov & Porfiriev, 2012:74). These are headed by the Prime Minister, who, in accordance with Russian law is the Chief of Civil Defence of the Russian Federation, whose everyday activities are managed by EMERCOM (Akimov & Porfiriev, 2012:74). With regard to issues of strategy, EPARIS developed two main strategic programmes i.e. the Federal Targeted Programmes for Risk Reduction and Mitigation of Natural and Technological Disasters in the Russian Federation for 1999-2004 and a similar programme covering the 2005-2010 time period (Akimov & Porfiriev, 2012:77). The latter programme (2005-2010) comprised seven sections, which reveal the key directions of EPARIS's strategic development in the first decade of the new century and these includes:

a. Systems research and improvement of the legal and organisational bases for public administration in the area of community safety and protection of critical infrastructure and facilities in disasters;

b. Improvement of disaster monitoring and forecasting systems including those for seismic hazards and tsunamis;

c. Development of the all-Russia complex system for disaster warning and public information in highly populated areas;

d. Development and implementation of measures to improve public safety and the protection of critical infrastructure and facilities;

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e. Development and improvement of technical measures and technologies to ensure community and area protection against the impact of disaster agents and the alleviation of a disaster's aftermath;

f. Development of the infrastructure for information support and contingency analysis of disaster risks; and

g. Development and improvement of the system for emergency and disaster management and training of the public and EPARIS professionals (Akimov & Porfiriev, 2012:77-78).

From this discussion, it is clear that political ownership is a key feature of the Russian disaster management system. The fact that the Prime Minister is the Chief of Civil Defence of the Russian Federation demonstrates that the country takes the function seriously. Other countries within the BRICS including South Africa should draw lessons from this good practice with a view to enhance political ownership and accountability which is fundamentally essential for any country to better manage its disaster risks. Having discussed the regulatory and institutional basis for DRR within the Russian environment, the next section presents strategies that this country utilises to integrate DRR in national multi-sectoral planning.

7.3.5.3 *Mechanisms/ models for integrating DRR in national multi-sectoral planning in Russia*

The Russian Federation pursues a targeted scientific-technical policy which seeks to protect the public and territories from emergency situations caused by natural and anthropogenic hazards (Russia, 2004). During the 1990s, the Russian Federation adopted the State Scientific-Technical Programme "Safety of the Population and Economic Objects with Regard to Risks of Natural and man-made Disasters" (SSTP "Safety") (Russia, 2004). The implementation of the SSTP "Safety" was classified into the following three stages:

i. 1991-1995 when the focus was on the development of a scientific-technical policy of the state on management, control and securing of safety on the basis of known theories and regularities in formation and development of natural and

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anthropogenic disasters as well as legislative, economic and regulatory technical documents, legal acts, state norms and standards;

ii.   1996-2000 when the focus was on the development of a three-level system (object-related, regional and national) for securing safety with regard to the general concept of sustainable development and results of the first stage; and

iii.   2001-2010 when development of ways and transition of Russia in the creation and functioning of objects and territories applying a single state and international system of laws, norms, rules and standards on safety improvement, reduction of natural and anthropogenic risks of global, national, regional, local and object-related scales were the focus (Russia, 2004).

According to this section it is worth noting that the country has identified the following DRR priorities:

i.   Risk assessment on various types of natural threats;

ii.   Early warning and forecasting;

iii.   Monitoring and evaluation of natural hazards and its impact;

iv.   Hazard mapping;

v.   Diagnosing seismic soundness of buildings and other infrastructure;

vi.   Enhance public education and awareness on existing threats and prevention/ mitigation measures;

vii.   Conduct of capacity building activities at all levels including drills;

viii.   Research and development, and

ix.   Investing on disaster reduction measures (Russia, 2006).

While action plans for emergency situations are drafted and executed at all levels of the RSES system, special plans such as (1) plans of prevention and liquidation of spillage of oil and petroleum products and (2) operational plans of fighting forest fires

which are approved annually by state authority bodies of subjects of the Russian Federation are also mandatory (Russia, 2006). This discussion has revealed that while Russia contends with a complex disaster risk profile, it also has a robust regulatory and institutional system that enables the country to better manage its disaster risks. The fact that issues like risk assessment on various types of natural threats, hazard mapping; early warning and forecasting and investing on disaster reduction measures are key priorities for the country demonstrates the paradigm shift from response-oriented strategies towards anticipatory methodologies which places DRR at the centre of all activities.

7.3.5.4   Challenges and opportunities for integrating DRR in national multi-sectoral planning

The discussion on Russia's disaster risk profile, legal and institutional systems as well as strategies or models to integrate DRR in national multi-sectoral planning has revealed that other than Brazil, Russia faces a complex disaster risk profile covering all natural hazards from earthquakes to volcanic eruptions. With regard to the country's frameworks, Russia's approaches to manage disaster risks are still predominantly response oriented and focus mainly on emergency management. Despite this, it is important as shown in the discussion above to note that there is a shift from emergency management towards DRR.

As discussed in previous chapters, notably Chapters 5 and 8 of this study, effective implementation of South Africa's disaster risk management legislation is hindered by the current placement of the function across all spheres of government. With this in mind, it is important to note that South Africa can draw key lessons from Russia where a dedicated ministerial department (Ministerial department of Emergencies) has been established to oversee all activities related to how the country deals with emergency and disaster situations. The placement of the disaster risk management function in Russia enables the country's political leadership to take full responsibility for the implementation of the function and this as shown in previous chapters is vital for the management of disaster risks in any country. This placement is also essential for the effective integration of DRR in national multi-sectoral planning in the country. The identification of key priorities for DRR in Russia assists all role players in the

country to better focus their efforts and resources thereby resulting in a systematic and coherent approach to the management of disaster risks. These priorities also support effective integration of DRR in planning initiatives and South Africa can learn from this approach in order to enhance the implementation of disaster risk management legislation by all role players.

This section has presented discussion on the disaster risks facing Russia, regulatory and institutional systems adopted by the country to manage its disaster risks as well as some strategies to integrate DRR in planning and development initiatives, the next section explores similar aspects within the Indian environment.

7.3.6   India

India is shaped by its scale and is the world's second most populated country with over 1.2 billion people, providing more than one in six of the world's people (Hague & Harrop, 2013:50; India, 2016:19). It is also the world's fourth largest economy and the seventh largest country by area (Hague & Harrop, 2013:50). Bounded by the Indian Ocean in the south, the Arabian Sea in the south-west, and the Bay of Bengal the south-east, it shares land borders with Pakistan to the west, China, Nepal and Bhutan to the north-east and Burma and Bangladesh to the east (India, 2016:19).

7.3.6.1   An overview of disaster risk dynamics in India

India, due to its physiographic and climate conditions is one of the most disaster prone countries of the world (India, 2016:20; UNDP, 2002:4). Floods, droughts, cyclones, earthquakes, landslides, avalanches and forest fires are recurrent phenomenas in India (India, 2008:xix; India, 2016:28; UNDP, 2002:4). While 58.6% of the landmass is prone to earthquakes from moderate to very high intensity, over 40 million hectares (12% of land) is prone to floods and river erosion and 68 % of the cultivable area is vulnerable to droughts while mountainous areas are prone to landslides and avalanches (India, 2016:20; Yadav, 2011). India is also prone to disasters induced by anthropogenic hazards such as fires, road accidents, maritime accidents and air accidents (UNDP, 2002:4; Yadav, 2011). Heightened vulnerabilities to disaster risks can be related to expanding population, urbanization and industrialization, development within high-risk zones, environmental degradation as

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well as climate change (Yadav, 2011). This observation is also shared by the NDMP (India, 2016:29) which states that the country is prone to disasters due to a number of factors which includes adverse geo-climatic conditions, topographic features, and non-scientific development practices.

Furthermore, India is among the countries that are most threatened by climate change, with experts warning that rising temperatures will lead to more floods, heat waves, storms, rising sea levels and unpredictable farm yields (World Bank, 2008:10). Some of the most important likely climatic effects are:

i.   Temperatures are projected to increase by 3-4 degrees by 2100 with warming widespread across all parts of the country but more pronounced in the north;

ii.   Rainfall will increaser, but it will also rain on fewer days of the year in some parts of the country;

iii.   Extreme weather events such as rainstorms, floods and heat waves will become more common; and

iv.   Spatial shift in the pattern of rainfall towards the already flood-prone coastal area (World Bank, 2008:10).

In the context of human vulnerability to hazards, the economically and socially weaker segments of the population are mostly affected (India, 2016:20; Yadav, 2011). Among the groups most vulnerable are the elderly persons, women, children orphaned on account of disasters as well as people with disabilities (Yadav, 2011). Within the context of South Asia where poverty, deprivation and death due to disasters are common, India remains the worst affected country. In India, between 1988 and 1997, disasters killed 5116 people and affected 24.79 million every year. Studies reveal that 21 out of 32 states and central territories are reported to be disaster prone in the country (Yadav, 2011:2).

This section has presented an overview of India's disaster risks and from this discussion it is evident that India is one of the most disaster prone countries. Bearing this in mind, the next section examines the regulatory and institutional systems that

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India has established to reduce its vulnerability to disasters with a view to minimise fatalities and disruption of livelihoods.

7.3.6.2 *Legislative framework and institutional arrangements for DRR in India*

Disaster Management in India has gone through what many would characterise as a paradigm shift. This paradigm shift was premised upon a sound legal and institutional framework.

i. Legislative and policy framework

The national vision for disaster management is to make India disaster resilient, achieve substantial DRR and significantly decrease the fatalities and losses in livelihoods, and assets (economic, physical, social, cultural and environmental) by maximising the ability to cope with disasters at all levels of administration as well as among communities (India, 2016:2). This view is echoed by Yadav (2011:51) who posits that the vision is to build a safer and disaster resilient India by developing a holistic, proactive, multi-hazard and technology driven strategy for disaster management. The primary legislative instrument for disaster risk management in India is the Disaster Management Act of 2005 (India, 2008; Yadav, 2011:51). This Act makes provision for the requisite institutional mechanism for formulating and monitoring the implementation of disaster management plans, ensuring measures by government for preventing and mitigating the effects of disasters and for undertaking a holistic, coordinated and prompt response to any disaster situation (Yadav, 2011:51). Section 11 of the DM Act makes it mandatory to prepare a National Disaster Management Plan (NDMP) for the whole of India (India, 2005). The National Executive Committee (NEC) is responsible for the preparation of the NDMP in consultation with state governments and expert bodies or organisations in the field of disaster management (India, 2005). It is worth noting that the NDMP outlines (1) measures to be taken for the prevention of disasters, or the mitigation of their effects, (2) measures to be taken for the integration of mitigation measures in the development plans, (3) measures to be taken for readiness and capacity building to effectively respond to any threatening disaster situations or disaster and (4) roles and

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responsibilities of different ministerial departments or departments of the Government of India (GoI) in respect of measures specified in 1-3 above (India, 2005).

The NDMP recognises that effective disaster management necessitates a comprehensive framework encompassing multiple hazards (India, 2016:2). Furthermore, the NDMP seeks to minimise ambiguity in the responsibility framework and thus outlines who is responsible for the different stages of disaster management (India, 2016:2). In essence, the NDMP provides a robust disaster management framework covering scope of work and roles and responsibilities of the various multi sectored agencies necessary to ensure effective mitigation, improved readiness and mobilisation of resources (India, 2016:2). While the NDMP deals broadly with disaster management for the entire country, the hazard specific nodal ministerial departments and departments remain responsible for the preparation of detailed disaster management plans which outlines how each of them will contribute to the national efforts across all phases of managing a disaster (India, 2016:2). In this regard, it can be argued that the NDMP provides an over-arching planning framework for disaster management in India which must be reviewed and updated annually (India, 2016:2).

According to the discussion above and in line with the mandate given in the Disaster Management Act and National Disaster Management Policy taking into account the country's commitment towards the Sendai Framework for DRR, the NDMP (India, 2016:4) has the following broad objectives:

a.   Improve understanding of disaster risk, hazards and vulnerabilities;

b.   Strengthen disaster risk management at all levels of government;

c.   Invest in DRR for resilience through structural, non-structural, financial measures and capacity development;

d.   Enhance disaster readiness for effective response;

e.   Promote "Build Back Better" in recovery, rehabilitation and reconstruction;

f.   Prevent disasters and achieve substantial reduction of disaster risk and losses in lives, livelihoods, health and assets;

g. Increase resilience and prevent the emergence of new disaster risks and reduce existing risks;

h. Promote the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures to prevent and reduce hazard exposure and vulnerabilities to disaster;

i. Empower local authorities and communities as partners to reduce and manage disaster risks;

j. Strengthen scientific and technical capabilities in all aspects of disaster management;

k. Capacity development at all levels to effectively respond to multiple hazards and for community-based disaster management;

l. Provide clarity on roles and responsibilities of various ministerial departments and departments involved in different aspects of disaster management;

m. Promote the culture of disaster risk prevention and mitigation at all levels; and

n. Facilitate the mainstreaming of disaster management concerns into developmental planning and processes.

The approach adopted by India in its 2016 NDMP incorporates, for each hazard, the four priorities of the Sendai Framework into the framework for DRR under five thematic areas for action (1) Understanding risk (2) Inter-agency coordination (3) Investing in DRR (structural measures) (4) Investing in DRR (non-structural measures) and (5) Capacity development (India, 2016:31-32). While the NDMP has adopted an action oriented approach which clearly outlines the responsibilities of central and state agencies in line with the five thematic areas, it also sets out the short (5 years), medium (10 years) and long-term (15 years) measures that must be completed by all key role players to reduce disaster risks (India, 2016).

In addition to the Disaster Management Act, 2005, India adopted a national policy on disaster management in 2009. The national policy recognises the multi-sectoral

nature of the function and in view of this, suggests a multidisciplinary approach for DRR consisting of the following (India, 2016:31):

a.   Integrating risk reduction measures into all development projects;

b.   Initiating mitigation projects in identified high priority areas through joint efforts of the central and state governments;

c.   Encouraging and assisting state level mitigation projects;

d.   Paying attention to indigenous knowledge on disaster and coping mechanisms; and

e.   Giving due priority to the protection of heritage structures.

This discussion has revealed that India has a robust and modern legislative framework which forms a sound basis for all its DRR activities. This legislative framework makes it mandatory for the country to prepare a NDMP which provides an over-arching planning framework for disaster management in India while covering scope of work and roles and responsibilities of the various multi-sectoral agencies necessary to ensure effective mitigation, improved readiness and mobilisation of resources. With this in mind, the next section presents an analysis of institutional arrangements for DRR in India.

ii.   Institutional arrangements for DRR in India

The Disaster Management Act provides for the establishment of the National Disaster Management Authority (NDMA) which is headed by the country's Prime Minister in order to ensure political commitment and ownership (India, 2008:xix; Manyena *et al*., 2013:1790). While the Ministerial department of Home Affairs is responsible for overall coordination of disaster management in the country, the Cabinet Committee on Security (CCS) and the National Crisis Management Committee (NCMC) are the primary committees responsible for top-level decisions within disaster management (India, 2016:11). Figure 7.3 provides a schematic view of the basic institutional structure for disaster management at the national level.
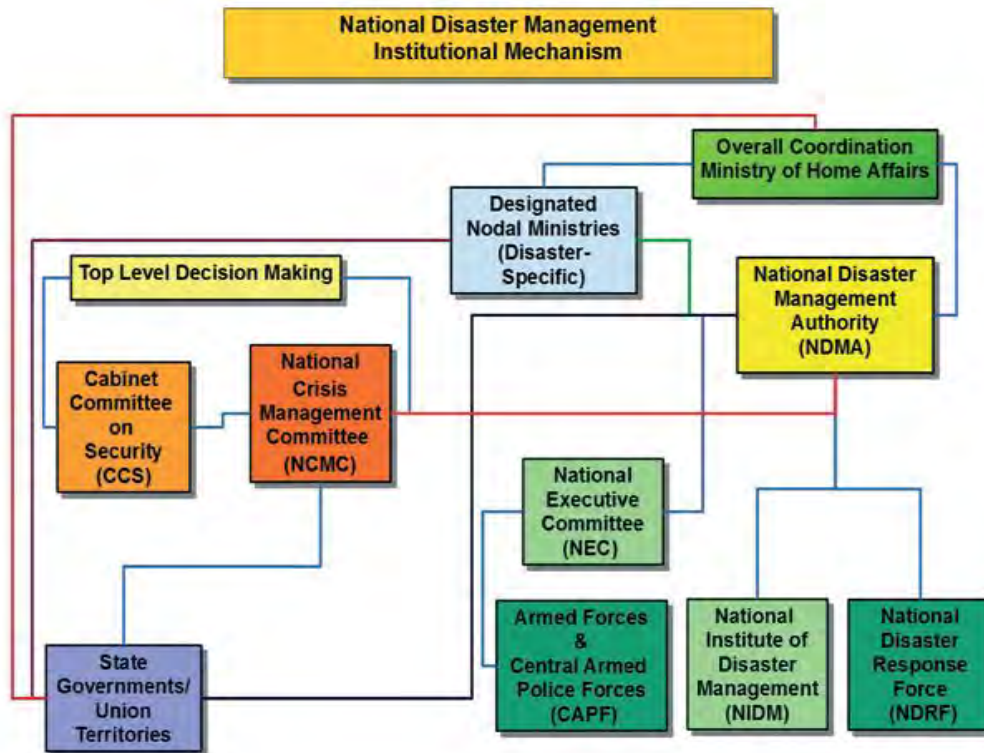
Figure 7.3: Basic institutional structure for disaster management at the national level (adapted from India, 2016)

It is important to note that Figure 7.3 does not imply a chain of command but rather shows institutional pathways for coordination, decision-making and communication for disaster management (India, 2016:11). Having outlined the institutional machinery of disaster management in India, Table 7.4 provides a brief description of the composition and primary duties of the key national-level decision-making bodies for disaster management:

Table 7.4: Key national-level decision-making bodies for disaster management

Name	Composition	Vital role
Cabinet Committee on Security (CCS)	Prime Minister; Minister of Defence; Minister of Finance; Minister of Home Affairs and Minister of External Affairs	Evaluation from a national security perspective if an incident has potential security implications; Oversee all aspects of readiness, mitigation and management of Chemical, Biological, Radiological and Nuclear (CBRN) emergencies and of disasters with security implications.

Name	Composition	Vital role
National Crisis Management Committee (NCMC)	Cabinet Secretary (Chairperson); Secretaries of Ministerial departments or Departments and agencies with specific disaster management responsibilities	Oversee the command, control and coordination of disaster response; Give direction to the Crisis Management Group as required; Give direction for specific actions to face crisis situations.
National Disaster Management Authority (NDMA)	Prime Minister (Chairperson); Members (not exceeding nine, to be nominated by the Chairperson)	Lay down policies for disaster management; Approve the national disaster management plan; Approve plans by the Ministerial departments or Departments of the Government of India in accordance with the national plan; Recommend provision of funds for the purpose of mitigation
National Executive Committee	Union Home Secretary (Chairperson); Secretaries in the Ministerial departments or Departments of Agriculture, Atomic Energy, Defence, Drinking Water and Sanitation, Environment, Forest and Climate Change Finance (Expenditure), Health and Family Welfare, Rural Development, Science and Technology, Space, Telecommunications, Urban Development, Water Resources, etc Secretaries in the Ministerial department of External Affairs, Earth Sciences, Human Resources Development, Mines, Shipping, Road Transport and Highways. NDMA are special invitees to the meetings of the NEC.	To assist the NDMA in the discharge of its functions; Preparation of the National Disaster Management Plan (NDMP); Monitor the implementation of the NDMP and the plans prepared by the Ministerial departments or Departments; Ensure compliance of the directions issued by the Central Government; Coordinate response to disasters

Name	Composition	Vital role
National Disaster Response Force	Specially trained force headed by a Director-General and structured like para military forces for rapid deployment	Provide assistance to the relevant state government or district administration in the event of an imminent hazard event or in its aftermath.
National Institute of Disaster Management (NIDM)	Union Home Minister, NDMA members including Secretaries of various nodal ministerial departments and departments of both central and state governments, heads of national levels scientific, research and technical organisations, eminent scholars, scientists and practitioners.	Human resources development and capacity building for the disaster management sector; Design, develop and implement training programmes; Undertake research; Formulate and implement a comprehensive human resources development plan; Develop educational materials for dissemination and Promote awareness generation.

Source: India (2016)

iii. Role of Ministerial departments

The ministerial department of Home Affairs is the nodal ministerial department for all disasters except a few specific types of disasters for which the concerned ministerial departments have the nodal responsibilities for management of the disasters (India, 2008:16). The nodal ministerial departments form part of the National Crisis Management Committee. Table 7.5 below shows the nodal ministerial departments for the different types of disasters in India:

Table 7.5:   Type of Disaster and the Central Nodal Ministerial department

Civil aviation / air accidents	Ministerial department of Civil Aviation
Biological disasters	Ministerial department of Health and Family Welfare
Chemical and industrial disasters	Ministerial department of Environment, Forests and Climate Change

Drought/ hailstorm/cold wave and frost/pest attack	Ministerial department of Agriculture and Farmers Welfare
Flood	Ministerial department of Water Resources
Earthquake	Ministerial department of Earth Sciences
Tsunami	Ministerial department of Earth Sciences
Nuclear accidents inside or outside the country which pose health of other hazards to people in India	Department of Atomic Energy

Sources: India (2008); India (2016); Yadav (2011)

This discussion has revealed that the highest possible institutional structures India are responsible for DRR activities and programmes. The assignment of hazards to specific ministerial departments enables a clear definition of roles and responsibilities essential for effectively integrating DRR measures in national multi sectored planning. Building on this, the next section explores strategies that are utilized by India to integrate DRR in national multi sectored planning.

7.3.6.3 *Mechanisms/ models for integrating DRR in national multi-sectoral planning in India*

The integration of DRR in national multi-sectoral planning within the Indian context is a legislative requirement in terms of the country's Disaster Management Act, 2005. Section 6 of the Disaster Management Act outlines the powers and functions of the national authority and notable among these duties is the responsibility of the authority to lay down guidelines to be followed by the various Ministerial departments for the purpose of integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and projects (India, 2005). Furthermore, Section 11 of the Disaster Management Act calls for the development of a national plan for disaster management for the country and this plan shall include measures to be taken for the integration of mitigation measures in the development plans (India, 2005).

Furthermore, the development plan of every ministerial department should incorporate elements of DRR (India, 2015:112). These plans need to incorporate

urban planning and zoning, flood proofing, adopting of disaster resilient housing designs and construction of schools, establishment of early warning systems for various hazards, generating community awareness, etc (India, 2015:113). In essence, mainstream DRR within the Indian environment means that risk reduction becomes a practice of all partners involved in development work by institutionalising the process in planning and implementation as well as in policies through the following:

i.   Building institutional capacity to critically examine all development initiatives or projects to ensure that they are structurally safe to withstand the impact of hazards that it would be exposed to;

ii.   Taking into account the hazards and vulnerabilities of the area and making sure that development initiative or project does not increase its vulnerability, rather it aims to reduce existing vulnerabilities; and

iii. Ensuring that relevant development initiative or project has adequate flexibility to respond to disasters that may occur during the course of its implementation (India, 2005:113).

Thus the NDMP of India has identified some of the sectors and national programmes that can specifically integrate DRR features as depicted in Table 7.6:

Table 7.6: **Examples of sectors and national programmes that can specifically integrate DRR features**

Sector	DRR features/ elements to consider during planning
Housing	• Introduce disaster resistant and locally suitable designs and norms for houses in vulnerable regions and habitations; • Based on the area's vulnerability profile, include safety measures in the housing scheme guidelines and ensure compliance; • Utilise the housing scheme as a medium to generate awareness and enhance capacity of locals for safe construction practices for community or house owners; • Consider land-use planning; • Enforce construction of all infrastructure based upon the local hazards and vulnerabilities; • Emphasise disaster risk audit at the stage of preparation of detailed project reports; • Follow NDMA guideline on earthquake safety.

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Sector	DRR features/ elements to consider during planning
Roads	• Ensure that roads are constructed in a manner that it does not lead to landslides, water logging, etc; • Add special component to provide for foot bridges for those villages which may not get connected in the near future as a special package; • Make a special budgetary provision for restoration of roads destroyed by disasters; • Explicitly address DRR concerns while planning for rural roads and identifying core network and accord priority to connect the vulnerable habitations.
Education	• School safety should be part of children education and teacher training curriculum; • Ensure safety of school buildings through a strict techno-legal regime by incorporating provision for school safety in the national building code; • Design and construct schools taking into account the disaster risk profile of the area; • Develop drafts for structurally safe designs for schools; • Make disaster resistant construction methods and technologies a compulsory part of all technical education covering engineering, architecture, etc.
Rural development	• Provide for programmes or schemes incorporating water conservation and water harvesting systems, drought proofing, including afforestation and tree plantation, flood control and protection works; • Ensure rural connectivity to provide all –weather access; • Undertake disaster management of village assets like schools, primary health centres, etc;
Agriculture	• Programmes for better management of water for increased production and productivity by managing tanks, ponds and other water bodies; • Ensure creation of seed reserve and genetic pool in different parts of the country to take care of likely damages due to floods or drought; • Programmes focusing on evolvement of new drought resistant/flood resilient varieties and climate resilient techniques should be incorporated;
Health	• Incorporate structural safety of existing buildings and compliance of structural measures for new buildings; • Provide separate scheme for retrofitting of major government hospitals; • Ensure local disaster management plans are developed in health centres and hospitals; • Ensure that all hospital staff is informed about the possible disasters in the district, likely damages and effects, and information about ways to protect life, equipment and property.
Water and sanitation	• Designate focal points for coordination with other sectors and stakeholders for disaster management purposes; • Prepare sectored disaster management plans at national and sub-national levels and ensure their implementation;

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Sector	DRR features/ elements to consider during planning
	• Take action to protect drinking water systems so that sustained water supply can be ensured during floods and other disasters; • Identify flood-prone areas and ensure efficient management of flood forecasting and warning centres and improve procedure of flood forecasts and intimation to appropriate authorities; • Establish systems for keeping watch on infrastructure and protection works and take steps for strengthening of protection works before the flood season.

Sources: India (2014); India (2015)

Like most countries, India prepares five-year plans and the tenth Five Year Plan (2002-2007), which was prepared in the backdrop of Orrisa super cyclone, Gujarat earthquake and the end of the International Decade of Natural Disaster Reduction (IDNDR) for the first time, recognised disaster management as a development issue (India, 2006:3). The tenth Five Year Plan documented had a detailed chapter on disaster management which provides guidelines for DRR into development planning (India, 2002:31). The plan's prescriptions on disaster management can be classified broadly into three categories namely, (1) policy guidelines at the macro level that would inform and guide the preparation and implementation of development plans across sectors, (2) operational guidelines for integrating disaster management practices into development, and (3) specific developmental schemes for prevention and mitigation of disasters (India, 2006:4). At an operational level, the plan recognised that DRR should be built into development planning through the introduction of a rigorous process of vulnerability analysis and risk assessment, maintaining comprehensive databases and resource inventories at all levels as well as developing infrastructure for mitigation planning (India, 2006:4). In essence, the fundamental message from the plan is that the design of development projects should take DRR within its ambit, otherwise the development ceases to be sustainable and eventually causes more hardship and losses to the country (India, 2002:202). It is however, important to note that this plan was developed prior to the promulgation of the Disaster Management Act of 2005 and the subsequent establishment of the NDMA.

With regard to the preparation of the eleventh plan (2007-2012), the Indian Planning Commission (IPC) took this matter further and constituted a Working Group on

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Disaster Management (WGDM) (India, 2006:i). The Terms of References (TOR) of the WGDM included (1) examining the manner in which measures for DRR, readiness and capacity building should be enhanced and integrated into the development plans of the central and sub-national (states), (2) drawing up guidelines that must be followed by the IPC while consideration approval to programmes and projects in order to ensure integration of DRR principles in planning and plan implementation and (3) developing guidelines for ensuring that appropriate financial provisions for disaster management are built into the cost estimates (India, 2006:i). While the WGDM reflected comprehensively on disaster management issues and concerns, it made the following key recommendations in line with the three TORs:

Table 7.7: **Recommendations of the WCDM for the eleventh five year plan (2007-2012)**

Term of Reference	Recommendations
To examine the manner in which measures for disaster mitigation, readiness and capacity building should be enhanced and integrated into the development plans of Central and State governments	a. Mainstreaming DRR into the development planning process essentially means looking critically at each activity that is being planned, not only from the perspective of reducing the vulnerability of that activity, but also from the perspective of minimizing that activity's potential contribution to the hazard. Every development plan of each Ministerial department should incorporate elements of impact assessment, risk reduction and the do no harm approach.
	b. There is a need to identify and establish appropriate institutional arrangements for mainstreaming DRR. A major challenge is to develop the skills, capacities and tools necessary to change the current focus on disaster response to one of DRR.
	c. Possible steps by Ministerial departments concerned: the ministerial departments of Rural Development, Urban Development, Environment and Forests, Science and Technology, Water Resources, etc should identify their development schemes that can be directly linked with DRR.
	d. In order to address the issue of earthquake safety, actions that lead to improvement of construction on the ground need to be initiated.
	e. Efficient disaster management demands data in useable form and this demand varies from situation to situation.
	f. The Jawaharlal Nehru National Urban Renewal Mission envisaging an investment of Rs.55,000 crores, covering 63 cities, inter alia, provides a great opportunity for improving safety of cities from hazards.

	g. Scientific assessment of development efforts and its impact in any given hazard zone, would require that the projects must relate to large scale single or multi-hazard maps and micro-zonation studies.
	h. The Survey of India will need to be entrusted with the responsibility of generating large scale maps which will form the basis for disaster management studies.
	i. Allocation of plan funds to State Governments for schemes for hazard identification and risk assessment will need to be given priority once they have prepared the project paper, completed preliminary work and details of the scheme.
Drawing up guidelines that must be followed by the IPC while consideration approval to programmes and projects in order to ensure integration of DRR principles in planning and plan implementation.	The WGDM recommends a set of guidelines to assist the Planning Commission in appraisal of projects and schemes on Disaster Management for allocating funds. These guidelines are: a. The guidelines are broad and generic and not disaster or theme specific; b. Conceptualisation of hazard scenarios and associated vulnerability and risk assessments in a given situation will necessarily have to depend on whatever maps and information is available at this point in time; c. Master Plans and building and land use regulations and guidelines, although at different levels of evolution in different parts of the country, will apply until superseded by their revised and updated versions; d. The planning and designs of disaster mitigation features and elements will have to depend on the National Building Code of India; The NDMA is in the process of making disaster/theme specific guidelines and action plans and these must be dovetailed into the set of guidelines being proposed. **The guidelines are:** a. proposed project or scheme must – • be need based and demand driven; • fall within the high priority bracket, linked with the development plan of the area; • have well stipulated goals, clearly identified stakeholders and beneficiaries; • be fully backed with analyses of risks and quantified benefits in terms of disaster safety and • clearly reflect implications of not taking up the project in terms of disaster related risks, environmental protection as well as economic development.

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	b. priority is to be given to projects/schemes located in well-known disaster hotspots and multi-hazard prone areas/districts recognised by the NDMA if these are related to hazard risk mitigation project.
	c. The project or scheme should be based on a detailed hazard and risk assessment and where necessary, required environmental clearance must also be taken.
	d. The reliability of hazard, vulnerability and risk assessments will depend upon the quality of maps and other investigational data.
	e. Projects or schemes which yield multiplier effect for the greatest good of the largest number will deserve priority.
	f. Project merit rating should also depend on the following factors: • Breaking new ground in terms of scientific, technological or management innovation, including people's participation; • Delivering best practices for others to emulate; • Choice of appropriate technology; • Employment generation; • Sustainable capacity building; • Pro-active engagement of communities and spreading culture of safety in communities; • Since disasters do not respect boundaries, projects of interest to two or more Districts or States may score over those yielding localised benefits.
	g. These guidelines could also be made mandatory for the State Disaster Management Authority to adhere to.
To develop guidelines for ensuring that appropriate financial provisions to provide for disaster management are built into the cost estimates of programmes and projects	a. It is important that a certain portion of the Plan funds is allocated for use for schemes or projects which directly or indirectly add to the efforts of disaster management. It is suggested that 2% of plan funds both of Central Ministerial departments as well as State Governments are exclusively utilised for this purpose.
	b. As far as new development projects are concerned, additional cost, if any, on account of disaster mitigation related features will be a part of the new project cost in future.

Source: India (2006)

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7.3.6.4 Challenges and opportunities for integrating DRR in national multi-sectoral planning

The discussion on India's disaster risk profile, legal and institutional systems as well as strategies or models to integrate DRR in national multi-sectoral planning has revealed that while India is prone to a variety of hazards due to its physiographic and climatic conditions, it also has robust and comprehensive regulatory and institutional frameworks to manage these hazards effectively. India's national policy for disaster risk management clearly articulates the vision of building a disaster resilient country, achieve substantial DRR while significantly decreasing losses to lives, livelihoods and assets. The Indian Disaster Management Act requires the preparation of a national disaster risk management plan which must outline the measures to be taken for the prevention of disasters or the mitigation of their effect, measures to be taken for the integration of mitigation measures in development plans and identify the roles and responsibilities of different ministerial departments of the Government of India relating to disaster risk management.

With regard to institutional arrangements, India's disaster risk management authority is headed by the Prime Minister and this has significantly enhanced political ownership and accountability. The allocation or assignment of a Ministerial department to manage a specific hazard is essential for effective coordination and ownership by major departments. The examples of the roles and responsibilities of the various sector departments indicated in Table 7.5 revealed that each ministerial department has been assigned specific responsibilities and this minimizes duplication which is wasteful and costly. With regard to the interface between DRR and national strategic long term planning, India recognises that DRR should be built into development planning through the introduction of robust vulnerability analysis and risk assessment. The establishment of a working group on disaster risk management which specifically gives priority to how to integrate DRR measures and strategies into development is a good practice that South Africa can learn from.

Having dealt with India, the following section turns attention to the last country within this block, China. Similar to the other three countries, China's DRR system will be examined. Firstly, this will start with an overview of the country's disaster risk profile. Secondly, regulatory and institutional frameworks and thirdly an analysis of strategies

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or models that China has put in place to integrate DRR in national multi-sectoral planning.

7.3.7   China

China is located in south east Asia along the coastline of the Pacific Ocean with a total area covering about 9.6 million square kilometres and a coastline of 18,000 kilometres (IFRC, 2012b:7). From an administrative point of view, China is divided into 28 provinces and five centrally governed cities including Beijing, Tianjin, Shanghai and Chongqing as well as two special administrative regions i.e. Hong Kong and Macau (IFRC, 2012b:14). In the next section, an overview of China's disaster risk profile is presented.

7.3.7.1   An overview of disaster risk dynamics in China

China is prone to almost all natural hazards (except volcanoes) due to its vast territory, complicated weather and geographical conditions (IFRC, 2012b:7; Kang, 2015:23; Lixin *et al*., 2012:295; Shi *et al*., 2007:2; Wang *et al*., 2011:10; Zou & Yuan, 2010:24). These hazards induce serious losses related to loss of lives, property and livelihoods and while thousands of people die annually, approximately 200 million people are affected by disasters every year (China, 2006:1; Lixin *et al*., 2012:295). This assertion is supported by Wei *et al*. (2012:642) who argue that China, which stretches across a vast area with complicated natural conditions and a significant monsoon climate, is a country severely affected by various natural disasters with high frequency and wide distribution. There are five main natural disaster categories threatening China: flood, drought, earthquake, typhoon and land- or mudslides. The losses caused by these five main natural disasters come up to 80-90% of the annual disaster loss total (IFRC, 2012b:7; Shi *et al*., 2007:4). While droughts mainly occur in North China Plateau in spring and autumn, the floods are prevalent in the South mainly occur in the seven large river basins, especially in the middle and lower reaches of Yangtze River and Huaihe River in summer and autumn (Lin *et al*., 2013:59; Shi *et al*., 2007:4). Wei *et al*. (2012:643) summarise the disaster risk profile of China succinctly when they observed that disasters happened nearly every year, mostly droughts in the North and floods in the South.

In most arid and semiarid regions of China, drought has caused serious impacts on agriculture and livestock production systems and has led to a deterioration of the ecological environment (Lin *et al*., 2013:59). The heavy agricultural losses caused by droughts have become one of the major obstacles to China's regional development (Lin *et al*. 2013:59). Due to China's geographic environment, the disaster risk profile has the following key characteristics: (1) multiple natural hazards (2) high frequency of hazard occurrence (3) significant regional differentiation (4) seasonal characteristics and (5) severe disaster losses (China, 2006:1; Feng, 2005:1-2). The continuous and rapid development of the country's economy coupled with expansion of the production scale and accumulation of social assets have resulted in increased losses from disasters (Lixin *et al*., 2012:296). In addition to natural hazards, China also suffers significant losses of lives, property and livelihoods due to industrial accidents and in 2005 around 717 900 industrial accidents occurred killing 127 100 persons leading to 89 billion RMB direct economic loss (Shi *et al*., 2007:5).

Like most countries in the world, disaster risks within China are impacted upon by climate change. Global climate changes, rapid domestic economic development, and China's accelerating urbanisation process have exerted pressure on China's resources, environment, and ecology, resulting in an ever more complex and daunting situation of natural disaster prevention and management (Jiang, 2013:101). This viewpoint is supported by the IFRC (2012b:8) who reiterate that the risks of extreme weather phenomena are increasing due to climate change. Although China's exposure to natural disasters has increased in recent years, effective DRM has figured prominently in Chinese governance throughout its extended history (Zhang *et al*., undated:1). With this in mind, the next section explores the legislative framework as well as institutional arrangements for DRM in China.

7.3.7.2 *Legislative framework and institutional arrangements for DRR in China*

China acknowledges significant importance to legislation regarding DRR and has enacted a numbers of laws and regulations as will be demonstrated in the following discussion.

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i.   Legislative and policy framework

According to Lixin *et al.* (2012:301), a clear legal framework is the foundation for DRR. It is with this in mind that Zou and Juan (2013:26), assert that China acknowledges great importance to legislation regarding disaster DRR and since the early 1980s, has enacted more than 100 laws and regulations relating to the prevention and mitigation of disasters. China has instituted, promulgated and enforced laws and regulations as part of forward movement to phase in a legal framework for disaster reduction (Lixin *et al.*, 2012:304; Wei *et al.,* 2012:659; Zou & Yuan, 2013:25*).* This viewpoint is supported by the IFRC (2012b:2) in their study of law and regulations for DRR in China. They noted that the legislative and institutional framework for the function is diverse and cut across a number of legal documents. In short, there is no single and unified law on disaster management which covers prevention, response and risk reduction (IFRC, 2012b:2; Lixin *et al.*, 2012:304).

The existing laws and regulations are all about single aspects of DRR and can be characterised as hazard specific, such as the "Law of the People's Republic of China on Protecting Against and Mitigating Earthquake Disasters", the "Flood Control Law of the People's Republic of China", the "Law of the PRC on Safety in Mines", the Law on "Desertification Prevention and Transformation", Regulation on the "Prevention and Control of Geologic Disasters", Fire Protection Law" (Lixin, 2012:301-302; Wei *et al.*, 2012:660). These laws and regulations are enforced by different disaster management departments (IFRC, 2012b:2; Lixin *et al.*, 2012:304). In this regard, Wei *et al.* (2012:661) argued that the creation of an integrated law on DRM is an urgent matter in order for the country to carry out effective DRR. Notwithstanding the absence of a unified and integrated legislation for DRR, China has the Emergency Response Law which deals with various aspects related to the prevention and reduction of occurrence of emergencies, controlling, mitigating and eliminating the social harm caused by disasters. While China has a variety of DRR laws and regulations, a study by the IFRC (2012b:3) revealed these laws do not provide detailed provisions for disaster readiness and response. Building on this discussion, the next section examines China's DRR institutional machinery.

ii.   Institutional framework for DRR in China

China's unique political system has inevitably impacted upon its disaster management system (Zhang *et al.*, undated:2). Drawing from this political influence, China has adopted a natural disaster risk management regime featuring central leadership, departmental responsibility and graded disaster administration with major responsibilities on local authorities (Feng, 2005:3; Wang cited in Lixin *et al.*, 2012:296). This view is supported by Zou and Yuan (2013:25) who argued that China adopted a hierarchical management system for DRR, with the central government as the top leader and various government departments sharing various responsibilities. In essence, the operational mechanism of DRR system in China can be summed up as (1) unified leadership, (2) graded response, (3) functional division and (4) centrality of local government supported by national government. While unified leadership means that the government sets the regulatory and policy framework and is responsible for overall planning and coordination of measures to reduce disaster risks, graded response implies that that the national government is responsible for major disasters, provincial government focuses on large scale whereas local government focus on all minor and medium disasters (Lixin *et al.*, 2012:296).

Functional division means that relevant sector departments are responsible for DRR work in line with their respective duties and mandates (IFRC, 2012b:24; Lixin, 2012:296). This functional division resonates with China's philosophy of a "single style" DRR system in which management of a specific disaster resides with a particular sector department while broadly in the phases of disaster cycle, different departments take responsibilities in line with their functions (Lixin, 2012:296). In this regard, it can be argued that China recognizes the multi sectored and multi-disciplinary nature of the function and the fundamental role that sector departments play in the creation of a robust and responsive DRR system for the country.

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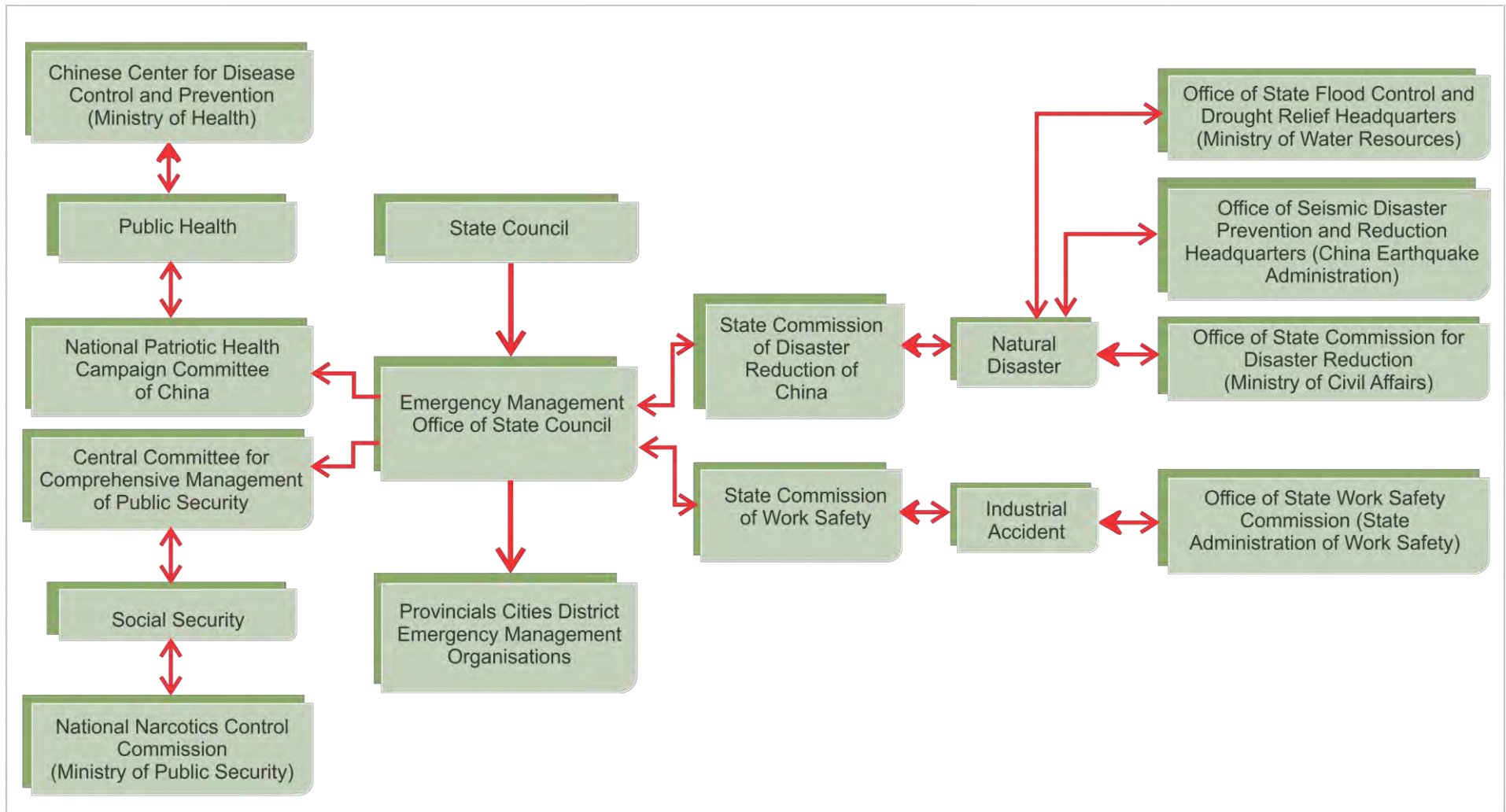
Figure 7.4: DRM organisation system of China (adapted from Shi *et al*., 2007)

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China has developed a DRR system with characteristics in line with the country's realities and based on its past experiences (Lixin, 2012:296; Zou & Juan, 2013:25-26). Under the unified leadership of the State Council, the central organs coordinating and organising DRR and relief work are the National Disaster Reduction Committee, the State Flood and Drought Control Headquarters, the State Earthquake Response and Rescue Headquarters, the State Forest Fire Control Headquarters and the National Disaster Control and Relief Coordination Office (Zou & Juan, 2013:27). The China National Commission for Disaster Reduction (CNCDR) is the comprehensive coordinating body for DRR at the level of the central government (China, 2013:101; IFRC, 2012b:21). It is commissioned to research and formulate national disaster reduction guiding principles, policies, and plans; coordinate major national disaster reduction activities; guide localities in their disaster reduction efforts; promote disaster reduction international exchange and cooperation; and to organise and coordinate disaster response and relief work nationwide (IFRC, 2012b:21; Jiang, 2013:101). The CNCDR is composed of 34 organisations including relevant governmental agencies, research institutions and nongovernmental organisations (Jiang, 2013:101).

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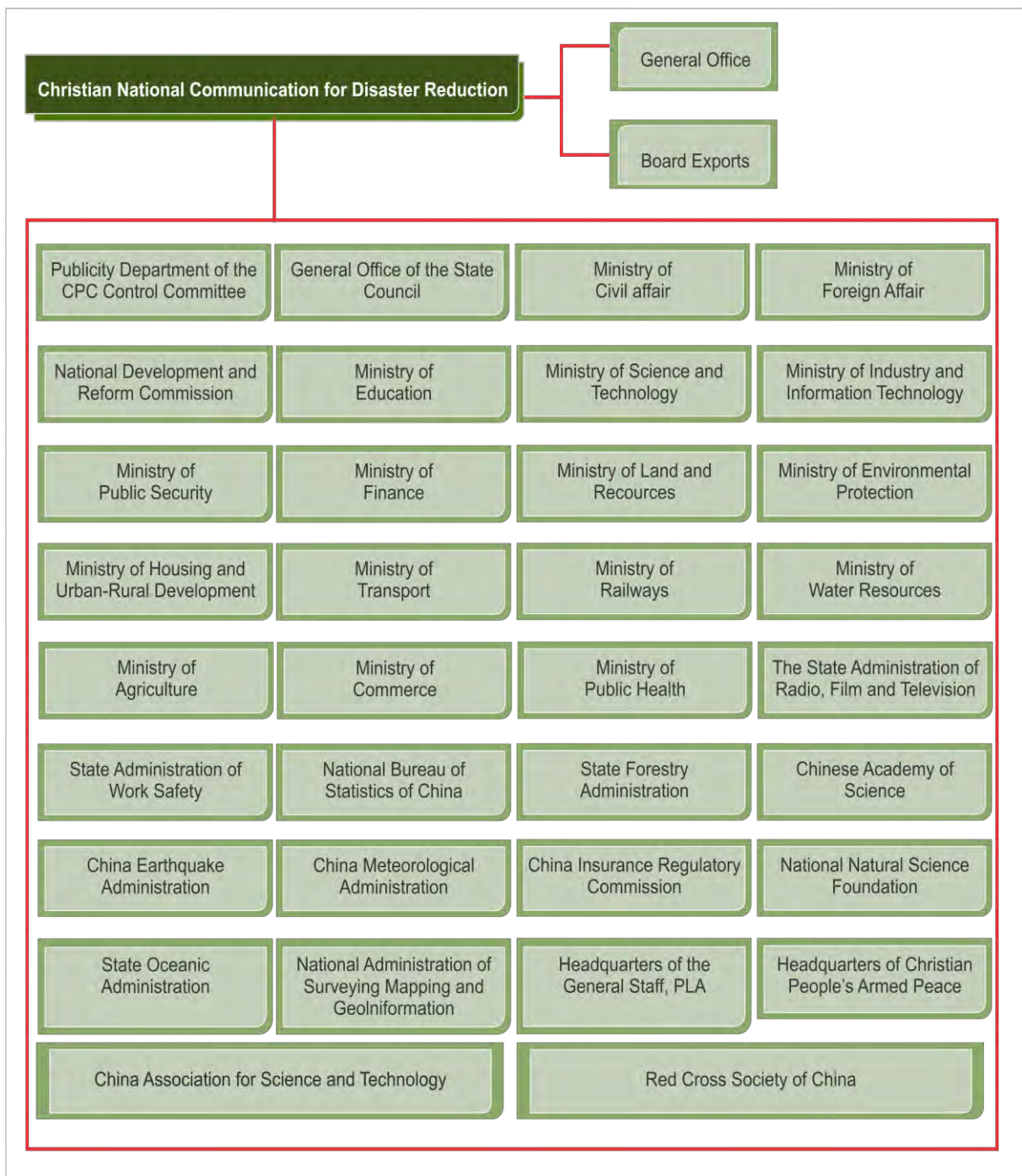
Figure 7.5: China National Commission for Disaster Reduction (adapted from Kang, 2015; Wei *et al*., 2012)

This discussion has revealed that China has strong and robust institutional systems to manage complex disaster risks. Bearing this in mind, the next section presents discussion on mechanisms or models that are utilised by China to integrate DRR in national multi sectored planning.

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7.3.7.3 Mechanisms or models for integrating DRR in national multi-sectoral planning in China

The Chinese government has fully recognised that DRR is critical to the success of sustainable development policies (China, 2006:2). China regards DRR as an important safeguard for the realisation of the overall objectives in national economy (China, 2006). Jiang (2013:101) argues that with regard to DRR, China follows the principle of comprehensive disaster reduction. China integrates DRR work into its overall governance structure, builds capacity mainly in cross-agency collaboration and cross-regional cooperation on multi-hazard comprehensive DRR, plans holistically measures against natural disasters as well as all stages of DRR, leverages resources from all sides and integrates multiple tools such as laws, regulations, market and technology, and strives to reduce life and property losses (Jiang, 2013:101). For years, the Chinese government has consistently incorporated DRR into its sustainable development strategy at the national and local levels (Zou & Juan, 2013:26).

Figure 7.6: Process of integrated DRR in China in the past 25 years (adapted from Jiang, 2013)

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It is clear from the discourse that China has adopted various policy frameworks to support an integrated approach to managing disaster risks. The table below takes this further by highlighting some initiatives undertaken by the China in its endeavour to integrate DRR in socio-economic development planning.

Table 7.8: **Examples of initiatives undertaken by the Chinese government to incorporate DRR in socio-economic development plans are depicted in Figure below:**

Year	Name of initiative	Linkage to DRR
1994	China 's Agenda in the 21st Century	The central government clearly defined the relation between DRR and ecological and environmental protection at the national level, placing as major concerns on its agenda the construction of disaster prevention and reduction system and the reduction of human factors in triggering or worsening natural disasters.
1998	PRC's Disaster Reduction Plan	This plan puts forward the guidelines, goals, main tasks and major measures of disaster reduction work in the form of specialised plans.
2006	Disaster Reduction Action Plan of the PRC (2006-2015)	This Action Plan has the following strategic goals (a) integrate disaster risks into China's 11th five-year development plan and stress the importance of DRR and vulnerability reduction, (b) to promote the establishment and capacity building of local disaster reduction organisations and facilitate disaster reduction, (c) to promote community disaster reduction, enhance community contingency reserve, responsive measures and restoration plans and carry through in practice and (d) to timely apply various disaster reduction measures to high risk zones. In terms of this Action Plan, local government should formulate medium and long term DRR goals and plans on the basis of local conditions and integrate them into local development plans. With regard to public infrastructure, the Action Plan stipulates that disaster risk factors are included in the scheme of infrastructure project planning including design criteria, project examination and approval as well as project implementation. The Action Plan requires that the disaster resistance capabilities of critical public facilities and infrastructure such as schools, clinics, hospitals, water plants, power plants, etc should be strengthened.

Year	Name of initiative	Linkage to DRR
2007	11th Five-year Plan on Comprehensive Disaster Reduction	This explicitly stipulates that local governments should incorporate disaster reduction into their economic and social development plans
2011	National Comprehensive Disaster Prevention and Reduction Plan (2011-15)	This plan explicitly defined the development guidelines, main tasks and main projects of China's disaster reduction work during the 12th Five-year Plan period (2011-2015).

Sources: Jiang (2013); Zou & Yuan (2010)

In 2011, the PRC adopted a National Comprehensive Disaster Prevention and Reduction Plan (2011-2015) with clear defined DRR tasks and targets (Jiang, 2013:101). The Ministerial department of Civil Affairs, the National Development and Reform Commission and the CNCDR were designated to draft, compile and verify the plan. The CNCDR is in charge of the coordination and planning of measures for implementation. According to Jiang (2013:101), the plan stipulates eight development goals to be fulfilled by the end of 2015 as follows:

i.   Determine natural disaster risks in key areas of the country, and initially set up a nationwide information platform for comprehensive disaster reduction and risk management in order to further enhance the capacity in natural disaster monitoring and early warning, statistical analysis of loss data and information services;

ii.   Reduce by a large margin the fatalities in natural disasters of the same intensity and keep the proportion of direct economic loss from disasters to below 1.5% of GDP;

iii. Integrate DRR into national economic and social development plans at various levels and reflect the demands of disaster prevention and reduction in plans of land use, resource management, energy supply, urban and rural development as well as poverty alleviation;

iv.   Ensure disaster affected people receive initial relief and basic subsistence support within 12 hours of natural disasters;

v.   Enhance substantially the awareness of the general public on DRR;

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vi.   Reinforce DRR personnel in scale and knowledge structure;

vii.   Create 5000 national level comprehensive disaster reduction communities, with at least one disaster monitoring person in each urban and rural grassroots community; and

viii. Further improve DRR mechanisms.

The recognition of these eight goals indicates that China's DRR work now has quantifiable assessment criteria which aim to guarantee the quality of plan implementation (Jiang, 2013:102).

7.3.7.4   Challenges and opportunities for integrating DRR in national multi-sectoral planning

The discussion on China's disaster risk profile, legal and institutional systems as well as mechanisms or strategies to integrate DRR in national multi-sectoral planning has revealed that China is prone to almost all natural hazards due to its vast territory, complicated weather and geographic conditions. It has also emerged that since the 1980, China has enacted several legislation regarding DRR. While there is no single unified legislative framework for DRR in the country, China has a diverse set of laws and regulations which can be characterised as hazard specific. Inevitably, the country's institutional framework for disaster risk management has been influenced by China's unique political system and this has resulted in government machinery which features central leadership, departmental responsibility and graded disaster administration with major responsibilities on local authorities.

The establishment of China National Commission for Disaster Reduction, which is the apex body for coordinating DRR and includes research agencies and relevant non-governmental agencies, demonstrates that China recognise the multi-sectoral nature of the function and the importance of strong and robust institutions. It has also emerged that China incorporates DRR into its sustainable development strategy at both national and local levels as outlined in Figure 7.6 and Table 7.8 respectively.

While China is prone to a variety of hazards due to its physiographic and climatic conditions, it also has robust and comprehensive regulatory and institutional frameworks to manage these hazards effectively. China's regulatory and institutional frameworks enables the country to manage disaster risks adequately.

Having outlined the disaster risk profile, regulatory and institutional frameworks and some strategies of integrating DRR in national multi-sectoral planning in each of the BRIC countries, the next section presents a summative analysis of models or mechanisms for integrating DRR in national multi-sectoral planning.

7.4 THE SUMMATIVE ANALYSIS OF MODELS OF MECHANISMS TO INTEGRATE DRR IN NATIONAL MULTI-SECTORAL PLANNING FOR THE BRICS COUNTRIES

An analysis of mechanisms or models for integrating DRR in national multi-sectoral planning within the BRIC countries reveals an interesting picture. This chapter has revealed the general status quo as well as the specific peculiarities within each country regarding integration of DRR in national multi-sectoral planning. The following sections summarise the findings of the analysis with regard to disaster risk profile, legal and institutional arrangements and mechanisms for integrating DRR in national multi-sectoral planning in the BRIC countries.

7.4.1 An overview of disaster risk dynamics in the BRIC countries

An analysis of the disaster risk profiles for the BRIC countries has revealed that these countries are among the most vulnerable to the impacts of disasters globally. The vastness of the territories of all these countries, complex weather and geographic patterns, coupled with huge population expose them to diverse and varied natural and anthropogenic hazards. Like in all countries across the globe, disaster risks are further exacerbated by climate change. The analysis has also revealed that vulnerability to hazards is largely influenced by socio-economic factors with the economically and socially weak segments of the populations bearing the brunt of these hazards. Similar to South Africa, disaster risks in all these countries is also impacted upon by rising urbanisation which result in high population density in

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urban areas and the occupation of environmentally vulnerable areas such as floodplains.

7.4.2 Legislative Framework and institutional arrangements

An analysis of legislative and institutional frameworks revealed that all these countries value the importance of having robust legislation and institutions in order to effectively reduce and manage disaster risks. It was also revealed that most of these countries are currently utilising several legislation and policies to manage disaster risks and that while the national sphere or tier of government (see chapter 6 for a distinction between a sphere and a tier) remains responsible for overall policy development and setting direction, sub-national spheres or levels also have key responsibilities in the implementation of DRR measures. The placement of the DRR function at a national level has also emerged as an important condition in order for a country to better manage its disaster risks. In this regard, it is worth noting that while Russia has a stand-alone ministerial department dealing with emergencies and disasters, India's Disaster Management Act provides for the establishment of a National Disaster Management Authority which is headed by the Prime Minister. Due to its unique political system, China has adopted a system featuring central leadership, departmental responsibility and graded disaster administration with major responsibilities on local authorities.

7.4.3 Mechanisms for integrating DRR in national multi-sectoral planning in the BRICS countries

With regard to integration of DRR measures in national multi-sectoral planning, a country such as India has made significant progress and this can be attributed to the fact that their legislation makes integration of DRR in planning initiatives mandatory. The preparation of a national disaster management plan which provides an overall planning framework also contributes in guiding sector departments to integrate DRR in their line function work within the Indian environment. The preparation of five-year plans in India recognised which disaster risk management as development issue forms a basis to integrate DRR in long-term national planning.

The analysis has also revealed that China regards DRR as an important safeguard for the realisation of the overall objectives in national economy and in view of this has consistently incorporated DRR into its sustai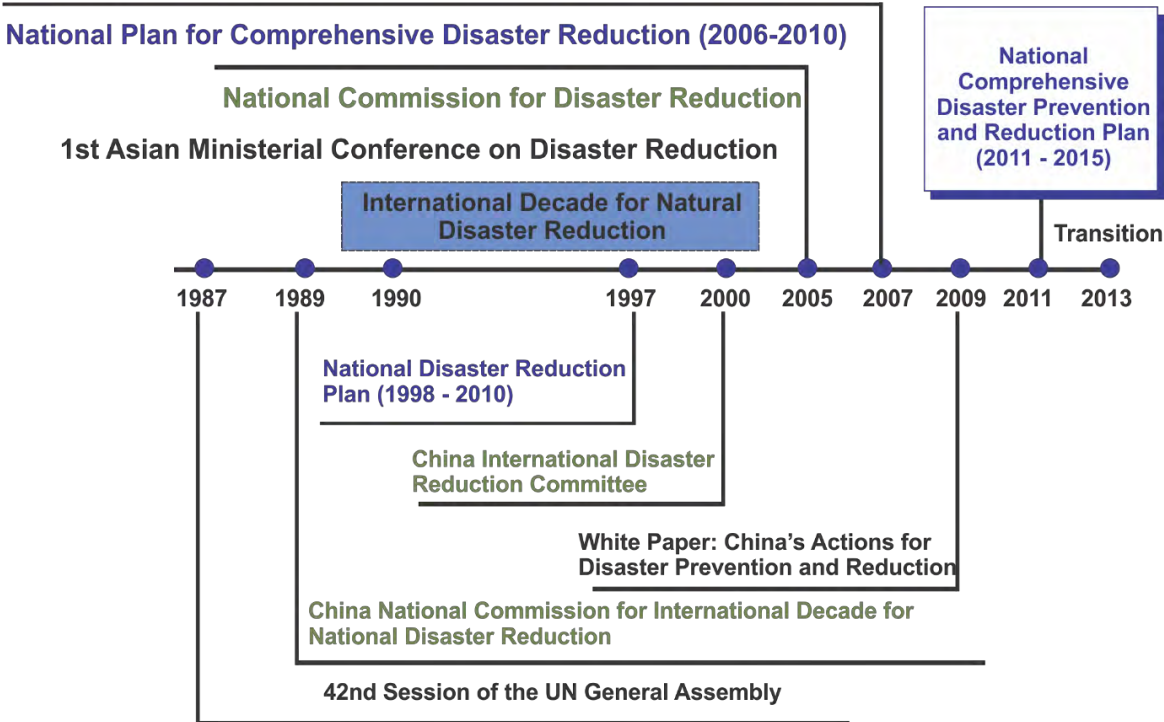nable development strategy at the national and local levels. The development of a flood vulnerability atlas in Brazil which allows the country to identify high risk areas for floods is an important tool to guide integration of DRR in national multi-sectoral planning. Another important lessons that South Africa could learn from particularly taking into account the fact that flooding is one of the three main hazard facing the country as discussed in chapter four.

7.5   CONCLUSION

In addressing the fourth objective of the study, this chapter has provided a critical analysis of existing legislative and institutional systems guiding the implementation of DRR in each country constituting the BRIC block. The results of this analysis revealed that these countries have robust regulatory and institutional systems as basis for effective implementation of DRR. While some countries have stand-alone, comprehensive and unified legislation for DRR such as India, other countries have a variety of diverse and sector based policies and regulations that support the implementation of DRR. The importance of political ownership in ensuring effective implementation of DRR was demonstrated particularly by countries such as India whose national disaster management authority reports to the Prime Minister and is supported by various Cabinet committees.

With regard to integration of DRR in national multi-sectoral planning, it was evident that some countries such as India and China are advanced in the establishment of systems and regulatory frameworks to achieve this. The vulnerability of these two countries to major hazards such as earthquakes and tsunamis necessitates effective integration of measures to reduce disaster risks in planning across all levels of government in order to reduce loss of lives and damage to critical infrastructure due to disasters. Lessons can also be drawn from Brazil's example on how to integrate DRR in sectors such as transport and environment. While the analysis demonstrated the importance of reflecting DRR issues on national development plans of each

countries, it also emerged that the implementation of DRR must be aligned to international instrument guiding the function such as the Sendai Framework for DRR.

The purpose of this chapter was to analyse and examine mechanisms and strategies to integrate DRR in each of the BRIC countries. As already indicated, the findings of the analysis reveal the importance of integrating DRR measures in planning initiatives of the various sector departments. The following chapter, chapter eight, presents the findings of the empirical study.

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A PROPOSED MODEL FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING FOR SOUTH AFRICA: EMPIRICAL FINDINGS

8.1   INTRODUCTION

The preceding chapters provided a comparative analysis of models for integrating DRR in national multi-sectoral planning. The analysis revealed the importance of integrating strategies for reducing disaster risks in socio-economic development plans and initiatives. Chapter 1 indicated that this study applied theoretical and empirical perspectives respectively and while chapters 2 to 7 dealt with theoretical aspects of this research. This Chapter focuses on presenting and discussing the empirical findings. The Chapter commences by briefly outlining the methodology that was utilised for data collection and data analysis. An empirical research was carried out in order to enhance the study and to ensure the realisation of its objectives. The empirical research was undertaken in order to obtain the views and inputs of DRR and strategic planning practitioners about integration of DRR in national multi-sectoral planning within the South African environment.

The Chapter presents the findings of the study that stem from the views and inputs of key informants i.e. DRR and strategic planning practitioners in South Africa. These respondents were selected due to their knowledge and experience on issues related to the topic. As outlined in the Informed Consent **(Annexure D)**, respondents participated voluntarily and willingly and were duly informed of their rights to participate or not participate in the study. To elaborate on the methodology as outlined in chapter 1, various aspects regarding the empirical research will enjoy attention in the next section.

8.2   RESEARCH METHODOLOGY

To give practical meaning to the theoretical perspectives of the study regarding integration of DRR in national multi-sectoral planning and specifically on the feasibility and possible structure of a model to support such integration, inputs were

sought from disaster risk management focal points and related units and strategic or corporate planning practitioners of the various national departments. Inputs were also obtained from relevant academic and research institutions as well as professional bodies operating within the DRR fraternity with a view to garner the perspectives from organisations outside government and to maximise their possible support for the model. Conducting an empirical study was therefore important to gather practical viewpoints on how DRR can be integrated in national multi-sectoral planning in South Africa in order to fully address the objectives of the research.

The research assumed the format of an exploratory and descriptive study using qualitative methods with a view to delve in depth into complexities, relationships, processes and to identify important variables that are necessary for effective integration of DRR in national multi-sectoral planning. The strength of a qualitative approach has been demonstrated for research that it is exploratory and that stresses the importance of context, setting, and participants' frames of reference (Marshall & Rossman, 2011:92). Qualitative research examines the patterns of meaning that emerge from data gathered and such patterns are often presented in the participants' own words (Lunenburg & Irby, 2008:89). Respondents were selected from national sector departments, agencies responsible for DRR, and strategic planning units at both functional or technical, business or senior management and corporate or executive levels (see chapter 3 for levels of strategy within an organisation).

The selection of participants across these three levels enriched the study as those at technical levels grappled with practical strategies and measures that can be put in place to enhance integration of DRR in national planning initiatives of departments while senior, executive and programme managers mainly focused on measures required to institutionalise the integration of DRR within the broader planning framework of government.

8.2.1   Sampling

Purposive sampling (De Vos *et al*. 2005; Marshall, 1996:523; Welman *et al*. 2005:204) was utilised in this study and this enabled the researcher to rely on his expert judgement in selecting units that are representative or typical of the population. With this in mind, preference was given to key informants who on account

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of their experience and position, have adequate information about DRR and its integration in planning initiatives and activities of various government departments. The use of purposive sampling resonates with arguments advanced by Lunenburg and Irby (2008:176-177) who argue that qualitative research utilises sampling techniques that produce samples that are predominantly small and non-random in keeping with its emphasis on in-depth description of participants' perspectives and context. Lunenburg and Irby (2008:177) maintained that when one conduct qualitative research, it is important to purposively select respondents who meet criteria that will provide a sample that is likely to yield the type of information you need to achieve your purpose.

The size of the sample is another important aspect to consider in qualitative research and in this case (as outlined in detail in chapter 1), 19 officials (from practitioner to Senior Managers) involved in DRR from national departments, agencies and organisations were selected and participated through six focus group interviews. The number of focus groups was informed by Morgan (1996:144) who maintain that as a common rule of thumb, most projects utilises four to six focus groups. Krueger, 1994 (cited in Masadeh, 2012:65) argues that focus group research should comprise a minimum of three groups. Furthermore, another nine senior officials from national departments and organisations involved in disaster risk management were selected and interviewed through semi-structured personal interviews.

Thus a total of 28 respondents from 12 key national departments and agencies including departments such as Health, Transport, National Treasury, Cooperative Governance, Agriculture, Forestry and Fisheries, Social Development, Planning, Monitoring and Evaluation, South African Police Services, Rural Development and Land Reform, South African Weather Services and the National Disaster Management Centre participated in the study through focus group interviews and semi-structured personal interviews. Representatives of the African Centre for Disaster Studies, Disaster Management Institute of Southern Africa, and the Gauteng Provincial Disaster Management centre also participated in the study. As discussed in section 5.4, the President must establish the ICDM consisting of Cabinet members involved in the management of disaster risk or the administration of other related national legislation. In this regard, the Framework identified 17 key national

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departments whose Ministers must form part of the ICDM (South Africa, 2005). Thus, as per the Framework, there are 17 national key departments involved in the management of disaster risk and respondents were drawn primarily from these departments.

8.2.2 Focus group and semi-structured interviews

Firstly, focus groups interviews were used as a method to obtain information and viewpoints necessary to develop a model for integrating DRR in national multi-sectoral planning in South Africa. Morgan (1996:130) defined focus groups as a research technique that collects data through group interaction on a topic determined by the researcher. De Vos *et al*. (2005: 300-301) add that focus groups must be used when you want ideas to emerge from the group and when multiple viewpoints or responses are needed on a particular issue. A Research Data Collection Directive **(Annexure A)** was provided in advance to all identified respondents who participated in the focus group interviews with a standardised set of questions in order to enable them to adequately prepare for the sessions. In this study, organisations were selected to participate primarily based on the following reasons:

i. Organisational day-to-day activities overlap with other core DRR activities such as early warning and disaster risk assessments;

ii. Research organisations which from time to time are requested to conduct research related to DRR;

iii. Organisations representing interests of DRR practitioners across the country;

iv. Organisations that provide training on DRR and conduct DRR on a full time basis;

v. Organisations responsible for providing support and oversight on departmental planning activities including issues related to strategic planning.

vi. Organisations or national departments that have established disaster risk management focal points; and

vii. Organisations that play an important role in the management of disaster risks (see chapter 4 and 5).

A request to participate in the study was sent through email with introductory information to all identified sector departments, academic and research organisations involved in disaster risk management in South Africa. Some of the national departments that were invited to participate in the study includes Department of Higher Education, Transport, Health, Rural Development and Land Reform, Human Settlements, National Treasury, Agriculture, Forestry and Fisheries, South African Police Services, Planning, Monitoring and Evaluation, Environmental Affairs, Trade and Industry, Basic Education, International Relations and Cooperation, Water and Sanitation, Public Works, Cooperative Governance, National Disaster Management Centre and the South African Weather Services. With regard to academic and research organisations involved in disaster risk management, the African Centre for Disaster Studies (North West University) Disaster Management Training and Education Centre for Africa (Free State University), Research Alliance for Disaster and Risk Reduction (Stellenbosch University), Disaster Management Institute of Southern Africa were invited to participate in the study.

While some departments and organisations were not able to participate due to competing priorities, a total of six focus group interviews with 19 participants were held comprising departments which play a critical role in DRR in the country. The six focus group interviews included a session that was held with a research and academic organisation which is involved in DRR research, education and training on a day-to-day-basis. The participation of an experienced DRR consultant in one of the focus group interviews has provided perspectives which enriched the study. All the focus group interviews were facilitated or moderated by the researcher.

Thus, there was fair representation of national departments as a total of 28 respondents from 11 key national departments and agencies including departments such as Health, Transport, National Treasury, Cooperative Governance, Agriculture, Forestry and Fisheries, Social Development, Planning, Monitoring and Evaluation, South African Police Services, Rural Development and Land Reform participated in the study through focus group interviews and semi-structured personal interviews.

Representatives of the South African Weather Services, National Disaster Management Centre, African Centre for Disaster Studies, Disaster Management Institute of Southern Africa, and the Gauteng Provincial Disaster Management centre also participated in the study.

Focus groups are generally used as both a self-contained method and in combination with surveys and other research methods most notably individual in-depth interviews (Morgan, 1996). The use of focus groups as well as individual interviews is most common, since both are qualitative techniques (Morgan, 1996). Taking this into account, personal semi-structured interviews (using similar questions as those used in focus group interviews) were also utilised to allow respondents to provide their viewpoints on what the proposed model for integrating DRR in national multi-sectoral planning must address. While a total of six semi-structured interviews were undertaken, two respondents who were unable to be part of the interviews due to work commitments provided written inputs based on the same questions that were used for the personal interviews. The use of semi-structured interviews enabled the researcher to triangulate (Arksey and Knight, 1999) and obtain data from a wide range of different and multiple sources. While Arksey and Knight (1999:25) recognised the disadvantages of triangulation such time consuming and resource implications, they outlined the following advantages:

i.   Can increasing confidence in results;

ii.   Can strengthen the completeness of a study;

iii. Enhances interpretability: one set of data gives a handle to understanding another set;

iv.   The researcher is closer to the research situation, contributing to a more nuanced understanding of the focus of the study; and

v.   Divergence can uncover new issues or processes that can result in turn in the development of new theories, or modification of existing ones.

Five focus group interviews and five semi-structured interviews were recorded and transcribed verbatim. The researcher prepared notes for the focus group and semi-

structured interview sessions that were not recorded verbatim and all these data was initially grouped into core thematic areas and patterns. While the above mentioned sample constituted the body of knowledge which supports the empirical chapter of the study, it has also significantly contributed to the development of a model for integrating DRR in national multi-sectoral planning in South Africa as presented. The fact that both focus group interviews and semi-structured personal interviews participants were constituted of a mixture of junior or technical, senior and executive managers involved in DRR across the various sector departments including researchers and lectures from academic institutions has greatly enhanced the study. As a result, data saturation was reached and the lack of participation by national departments who could not commit to the research would not have had a significant impact on the outcome of the study.

8.3   PRESENTATION OF RESEARCH FINDINGS

This study applied qualitative data collection and analysis methods with the aim to develop a model for integrating DRR in national multi-sectoral planning in South Africa. Specifically, data was analysed using a qualitative descriptive approach and thematic analysis. The conceptual framework of the thematic analysis for both focus group and personal interviews was mainly built upon the theoretical positions of Braun and Clarke (2006). Braun and Clarke (2006:6) defined thematic analysis as a method for identifying, analysing and reporting patterns and themes within data. Franzosi (2004:550) built on this by defining thematic analysis as a method where the coding scheme is based on categories designed to capture the dominant themes present in a text. Stated differently, thematic analysis involves searching across a data set which may include a number of interviews, or focus groups, or a range of texts to find repeated patterns of meaning (Braun & Clarke, 2006:15).

While acknowledging that data analysis is not a linear process but rather a more recursive process, Braun and Clarke (2006:15-28) have identified six phases of thematic analysis which were utilised for this study and usefully summarised in the table below.

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Table 8.1:   **Phases of Thematic Analysis**

Phase	Description of process
Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
Generating initial codes	Code interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing themes	Checking in the themes work in relation to the coded extracts (level 1) and the entire data set (level 2), generating a thematic 'map' of the analysis.
Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Source: Braun & Clarke (2006:15-28)

In this study, while a theme captured something important about the data related to the research question, it also represented some level of patterned response or meaning within the data set (Braun & Clarke, 2006:10). In addition, the importance of a theme was not necessarily dependent on quantifiable measures but rather on whether it captured something important in relation to the overall research question (Braun & Clarke, 2006:10). Thus the themes (which are further broken-down into sub-themes in some instances) that emerged from the discussion are grouped together to form a complete picture of the participant's collective views and experiences as presented in the ensuing sections.

8.3.1   Views of participants regarding DRR

This question was identified as an ice-breaker in order to establish the participant's understanding of DRR. Since the central focus of discussion during the sessions was on DRR, it was thus important to obtain the views of participants through this question on what DRR entails. While all participants agreed that the fundamental objective of DRR is to reduce disaster risks, the respondents affirmed the cross-

cutting nature of the function and raised a number of pertinent aspects or issues which can be summarised as follows:

i.   DRR definition must be consistent with the Sendai Framework of Action;

ii.   Mechanisms for reducing risk can either be formal or informal;

iii.   Measures to reduce disaster risks are either structural (engineering) or non-structural (education and awareness);

iv.   DRR is an important element of planning;

v.   DRR is first of all about making some policy choices. Policy must give legitimacy to DRR, outline the areas of focus as well as the relevant stakeholders who must be involved;

vi.   DRR aims to reduce the possibility of occurrence and if a disaster occurs, to reduce its impacts;

vii.   Risk identification (including during line function work) is an important aspect of DRR;

viii. DRR is part of risk management;

ix.   DRR looks at avoidance first, then mitigation;

x.   DRR is about all activities that will either help communities adapt or mitigate the extent and impact of disasters;

xi.   Government should prioritise planning for disasters through compilation of disaster management plans for various localities;

xii.   Accurate and timeous early warning systems are critical for getting information to communities;

xiv.   There is a linkage between DRR and Environmental Impact Assessment (EIA);

xv.   Awareness raising and capacity building of communities are important;

xvi.   DRR must include build back better for known hazards;

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xvii.   DRR represents a new way of dealing with disasters;

xviii. DRR denotes developmental endeavours to cushion services, infrastructure and the environment against harm from both natural and anthropogenic factors;

xix.   DRR must be tailored to cut across the triple bottom line (social, economic and environmental aspects of development); and

xx.   Efficiency and sustainability are key tenets of DRR.

From the discussion on what DRR entails, the general agreement is that DRR encompasses all measures and activities that are put in place to reduce disaster risks. It is also evident that DRR is a critical component of sustainable development. This is consistent with the UNISDR definition of DRR as presented in section 5.1 of this study. Having broadly outlined what DRR entails, the following section presents the findings of the study in line with the identified thematic areas. The first thematic area deals with the integration of DRR in national multi-sectoral planning as discussed further.

8.3.2   Thematic area 1: Integration of DRR in national multi-sectoral planning

Questions that contributed to the development of this theme were intended to establish the respondents' understanding of DRR as a function that must be integrated in national multi-sectoral planning, the importance thereof as well as the possible mechanisms for such integration. The findings in this theme are grouped into sub-thematic areas as presented below.

8.3.2.1   DRR as a function that must be integrated in national multi-sectoral planning initiatives of national sector departments

On the question of whether DRR as a function must be integrated in national multi-sectoral planning initiatives of national sector departments, all respondents unanimously affirmed that DRR must indeed be integrated into national multi-sectoral planning. In this regard, all participants thought that integrating DRR in national multi-sectoral planning is necessary for South Africa to manage disaster risks better. To

complete the focus of the question, a follow up question sought practical and theoretical reasons for the need to integrate DRR in national multi-sectoral planning. The findings related to the importance of integrating DRR in national multi-sectoral planning are presented in the ensuing sub-theme.

8.3.2.2   *Importance of integrating DRR in national multi-sectoral planning*

In Chapter 1, arguments have been presented regarding the fact that risk reduction which is recognised as a long-term national investment need to be mainstreamed through a country's ministries, programmes and activities for it to be successful. Furthermore, it was also revealed in chapter 1 that DRR is a multi-thematic and multi-sectoral process hence mainstreaming it in development involves integration across sectors. In section 5.3, an extensive discussion was presented regarding the integration of DRR principles into programmes and initiatives of all sectors across the three spheres of government. With this in mind, this question was raised to afford respondents an opportunity to indicate why they think integration of DRR in national multi-sectoral planning is necessary. While the discussion on the importance of integrating DRR in national multi-sectoral planning proved to the most lengthy and in-depth, all participants were able to advance practical and theoretical reasons for such integration. Some of the reasons are captured in the following statements from respondents.

> "*It is necessary because the negative impacts of a disaster occurring are normally a lot greater when DRR measures have not been put in place. In addition, the cost of implementing DRR measures is normally less than the cost of reparation following a disaster.*"

> *Integration is necessary to ensure measures put in place complement each other and are not unnecessarily duplicated*".

> "*I think it must be integrated. For me, DRR is not a sector in itself but rather if you look at disasters, they affect different sectors and in that sense all those sectors that can be affected by disasters need to be involved in risk reduction activities. So, it should be integrated into the different sectors, be it agriculture, be it water, be it conservation, environment, you can even go as far as*

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infrastructure sectors and things like that so that you can try and build resilient infrastructure".

"When you have a disaster, it cuts across and affects all departments, therefore it needs to be coordinated. It's in that individual planning that each Department must reflect on DRR, must think about disasters although I may say that in my plan, it's not multi-sectoral, it's in my plan. Let's say in my plan, I need to think about disasters like flood, etc but I need to incorporate this into my plan".

"You see, each department has a risk management plan and in terms of a risk management plan, you need to incorporate also disasters in that plan and that's not always done because we think about other events/ things that can impact on the ability to fulfil the strategic plan other than disasters"

"Integration is critical it's not just necessary, it's critical. The question is how are we going to align the spheres of government?

"I think it is imperative because if they do not do that, when something happens, they won't be able to deal with it and it's too late. So you need to have a DRR mind set from the beginning in every sector department so that they can foresee potential problems and prepare for that and have resources available to mitigate and respond should a disaster happen."

"If we integrate our approach in dealing with issues of risk reduction, then we are not going to be seen as an isolated sector that needs to actually be all over because what I am seeing now is that, we are actually spreading ourselves too thin and the capacity is not there."

"I think by integrating DRR into other national sector departments will be being proactive and it can in future save money because if you have DRR in your planning, the people are ready for any disaster that might occur and you would not have to spend more money recovering compared to what you have not planned and prepared for."

"I think it should be integrated and the reason really is that, first and foremost, sector departments are the professionals in that specific field, if they understand

what DRR is, they are the ones that would understand the complexities of their function."

The reasons for integrating DRR in national multi-sectoral planning in South Africa provided by the respondents including those captured in the statements above can be summarised as follows:

i.   Disasters affect different sectors hence all sectors have a DRR responsibility;

ii.   Risk identification is critical for effective DRR;

iii.   Integration is necessary to reduce duplications and costs associated with disaster response and recovery;

iv.   Each sector department must reflect on hazards that can adversely impact on its operations and must include these on its planning;

v.   DRR must be incorporated in the risk management plan of each sector department; and

vi.   Vertical alignment of the three spheres of government is important for effective integration of DRR in national multi-sectoral planning.

Some of the reasons for integrating DRR in national multi-sectoral planning resonates with the scholarly literature presented in Chapters 1, 4, 5 and 7 of this study. With the importance of integrating DRR in planning initiatives of national sector departments solicited, the ensuing sub-theme turns attention to the mechanisms for achieving such integration.

8.3.2.3   *Mechanisms for integrating DRR in national multi-sectoral planning*

Chapters 5 and 7 of this study provided various legal and regulatory instruments, institutions and strategies that could be utilised to integrate DRR in national multi-sectoral planning. With this in mind, participants were required to indicate how they believe DRR integration into national multi-sectoral planning should occur. This was considered important because it provided an opportunity for respondents to propose

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strategies or mechanisms on how such integration should occur. All respondents were able to outline how they see integration of DRR occurring within their sectors. The responses below characterise some of the respondents' views.

"To my mind, the answer sit at the Provincial and Municipal Disaster Management cross-border boundary forums because at the municipal forums and at the cross-boundary forums, is where the departments can speak to each other and where the different provinces and municipalities can speak to each other, so in my mind, I believe that Disaster Management Centres at Municipal level and at Provincial level should play a much more critical role in bringing departments together because this integration cannot happen until the Disaster Management Centres function as a risk reduction centre as opposed to a response centre."

"Disaster risk management responsibilities should be integrated into the routine activities of each of the various sectors and should be effectively applied through the enforcement of norms and standards, which have disaster prevention as a core element in their determination".

"You need personnel at different categories of management. You need personnel to execute work coming out of the various Disaster Management units in SA. So it is important to have this function of DM in the department because it actually assist that in a way, you have people at Senior Management Level (SMS) able to take decisions – Chief Directorate guiding the process and Sub- Directorate – people who are able to coordinate within various provinces and make sure that your Disaster Management issues are taken care of.

"Part of the big challenge that we have got is that we are reactive. We are all reactive including Cooperative Governance and Traditional Affairs (COGTA) and the NDMC, we are not proactive and really with regard to risk, you need to be proactive. Being reactive is our biggest challenge and the focus of integration must be on proactive measures rather than reactive ones."

For me, it is multipronged. This integration should happen at institutional level, meaning as government, civil society and the public as a whole, we should

establish forums and or structures that would help us coordinate so I would like to believe that the NDMC should be coordinating some sort of forums in the country to institutionally align our strategic plans, our programmes and policies. So, two for me is methodological or scientifically. This for me, we should have integration of thoughts or philosophy. Philosophically, DRR should be an academic exercise prior to us dealing with issues of relief, so if then our methodologies are integrated and they are in such a manner that when it struck, we all approach that community using the same methodology, that would be very useful."

"Obviously in certain positions, one of the Key Performance Areas (KPAs) need to look towards the DRR side because if it's not on the KPA, then it becomes ad hoc."

"When it comes to institutional arrangements, one other thing, which I can say, I think between the departments, if you want to institutionalise this, my belief is that COGTA is a lead department, there has to be an Memorandum of Understanding (MoU) with all the departments and they must be signed by the Executive Authority, the political head, then the person responsible in the Branch, in our case it will be our Deputy Director General. It should be part of the Annual Performance Plan (APP) because one other thing I have realise in the department is, if something is not on the APP, it's a by the way, it's parked, it comes up as an operational project, when you present it, nobody listen to you because it's not on the APP –it's not going to be presented in Parliament. So I believe in order that this thing works, in the model, my personal view is it has to be in the APP so that it's monitored because everything that takes place in the department which is in the APP receives attention and there are questions asked for deviation and all those things. It must be prioritised through the APP."

The mechanisms or strategies that could be utilised to integrate DRR into sectoral activities and initiatives provided by the respondents including those captured in the statements above can be summarised as follows:

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i. Integrating DRR into national multi-sectoral planning must flow from the Disaster Management legislation and this legislation is adequate within the South African context;

ii. Integration should happen through strategic planning documents including Annual Performance Plans (APP), Integrated Development Planning (IDP) processes and Service Delivery Budget Implementation Plans (SDBIP);

iii. Integration of DRR into national multi-sectoral planning must be institutionalised through performance contracting at both individual and organisational levels.

iv. Relevant indicators which are context specific must be identified;

v. Creation of awareness on what DRR is about is important;

vi. Disaster Management Centres across all spheres of government must guide DRR integration by sectors;

vii. National norms and standards are essential to provide guidance and ensure uniformity of approach.

viii. Political ownership is critical for successful integration of DRR in national multi-sectoral planning;

ix. Intergovernmental relations structures are useful in placing DRR on the agenda and on ensuring vertical alignment between the different spheres;

x. Disaster management forums across all spheres have a critical role to play as platforms to support integration;

xi. There is linkage between Environmental Impact Assessment (EIA) and DRR;

xii. Establishment of focal points for DRR within sector departments is critical;

xiv. Integration should happen from a hazard perspective as opposed to a sector perspective; and

xv. The NDMC has a critical role of supporting integration of DRR into sectoral programmes.

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Having outlined the importance of integrating DRR in national multi-sectoral planning, the next section explores the DRR legislative and institutional systems which forms the premise for this integration.

8.3.3   Thematic area 2: DRR legislative and institutional systems

Appropriate legislative and institutional systems are essential for effective DRR (see chapters 5 and 7). This thematic area encapsulates aspects that pertains to the existing legislative frameworks and institutional arrangements supporting DRR in South Africa as well as those (legal frameworks and institutional arrangements) required for the effective implementation of the envisaged model. These questions were covered by question 5 and 10 of the research data collection directive respectively. This was considered important in order to establish if the existing legislative and institutional systems for DRR are providing an enabling and conducive environment for the integration of DRR into national multi-sectoral planning. With this in mind, it was also important to establish if these existing institutional and legislative systems were adequate to support the effective implementation of the proposed model. The findings are presented below in line with the identified sub-thematic areas.

8.3.3.1   DRR legal and regulatory frameworks

The development of legislation for DRR is a fundamental step in mainstreaming DRR into development (see section 5.3). As a basis to establish if South Africa's regulatory framework supports DRR, participants were asked to indicate the existing legislative and policy basis that supports this function. This was asked to verify if the existing legislative and policy frameworks made adequate provisions for DRR. The findings in these question reveal that, while South Africa has an internationally acclaimed, robust and enabling regulatory framework for DRR in the form of the Disaster Management Act, 2002 and the National Disaster Management Framework, 2005, implementation remains a major challenge. This view is encapsulated in these statements that were made during the interviews.

> *"As much as we are very much fortunate in South Africa to have the legislative framework, to be honest, if we were following that, we could be able to deal with*

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disaster management issues. When you look at the Disaster Management Act and the National Disaster Management Framework, these documents could take us forward, unfortunately, having those documents, we are not able to take guidance from them as different sectors."

"We have good frameworks and policies"

"The pertinent document is the Disaster Management Act supported by the National Disaster Management Framework. The Framework actually outlines what needs to be done. It actually enjoins government departments to come up with plans and the plans when we talk about disaster management, it's actually all-encompassing and it includes DRR. So for me, those are the two documents that outlines what needs to be done and that each department has to come up with its own document and the document needs to be implementable."

While most participants generally agreed that the regulatory framework is adequate, one of the respondents observed that more needs to be done to enhance the existing legislative system and this is reflected in the following statement:

"I think there we are lacking a little bit quite honestly. I think we got the Disaster Management Act, we got the National Disaster Management Framework, we have got some guideline documents but the guideline documents in themselves are just guideline documents and do not hold water, even the Framework is a framework and the framework is just a broad document on what needs to be done, the how part and the integration of the reporting line is still a challenge. I know that there has been some work in trying to develop some of the policy frameworks but I am not aware as to where it stands now. I am guessing it's not yet approved and that there is some work that needs to be done in that respect."

The participants also recognised the importance of using all relevant legislation to support DRR work. To elaborate on this view, one of the respondents cited that: *"disaster management legislation is not an island and works within a broader framework of other legislation".* Thus the findings reveal that South Africa has a robust and enabling regulatory framework for DRR although implementation remains

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a key challenge. In chapter 3, arguments were presented that revealed that implementation of a strategy is arguably the most important stage because without successful implementation, an organisation's strategy is really nothing more than fantasy (see chapter 3). Some respondents thought that sector specific legislation, policies and strategies play a critical role in supporting DRR activities. It also emerged that the regulatory framework for DRR in South Africa must not be seen in isolation but rather include applicable international instruments such as the Sendai Framework for Action, 2015 and the various sector specific global frameworks and strategies that the country has ratified.

Having dealt with regulatory frameworks, the following section turns attention to the institutional machinery that is required to support integration of DRR in national multi-sectoral planning.

8.3.3.2   DRR institutional frameworks and systems

Chapters 5 and 7 revealed that strong and robust institutions at all levels of government are essential to drive the DRR agenda. With regard to institutional arrangements for DRR in South Africa, all participants were able to articulate the core institutional mechanisms that are in place nationally such as the NDMC, National Disaster Management Advisory Forum (NDMAF), Provincial Disaster Management Centres (PDMC), Municipal Disaster Management Centres (MDMCs) which play a key role in DRR within the South African environment. While respondents recognised the importance of sector specific institutional structures in supporting DRR work and initiatives (see section 5.5), they also argued that international organisations that supports relevant line function or sector-specific programmes also play a critical role in supporting DRR. The responses below characterises some of the respondents' views.

> *With regard to institutional arrangements, we have the NDMC, unfortunately, it is there but it is not able or rather, we don't actually understand what it's its role as a sector. We tend to think disaster management is done by the NDMC of which disaster management is supposed to be done by us sectors and the NDMC must be able to coordinate. So that's where we are missing the point.*

When you read the Disaster Management Act, I mean, there is a role that sector departments should play but it also goes back to say, when you have the NDMC and structures such as the NDMAF, who goes into those forums? If a guy at the level of a Manager goes there into the NDMAF and unfortunately there is no Senior Manager, Chief Director or Deputy Director General who are actually supporting or being part of the NDMAF, then it actually will not bear any fruits"

"I think it is important that even with a particular sector, they need to have a body that can sit and deal with disaster management issues within their sector so that when a sector has to take up their issues with the NDMC or NDMAF, it's kind of a holistic approach so that is something that as a department, we understand that this is what is happening within disaster management."

"I don't think you mention the National Joint Operational and Intelligence Structure (NATJOINTS) because this is also a coordinating structure that looks at coordinating some kind of interaction."

"NATJOINTS and Provincial Joint Operational and Intelligence Structure (PROVJOINTS) that exists in all provinces – these structures also talk about DRR".

"So the activities from the World Meteorological Organisation (WMO) is very important and the WMO provided a lot of support for the development of the Southern African Development Community (SADC) early warning system which includes collaboration among countries and within countries between meteorological services and their DRR counterparts. So those institutional arrangements are there and they are pretty much successful in their operation."

These statements reveal that participants are conversant with the institutional machinery that supports DRR in the country. This also shows that they are aware of the important role that institutional forums within sectors play in the broader agenda of reducing disaster risks. Some participants thought that with regard to vertical alignment of DRR work between spheres of government, it is important to replicate existing national sector-specific structures at provincial and municipal levels. While

respondents recognised the importance of institutional structures within the various sectors, they emphasised that the NDMC must provide strategic leadership to all sectors and forums on all DRR activities and programmes (see section 5.4). The Disaster Relief Board was identified as one of the key structures that may contribute to the broader DRR agenda in South Africa although it was noted that the focus has historically been response-oriented. Some respondents highlighted that identifying prevalent risks may be crucial in order to ensure that institutional arrangements that are put in place enable the country to deal with its key and most prevalent risks. It was encouraging to observe that practitioners recognised the importance of international institutions in supporting DRR activities. From this discussion and consistent with arguments presented in section 5.5 of this study, participants also reiterated the importance of establishing DRR focal points within each sector that will drive DRR initiatives and programmes.

Having outlined the importance of robust institutions in driving the DRR agenda, the next section drills further on this by exploring the legal and institutional systems required for the effective implementation of the envisaged model.

8.3.3.3 Legal, and institutional systems required for effective implementation of the model

The question on the legal and institutional arrangements required to ensure effective implementation of the envisaged model was asked to obtain respondents views on whether the existing regulatory and institutional systems are adequate or if any adjustments are required. The findings in these question revealed that the majority of respondents are convinced that the existing legal and institutional frameworks are adequate to support the effective implementation of the model. The challenge that most participants identified, revolve around weak implementation and poor enforcement of the existing legislation as encapsulated by the following statements:

"I think in terms of the current frameworks and institutional arrangements, I will say in terms of the contents, I think at least adequate. I think it's a matter of, are they implemented? That is critical and that's what need to happen. I think if we are able to implement exactly as per the Disaster Management Act, we should

be able to get somewhere and even as guided by the Framework as well. What needs to happen is to make sure that different sectors and institutions play their roles as per the Disaster Management Act so that means that if you are to make sure from different sectors and spheres, disaster management plans are being done, you know your risks and you will know what to do if it happens".

"I don't think it must always be left to the legal, I think that some of the departments function on very strict legal frameworks so their Acts are very specific about what must happen. I think the failure then is the actual implementation, the coordination, so there is no need to always rush to legislation, but if you implement legislation incorrectly, the result on the ground is completely different. So the model must take into account that the legislation itself already exist – make sure that it is being implemented".

Some of the respondents thought that weak enforcement of existing legislation is one of the key challenges hindering effective DRR in the country. The following statements support this assertion.

"A kind of an enforcement that go to our different sectors hence I say that even in terms of your NDMC level, one will say that you need to have teeth to ensure that where you are required to bite, you are able to do so. Obviously it needs some kind of regulations and support and even the understanding of the sector's role."

"I think a twist is needed for example in terms of our Disaster Management Act and National Disaster Management Framework. There is no enforcement hence you see a lot of complaints around service delivery."

Other respondents voiced concerns about the fundamental importance of monitoring and evaluation as outlined in the statement below.

"When I look at the way you have structured this question, what comes to my mind is a very sharp monitoring and evaluation tool that you will use because we have accepted that the legal framework are there, the institutional arrangements are there now, the problem is the actualisation of these

frameworks now if we do have monitoring and evaluation according to our legislation, but I think that is one area that needs to be visited and to a large extent it should help you in the way you coin your indicators or rather the other way round, the way you have crafted your indicator."

One respondent raised concerns regarding the technical expertise required for effective DRR which the current mechanisms do not adequately address. The following statement bears testimony to this:

"Regarding institutional arrangements, we need an independent technical arm for managing disasters and then the department (COGTA) will deal with the legal issues and we need to strengthen the technical arm of all the specialities within sectors".

One participant was however sceptical of the existing institutional arrangements and the current placement of the DRR function and this is reflected in the following statement:

My problem is that I am not aware of a full assessment in terms of what has been our performance. For instance, in the past, the framework and the structures has been always that the Department of Provincial and Local Government (DPLG) now Cooperative Governance and Traditional Affairs (COGTA) is leading this. Is this the framework to go with? Are there some deficiencies related to this? We have not done a gap analysis that I am aware of, we are just going with this for historical purposes or reasons, for example, in other countries, how are their systems in terms of disaster management? Are there better institutional arrangements that we can have? Are there successes we have made due to this institutional arrangements? Is COGTA best place to run disaster management and I don't really know?

Despite this scepticism about the current placement of the DRR function in South Africa, the discussion on the legal and institutional systems required for effective implementation of the model revealed that South Africa has adequate legal and institutional frameworks to support the effective implementation of the envisaged

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model. While some participants argued that advocacy, education and awareness are essential to raise the profile of DRR, some thought that the absence of punitive measures could hinder effective integration of DRR in sectoral programmes. The importance of streamlining reporting mechanisms was also identified as a key issue that needs to be addressed. Having discussed the regulatory and institutional frameworks for DRR, in the next section, attention shifts to the legislative, institutional and policy frameworks that supports multi-sectoral planning in the country.

8.3.4 Thematic area 3: Legislative, policy and institutional frameworks for multi-sectoral planning in South Africa

Chapter 6 of this study outlined the institutional and legislative systems that supports multi-sectoral planning in South Africa. A question was raised to verify if participants understand the legislative instruments, policies and institutional arrangements that drive multi-sectoral planning in the country. The findings in this theme are presented below.

8.3.4.1 Legal, regulatory and institutional systems for multi-sectoral planning in South Africa

With regard to the legislative basis supporting multi-sectoral planning, most respondents noted that South Africa's Constitution forms the basis upon which planning by national sector departments build. Consistent with discussions presented in section 6.6 dealing with intergovernmental planning, a majority of respondents indicated that national sector departments must take into consideration the Intergovernmental Relations Framework Act, 2005 during planning. While some participants indicated that the Disaster Management Act is one of the legislation that must be taken into account, it was also highlighted that it is important for sector specific legislation to make provisions for DRR and related activities. These views are encapsulated in these statements that were made during the interviews.

> *"When you talk about legislative instruments, legislation is very firm. We have excellent legislation, South Africa has some of the best legislation not just in DRR but in many other spheres and we have excellent policies and we have*

wonderful institutional arrangements but when it comes to making it work on the ground, that is where sometimes it gets constrained".

"You have to make sure that your legislation is linked to the Disaster Management Act. If DRR components are not mentioned in your legislation, then you cannot properly plan for it but if it is in there, you can properly plan for it".

"I think the basic is first of all the Disaster Management Act, then the Constitution, from a municipal viewpoint is the Municipal Systems Act, Municipal Structures Act, etc.

Then there is the policy framework related to Service Delivery Budget Implementation Plan (SDBIP), etc all those things fit together but you can't just let stand on its own or just that, what I mention now be integrated, those things needs to be integrated with legislation executed by sector departments because just on its own, there will be a gap".

Yes the legislative instruments are there but currently they are there to ensure that the National Development Plan (NDP) and the Medium Term Strategic Framework (MTSF) are implemented. NDP is the overarching instrument that every department must look at.

From the discussion on institutional and legislative systems for multi-sectoral planning, the general agreement was that the Constitution forms the bedrock of planning by sector departments (see section 6.6 and 6.7). In addition to the Constitution and consistent with discussion presented in section 5.3, the following legislation, policies and frameworks were highlighted as being important in multi-sectoral planning:

i.   Intergovernmental Fiscal Relations Act, 1997;

ii.   Public Finance Management Act, 1999;

iii.   Local Government: Municipal Systems Act, 2000 at municipal level;

iv.   Municipal Finance Management Act, 2003;

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v.   Intergovernmental Relations Framework Act, 2005.

vi.   Disaster Management Act, 2015; and

vii.   Spatial Planning Land Use Management Act, 2015.

With regard to institutional arrangements, it emerged that the Department of Planning, Monitoring and Evaluation and the National Planning Commission play key roles in multi-sectoral planning in South Africa. At a provincial level, it was noted that the Provincial Planning Commission also has a primary role to play. Some participants noted that the various operational structures that are usually established by government such as the War Rooms can influence planning although their focus is predominately response oriented. It was encouraging to note that some participants noted and understood the interface between planning at a national level and international frameworks such as the Sendai Framework for Risk Reduction. The fact that some state entities are International Standard Organisation (ISO) certified was highlighted as important as such entities have to comply with relevant international standards that may also cover aspects related to planning and DRR.

8.3.4.2   *Policy and planning systems for multi-sectoral planning in South Africa*

Section 6.7 of this study provided the frameworks that guide national multi-sectoral planning in South Africa. Most respondents noted that the National Development Plan (NDP) provides an overarching framework for planning by sector departments. The responses below characterise some of the respondents' view.

> *"I am not sure about the master plan that we have in the country, the National Development Plan, that it is also an effort that is trying to pull everything together to develop this country. I am not sure about the specifics, but looking into it, you might pick some of these issues related to planning and how these sectors need to work together.*

> *"NDP is the overarching instrument that every department must look at".*

> *"Ideally, it should be derived from the National Development Plan;*

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"Personally, I think it is correct that the Disaster Management Act sort of direct responsibility to everyone in the country from municipality to other sector contributions but in the South African context, to me, the policy imperatives that are outlined in the NDP, provide basis for long-term planning and coordination in government as you would know it has a planning horizon until 2030. Out of it, we derive the nine point plan which the current government, that was translated into what they call Medium Term Strategic Framework (MTSF)."The MTSF then will outline those national imperatives that a particular administration or this current administration would like to achieve in the next five years. Then out of that, comes the strategic plan of each department and if then DRR is one of those issues highlighted in the MTSF and then all departments that have a role to play, all provinces and all municipalities should then make sure that they contribute towards the achievement of that particular goal."

"The NDP enjoins all sectors to plan for efficiency and sustainability".

In addition to the NDP, some of the policies and planning frameworks highlighted by the respondents which converge to a large extent with literature provided in chapter 6 are as follows:

i. Medium Term Strategic Framework;

ii. Framework for Strategic Planning and Annual Performance Plans;

iii. Framework for Managing Programme Performance Information;

iv. Integrated Development Plans, Service Delivery Budget Implementation Plan and Integrated Transport Plans (at municipal level);

v. Sectoral policies related to DRR such as the Climate Change Response White Paper;

vi. Government Outcomes approach; and

vii. Sector specific long-term plans such as the National Transport Master Plan.

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Some respondents noted that while South Africa has robust policy and planning frameworks, implementation of these plans remains a major challenge as discussed in section 8.3.3. With regard to utilising disaster management plans as an integral part of planning by national sector departments as discussed in section 5.5 of this study, one respondent was dissatisfied with the efforts made by the department in this regard. This concern is reflected in the following statement:

"Each Department has a disaster management plan and this department has one. Provinces also develop disaster management plans relating to them. We are sitting with a Disaster Management plan (not nationally adopted yet) beyond that, there is a gap because if we plan, we don't plan with an idea that there is going to be a flood and with that flood, there may be diarrhoeal diseases. We don't plan with disaster scenarios in mind".

With regard to the interface between IDPs and other sectoral plans, some participants observed that IDPs are critical instruments in planning and must be taken into consideration by national sector departments as stated in these statements below.

"You see, the IDP is where everything happens, that's where the projects happen, the budgets happen, that's where the implementation happens."

"We also have the Integrated Transport Plan (ITP), it's something that I think from a planning level, it is very much critical and also that we ensure we integrate DRR issues and functions into the ITP so that you don't just say, I want to connect these communities, you also say, if I want to connect these communities, what are the other things that I must take into consideration? You must understand that now people are not just doing roads, we are doing roads and storm water, we are integrating DRR because we say, if you provide a road and do not do water management, then it's a problem because that water will either damage the road or eventually it will cause a situation where once it rains heavily, it will cause a flood and be washed away hence you avoid that."

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From the discussion on policy and planning systems for multi-sectoral planning in South Africa, the general agreement is that existing planning policies and frameworks are adequate. Some participants thought that sectoral programmes and initiatives such as the Back to Basics within COGTA and the Land Care Programme within DAFF can be utilised to integrate DRR measures and activities. In chapter 5, it was argued that the NDMC plays an important role in supporting integration of DRR into national multi-sectoral planning as discussed below.

8.3.5 Thematic area 4: Role of the National Disaster Management Centre (NDMC) in supporting integration of DRR in national multi-sectoral planning

In chapter 5, it was revealed that the establishment of the NDMC (established in terms of section 8 of the Disaster Management Act) was the most fundamental aspect of the new disaster management legislation. A detailed exposition of the general powers and duties of the NDMC was presented in chapter 5 of this study. With this in mind, it was imperative to ask participants what they think is the role of the NDMC in supporting integration of DRR in national multi-sectoral planning. The discussion on the role of the NDMC in supporting multi-sectoral planning proved to be the most lengthy and in-depth with participants expressing varied proposals on what this institution should focus on. The findings in this theme are grouped into sub-thematic areas as presented below.

8.3.5.1 Legislative and institutional systems

With regard to legislative and institutional systems, some respondents thought that the NDMC plays a key role in ensuring that an enabling regulatory and institutional framework is in place to support integration of DRR in national multi-sectoral planning. This view is encapsulated in these statements that were made during the interviews.

> *"I think the NDMC's role is really to provide for the overall policy, perhaps to provide a little bit of direction in terms of that policy but not be too rigid with trying to direct what sectors either government or municipal sector needs to be doing."*

"The NDMC must concern itself with policy development and strategic planning – must make sure that frameworks for DRR and planning are there and that sectors are aware of these. Without these frameworks, municipalities, provinces and sectors are doing it their own way"

Thus the findings reveal that the NDMC must play a central role in developing policies that will support integration of DRR into national multi-sectoral planning in South Africa. Participants further noted that the NDMC has a central responsibility to raise awareness among sectors about the existence of DRR legislation. From this discussion, it also emerged that the NDMC is responsible for amending the disaster management legislation to address regulatory gaps impending implementation. The views raised by respondents resonates with the arguments presented in section 5.4 where it was outlined that the NDMC is responsible for the development of DRR policy and regulatory frameworks.

8.3.5.2   *Provision of strategic leadership on DRR issues*

The NDMC may act as an advisory and consultative body on issues concerning disasters and disaster management to organs of state, statutory functionaries, private sector, civil society organisations, other governments and institutions within Southern Africa, communities and individuals (see chapter 5). Consistent with discussions presented in chapter 5, most respondents agreed that the NDMC is at the centre of DRR in the country and must accordingly provide strategic leadership to all sectors of society on all matters related to DRR. Some participants argued that the NDMC must provide leadership in both disaster management planning as well as during implementation of DRR programmes and initiatives. The following statements bear testimony to the strategic leadership role that is expected from the NDMC.

"I think due to their recognition in terms of legislation (Disaster Management Act), as a body, the NDMC drive the process with the integration of sectors and integration of plans and DRR as well. I think in a way, they are supposed to also provide that type of direction and guidance to say, this is how you should be doing this or look at a framework for this, standardise plans so that Departments understand how to implement and operationalise this area of responsibility".

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"I think the NDMC should be a driver. It should make sure that implementation is happening at all different levels but is there as the main driving centre and should also provide guidance".

The role of the NDMC for me is to bring all departments in terms of expertise, ensure compliance and to also oversee the events that are occurring to ensure that sector departments are on board

"Their (NDMC) major role is coordination and obviously some leadership is also required"

From the discussion on the role of the NDMC, the general consensus was that the NDMC is at the centre of DRR in South Africa and that its effective functioning is essential for the country to effectively reduce disaster risks. Closely related to leadership is the NDMC's role as a national coordinating body as discussed below.

8.3.5.3   *Coordination and integration*

The disaster management philosophy and framework of South Africa is premised on the assumption that the NDMC is able to facilitate, provide guidance and monitor implementation of disaster management activities in an integrated and coordinated manner (see chapter 5). Participants unanimously agreed that the NDMC is the national coordinating body that must ensure an integrated and coordinated approach to the integration of DRR in national multi-sectoral planning in South Africa. Some of the aspects related to the national coordinating role of the NDMC are captured in the following statements from respondents.

"The NDMC is the main integrating entity of these things (DRR) in the country. It has to delegate some of the activities that is locally focused to the Provincial Disaster Management Centres (PDMCs) and the Municipal Disaster Management Centres (MDMC) to do that under the umbrella of the NDMC. So they have to do their own thing and do the coordination at their levels and it becomes very practical. All these activities must feed into the umbrella that must be driven and integrated by the NDMC."

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"I think the NDMC should be the heartbeat of multi-sectoral planning."

"The role of the NDMC is to set processes in motion, provide implementation guidance, coordination across sectors and support services."

"The NDMC is more like a national coordinating body."

"Their (NDMC) major role is coordination and obviously some leadership is also required"

With regard to mechanisms to ensure effective coordination, one of the participants shared admiration to the Swaziland coordinating model wherein national sector departments are clustered based on their mandates and are engaged by the National Disaster Management Body on a regular basis with a view to build their capacity and improve levels of preparedness to respond to disasters. While most respondents agreed on the coordination role of the NDMC, some respondents were however sceptical of the interface between the NDMC and other national coordinating bodies such as the NATJOINTS in relation to issues of coordination and integration as reflected in the following statement:

"The NATJOINTS, it seems sometimes like SAPS and the SANDF are the integrating bodies for disaster management and that the NDMC report to them during disaster situations which is the wrong way around. The NATJOINTS have a particular responsibility but they are not the integrating bodies, they should play their role in the bigger picture. The NDMC must do what it must do at its level".

Other respondents raised concerns about the placement of the NDMC vis a vis its functional mandate which includes ensuring an integrated, coordinated and multi-sectoral approach to DRR in the country. These concerns resonates with discussions on key constraints in the implementation of the Act presented in chapter 5. Notwithstanding the scepticism about the displacement of the NDMC in some instances by other national coordinating bodies such as the NATJOINTS on matters related to disasters and disaster management as well as challenges associated with

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its placement, all participants agreed that the NDMC remains the strategic centre of coordination and integration on all matters related to DRR in South Africa.

8.3.5.4 *Provision of implementation support to all spheres of government*

During discussions on the role of the NDMC, participants alluded to the role that the NDMC must play in providing implementation support to all spheres of government on DRR matters and activities. In this regard, the following issues were highlighted as being important:

i.   The NDMC must provide support to institutions, departments, and municipalities with particular focus on those specifically lacking resources, training and awareness on DRR issues;

ii. The NDMC must provide implementation guidance and support to all sectors;

iii. The NDMC must provide support to sector departments and all spheres of government on disaster management planning;

iv. The NDMC must support national sector departments to establish focal points that will coordinate DRR activities within the respective sectors;

v.   The NDMC must identify sectors where there is weak integration of DRR into national multi-sectoral planning and provide targeted support to those sector departments;

vi. The NDMC must ensure that implementation of the disaster management legislation is happening at all levels of government;

vii. The NDMC must ensure that sector departments have aligned their specific functions and activities to the disaster management regulatory framework; and

viii. Political buy-in and ownership is essential for the NDMC to execute its mandate of supporting effective implementation of DRR by all spheres of government.

Having outlined the role of the NDMC in supporting implementation of disaster management legislation, the following section turns attention to yet another important mandate of this entity which is compliance and enforcement.

8.3.5.5   *Compliance and enforcement*

Some participants argued that the current challenges facing the disaster management function stem from non-compliance with applicable legislative frameworks which is compounded by the weak or non-existent mechanisms of enforcing the legislation. The responses below characterises some of the participants' views in this regard.

> *"The NDMC needs to enforce the legislation."*

> *"The role of the NDMC for me is to bring all departments in terms of expertise, ensure compliance and to also oversee the events that are occurring to ensure that sector departments are on board and then my take is that, they are also responsible for ensuring that processes are followed with regard to declaration at all levels of government."*

> *"My understanding of the NDMC's role is to ensure that sector departments have aligned themselves in their specific functions with the Disaster Management Act and the Framework and then also to monitor and evaluate in terms of compliance and also to coordinate events."*

These responses show a convergence between the respondents' views and academic literature. For instance, section 5.4 revealed that the NDMC must specialise in issues concerning disasters and disaster management and must monitor whether organs of state and statutory functionaries comply with the disaster management legislation. Closely linked to compliance and enforcement is the development of national norms and standards which play a vital role in ensuring uniformity of approach by all sector departments involved in DRR activities.

8.3.5.6   Development of national norms and standards

Section 5.5 provided discussion on the multi-sectoral and multi-disciplinary nature of DRR in South Africa. In line with this assertion, some participants argued that the multiplicity of role players involved in disaster management necessitate the development of national norms and standards. These norms and standards must be developed by the NDMC with a view to ensuring uniformity of approach on all disaster management issues. These views are evident in the response of some of the respondents.

> *"Disaster risk management responsibilities should be integrated into the routine activities of each of the various sectors and should be effectively applied through the enforcement of norms and standards, which have disaster prevention as a core element in their determination."*

> *So what's being said is that how we should work with the locals must be pre-defined by the NDMC. It's almost like you have to set the standard for operations because you can't judge without the standards, so you can't make the decision when there is no standard."*

> *"I think in a way, they are supposed to also provide that type of direction and guidance to say, this is how you should be doing this or look at a framework for this, standardise plans so that departments understand how to implement and operationalise this area of responsibility."*

Thus the findings reveal that the majority of respondents recognise the fundamental role that the NDMC must play in guiding the implementation of disaster management legislation and policies in the country. It is also clear that norms and standards are essential to define performance deliverables which is essential for effective monitoring of performance by all role players. To explore the centrality of the NDMC in DRR further within the South African environment, the next section explores the NDMC's role in capacity building, research and knowledge management.

8.3.5.7   *Capacity building, advocacy, research and knowledge management*

In section 5.4, it was revealed that the NDMC must promote disaster management capacity through building, training, research and education throughout South Africa. In this regard, most participants agreed that the NDMC must lead initiatives that seek to build capacity of the various sector departments to integrate DRR in their sectoral programmes and planning initiatives as highlighted in the statements below.

"I think that the NDMC should be the body that kind of get sectors to understand their role and DRR is and how they function within it to help them understand how to do planning within this as well. To my mind, currently, the sector departments are busy with their core business and they see DRR either as an add-on or something that they are asked to do but they don't know what it is, so I think that to my mind, that should be one of the major roles that the NDMC plays in terms of DRR and planning to get the sector departments to understand this."

"I think the one thing that should happen is, in fact, it will also assist the NDMC as well, in terms of being able to coordinate is actually about capacity and that capacity should be at all levels and as soon as within different sectors, we are capacitated both at senior management and operational levels, once people are capacitated, they understand their role – the role that they need to play in relation to DRR. I think that will go a long way because until people understand what it is that they are supposed to do, there is nothing that will happen."

"I think the NDMC is actually the core of ensuring that new knowledge is made available to sector departments."

"I think we should also be taking a lead with regard to research, I know that a lot of departments and entities are undertaking their own research but we should be a portal whereby we coordinate to streamline all these activities because there are pockets of research lying all over and there are not utilised which is a waste of resources but in case where we are going to have proper coordination, we were really going to benefit more so to me, we really have a lot, a huge responsibility regarding multi-sectoral planning."

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"As a coordinating body also, I think in terms of institutional memory and the knowledge in terms of trends"

While most respondents agreed that capacity building, advocacy, research and knowledge management are fundamental functions of the NDMC, some participants raised their concerns regarding the technical or specialist expertise that it is required for the NDMC to give effect to its legislative mandate. With this is mind, the following section explores the role of the NDMC in providing technical and specialist expertise to sectors in their quest to integrate DRR in national multi-sectoral planning.

8.3.5.8 Provision of technical and specialist expertise

The NDMC must specialise in issues concerning disasters and disaster management (see chapter 5 of this study). Thus some participants raised concerns about the lack of technical or specialist capability within the NDMC as reflected in the statements below.

"For me, I don't know really if the NDMC really has to deal directly with us in many instances, yes it has to but I would, if I were a President of the country, I would let it free and make sure that it does all the technical work because for me, the NDMC is all about the science of disaster management, is all about planning for disaster management, is all about response to disasters, is all about creating systems for this response and then the department's role (COGTA) will be the one that directly impact on work of each department because it would be dealing with sector coordination issues with political sort of flavour. The people who work for the NDMC, for me, it should be your remote sensing specialists, your GIS specialists, should be your weather analysts, climatologists. For me, this institution should have a bunch of scientists."

"COGTA can deal with sector coordination and the NDMC must deal with all technical issues and must be independent."

"To me, we should be having within the NDMC sector specialists especially with our problematic ones, agriculture, roads, human settlements so that we are able to influence planning especially at municipal level, your IDPs when they are

being submitted to us, we should be able to advise and say these are our inputs as well as the sector plans, I think with time we will get to that."

The provision of technical and specialist expertise is seen as one of the primary role of the NDMC. It is thus recommended that the NDMC builds adequate technical and specialist capability in order to effectively implement the Act.

8.3.5.9   Monitoring and evaluation

The NDMC must monitor whether organs of state and statutory functionaries comply with the Disaster Management Act and the National Disaster Management Framework (see chapter 5). On this issue, most participants agreed that this is one of the NDMC's key functions as outlined in the statements below.

"My understanding of the NDMC is to ensure sector departments have aligned themselves in their specific functions with the Disaster Management Act and the Framework and then also to monitor and evaluate in terms of compliance."

"If I was going to be asked to say to the NDMC what I think should happen, the first thing and that would lead to the role because the role will be defined by the activities. "The first activities in my mind is to identify nationally maybe on a scale of red, orange, yellow, blue or green, where integration is happening well and where it is not happening well".

From the discussion on monitoring and evaluation, it is clear that the views of participants converge with arguments that were presented in the scholarly literature on chapters 5 and 7. It is also clear that monitoring, evaluation and compliance activities are closely related. In chapter 5 it was argued that the NDMC is at the heart of disaster management and plays a fundamental and central role in the effective implementation of the disaster management legislation. In fact, it was contended that the success of disaster management in South Africa is inextricably linked to the effective functioning of the NDMC. The varied views and proposals given by participants on the NDMC's role in supporting integration of DRR into national multi-sectoral planning reaffirms this notion. Given the NDMC's role in DRR in South Africa, it is thus recommended that adequate resources i.e. human, financial and

otherwise be allocated to this important institution in order for the country to effectively reduce disaster risks.

Having outlined the roles and responsibilities of the NDMC in supporting integration of DRR into national multi-sectoral planning, the key aspects that must be covered by the envisaged model will enjoy attention.

8.3.6 Thematic area 5: Key aspects that must be covered by the model

Through this question, participants were given an opportunity to indicate if they think that developing a model for integrating DRR in national multi-sectoral planning is important. The response to this question showed unanimous affirmation. This is because all participants agreed that a model for integrating DRR in national multi-sectoral planning is not only fundamentally important but is necessary and long-overdue. The view of some participants was that while the Disaster Management Act and the National Disaster Management Framework outline the importance of integrating DRR in national multi-sectoral planning, the model was expected to streamline, provide practical guidance, norms and standards to sector departments on how such integration must occur. Some participants noted that although the basis of integrating DRR into national multi-sectoral planning is the respective sector specific legislative mandates, the model was expected to identify key areas of responsibility including cross-cutting issues that sector departments must consider in their endeavour to reduce disaster risks. By outlining key areas of responsibilities, some participants thought that the model will assist National Treasury in addressing issues associated with resource allocation as well as aspects related to the so-called 'unfunded mandates'.

To complete the focus of the question, a follow-up question sought the key aspects that must be covered by the proposed model. In this regard, all participants were able to articulate the key aspects/ focus areas that should be covered by the model. These responses have been grouped into sub-thematic areas as outlined further.

8.3.6.1 Institutional and regulatory frameworks

The importance of strong and robust institutions at all levels of government to drive DRR agenda has been widely recognised by scholars and practitioners alike (see chapters 5 and 7). In this regard, it is important to note that some participants argued that the model must outline institutional and governance arrangements or systems that are required to drive the integration of DRR in national multi-sectoral planning in the country. The statement below bears testimony to this.

> "The model must also demonstrate the political coordination. How do you make sure that people do not overstep each other's mandate in the process? So you can use existing institutional framework like you have Ministers and Members of Executive Council (MINMECS) and they should have working groups and one of the working group should be the one on DRR which the NDMC must coordinate the technical one at working group level."

With regard to regulatory arrangements, some participants observed that the various sector legislative mandates form the foundational base upon which national departments must integrate DRR into their programmes and initiatives. The importance of policy, regulations and possibly a South African National Standard (SANS) to guide the integration of DRR in national multi-sectoral planning was emphasised. These views are evident in the responses of some of the participants.

> "The Disaster Management Act and its policy framework provide legal avenues for that scenario."

> "In respect of the key aspects, I think first of all, you need your policy, you may even need regulations. Maybe you need to have first regulations and then policy because if you have your Regulations, it gives it more direction. I think you need best practice or standards, South African standard which will then guide the whole disaster risk management initiative. That will provide the basis for integration with sector department work."

> "I think it is important to have a model and as I indicated, the aspects for each sector department with regard to DRR is per their legislative mandate but the

model then probably it's going to assist us to tease out those things, to say Department of Agriculture, Forestry and Fisheries, your Conservation of Agriculture Resources Act says conservation and these are DRR issues, Department of Water and Sanitation, these are the issues that you have to be dealing with regarding DRR so it's just to tease out and put the areas of responsibilities in a model so that we can look at the crosscutting issues."

The views expressed by respondents regarding the importance of institutional and regulatory frameworks resonates with the arguments presented in chapter 5 where it was argued that a good disaster risk management policy must define institutional arrangements required to drive DRR at all levels of government. While it was not raised specifically within this sub-thematic area, participants generally agreed that the establishment of dedicated DRR focal points in each national sector department is essential for effective integration of DRR in national multi-sectoral planning. Having demonstrated the importance of establishing institutional arrangements to drive DRR programmes, the next section argues that understanding disaster risks facing the country is vital for effective integration of measures and strategies to reduce disaster risks in national multi-sectoral planning.

8.3.6.2   *Risk assessment/ identification*

Chapter 4 provided an overview of South Africa's disaster risk profile and from this discussion, it emerged that a number of government entities are responsible for addressing disaster risks facing the country. This discussion also revealed that effective DRR must be informed by a credible and scientifically robust disaster risk assessment process (see chapter 5). With regard to the key aspects or focus areas that must be addressed by a model for integrating DRR in national multi-sectoral planning, most participants agree that disaster risk assessment or identification is an essential component that must be reflected in the model. This view is encapsulated in these statements that were made during the interviews.

"So with regard to Question 8, about the model, I would like to see any development whatsoever, any maintenance, any operational items on the ground and any economic visions, everything, the moment that the decision

making process starts, then there needs to be disaster risk identification/ assessment. I think any decision making that relates to any economic or spatial development, so I am saying at the development application stage, at the spatial development framework phase, or at any economic stage whether it be private, government, parastatals does not matter, there should be a disaster risk assessment at the beginning because that disaster risk assessment could point out that development or economic initiative is fatally flawed or it could identify opportunities for immediately reducing the risk and addressing other risks."

"It must look at possible threat or risk profile."

From these statements, it is clear that a disaster risk assessment forms the foundational basis upon which effective DRR must grow. The responses show a convergence between the views of respondents and scholarly literature (See chapters 5 and 7). The acknowledgement of the importance of risk identification by participants is a step in the right direction to integrate DRR in national multi-sectoral planning. Having identified the risks, participants recognised that another important aspect or component of this model revolves around ensuring that adequate mechanisms are in place to warn at risk communities of impending disasters as discussed below.

8.3.6.3 *Early warning systems*

Early warnings of impending disasters and their effective dissemination using telecommunications and broadcast services are key factors to successful DRR and must be integrated into governmental policy and decision-making processes (see chapters 5 and 7). In this regard, most respondents demonstrated their understanding of the important role played by early warning in DRR and argued that the model must address these issues as encapsulated by the following statements:

"Early warning is critical because once we are able to identify the risks and also assess to say how will it impact on our service, we should be able to say then, within this multi-sector environment, I develop a system wherein all the sectors will be able to get their early warnings so that you will know that if you get this

kind of warning, then that means in terms of your infrastructure and service, then you should be able to do certain things to make sure that you are able to reduce the impact that might come as a result of that particular risk."

"It should look at communication, I think that this is one of the most important issue. It must deal with communication including early warnings."

"I think all sectors will have to look at the model and use and some components will be more relevant than others, for example, the South African Weather Services (SAWS) will be more interested in early warning systems but every sector needs to have something on early warning linked to SAWS."

Thus the findings revealed that the majority of respondents recognise that early warning systems are fundamental to effective DRR hence it (early warning) must form an essential component of the model to integrate DRR in national multi-sectoral planning. Linked to the imperative of warning communities of impending disasters through early warning systems is the role that an effective asset management system can play in integrating DRR into planning activities and initiatives of national sector departments.

8.3.6.4   *Asset management systems*

One of the participant thought that a robust asset management system within a sector department can significantly contribute to effective DRR. This is because an asset management system enable each sector department to know the maintenance state of all its key infrastructure systems across the country. This is important as the asset management system indicates infrastructure that (due their state of maintenance) is prone to failure as a result of the impacts of natural or anthropogenic hazards. This view is encapsulated in these statements that were made during the interviews.

"if you get early warnings, you know that you have a bridge in a particular area and so that bridge is at this level in terms of maintenance and you should be able to say okay, let me pass a particular message to that province and say let's keep people away from that bridge because something might happen."

"Even in terms of your resource planning, if you have a good asset management system, you will know if you have money, where to start, I should go and deal with this one because it is old, etc. from a multi-sectoral perspective, from our side, if we build a road, we will build it knowing that this road is in relation to a health facility, education, etc due to their asset management system because it should tell us and if you integrate that into a national thing from different sectors, you should be able to create a picture that even National Treasury can use during division of revenue, they are able to say, the asset management system shows us that here we have, here we don't have. I think it may assist in that regard."

"I am saying, it is critical for DRR because at least by knowing and able to get early warnings, you should be able to deal with some of the challenges in terms of your infrastructure."

It is thus recommended that national sector departments utilises their asset management systems to inform their DRR programmes.

8.3.6.5 *Capacity building, education and training*

Chapter 4 revealed that communities are at the coal-face of disasters in South Africa. Chapter 5 expounded on the importance of capacity building, education and training of communities for effective DRR. The practical application of this was further enunciated on in chapter 7. Participants agreed that the model must make provision or include measures that outline how national sector departments will interface with communities as well as how they will build capacity, educate and train communities on DRR issues within their respective line functions. The statements below characterise some of the responses.

"In a way, we say, let's have a model that will illustrate the policy, science and community interface."

"Training of community to build capacity and sectors must build capacity per mandate."

"Then there is the awareness issues, there is campaigns, you know, there is a host of things that one would like to participate in and to try and streamline all these and yet to give people freedom to still execute the plans of actions dependent on their budgets and their resources and so on."

These findings revealed that national sector departments have a vital role to play in raising awareness particularly at community level on disaster risks related to their line function activities. The success of DRR initiatives hinge on sustainable and adequate allocation of financial resources as discussed in the next section.

8.3.6.6   *Funding of DRR programmes and initiatives*

Adequate allocation of financial resources is essential for effective DRR (see Chapter 7). Funding of DRR programmes was identified by some respondents as a key component that must be covered by the envisaged model. Some of the aspects related to funding are captured in the following statements:

"The model will assist us with the cross-cutting issues and so if we have a model it will also assist us to motivate with National Treasury but these are the gaps that we see and these are the unfunded mandates and probably we can also look at how to resource those unfunded mandates."

"The model must talk about where the decisions are and the funding."

These statements do not only show that respondents understand the importance of funding for DRR, but also show that they are aware that without adequate allocation of resources, effective integration of DRR in national multi-sectoral planning will remain a dream. To summarise, the discussion on the key aspects that must be covered by the model including those captured in the statements above are as follows:

i.   The model must provide practical guidance, norms and standards to national sector departments on how integration of DRR in national multi-sectoral planning must occur;

ii.   The model is expected to outline key areas of responsibility including cross-cutting issues that must be addressed by departments in the process of integrating DRR in national multi-sectoral planning;

iii. Various sector specific legislation forms the basis upon which DRR integration in national multi-sectoral planning must flow from;

iv.   Risk assessment is an important and essential component of the model;

v.   Asset management systems can significantly improve disaster preparedness thereby contributing to effective DRR;

vi.   Some components of the model will be more relevant to some sectors than others;

vii. The proposed model must be linked to the National Disaster Management Framework;

viii. The model must articulate issues of community resilience;

ix.   It is important to ensure that administrative and governance frameworks are put in place for the effective implementation of the model;

x.   The model must raise awareness about the importance of DRR; and

xi.   DRR can be integrated into sectoral programmes such as Land Care within the Department of Agriculture, Forestry & Fisheries and Back to Basics within COGTA.

In chapter 1, it was indicated that this study will explore and describe the performance indicators that will be incorporated into a model for integrating DRR in national multi-sectoral planning in South Africa. The views of respondents with regard to these indicators are presented in the ensuing section.

8.3.7 Thematic area 6: Performance indicators proposed by respondents for the envisaged model for integrating DRR in national multi-sectoral planning in SA

Regulations issued in terms of the Public Finance Management Act require institutions to identify a core set of indicators needed to monitor institutional performance (see chapter 6). Furthermore, an organisation is required to identify a set of programme performance indicators to monitor its performance on an ongoing basis. While an organisation must consult the key stakeholders in the process of identifying performance indicators, it must also ensure that these indicators are reliable, well defined, verifiable, cost effective and appropriate with baseline information and targets expressed in actual numbers (see chapter 6). In terms of the National Treasury's Framework for Managing Programme Performance Information, a good performance indicator should be:

i. **Reliable**: the indicator should be accurate enough for its intended use and respond to changes in the level of performance;

ii. **Well-defined:** the indicator needs to have a clear, unambiguous definition so that data will be collected consistently, and be easy to understand and use;

iii. **Verifiable:** it must be possible to validate the processes and systems that produce the indicator;

iv. **Cost-effective:** the usefulness of the indicator must justify the cost of collecting data;

v. **Appropriate:** the indicator must avoid unintended consequences and encourage service delivery improvements, and not give managers incentives to carry out activities simply to meet a particular target; and

vi. **Relevant:** the indicator must relate logically and directly to an aspect of the institution's mandate, and the realisation of strategic goals and objectives (South Africa, 2007:7).

With this in mind, the question was posed to enable participants an opportunity to identify key indicators that can be utilised to monitor implementation of the envisaged

model by national sector departments. One participant noted that the difficulty associated with DRR indicators is that it is not easy to measure as to whether the interventions that you put in place have lessen the impacts or have prevented the disaster hence DRR does not draw the attention of politicians. Notwithstanding this difficulty, most participants articulated various aspects that must be utilised to monitor implementation of the envisaged model and these views are categorised into various sub-themes as outlined below.

8.3.7.1 *Disaster risk assessment and planning are undertaken by all key sector departments*

Risk assessment is a required step for adoption of disaster reduction policies and measures (see chapter 5). This view is evident in the response of one of the respondents as reflected below.

> *I would say that once you have developed that particular model, in terms of checking if it's working, it will be important to check if whether in terms of risk assessment and even disaster management plan, you should be able to have those processes being there and if all those processes are there because once you have all the disaster management plans from all the sectors and different entities, and you also have your disaster risk assessment activities taking place in various institutions, to a certain extent, you will know that you are going somewhere because once you have that, you know that I will be able to know my risks and the likely impact in terms of vulnerability*

From this discussion, it is evident that the development of disaster management plans based on a robust disaster risk assessment is one of the fundamental indicators that could be utilised to measure the performance of national sector departments in integrating DRR in national multi-sectoral planning.

8.3.7.2   *Disaster impacts are reduced substantially*

In chapter 7 of this study, discussion was presented on the Sendai Framework. From this discussion, it emerged that the expected outcome and goal of the Sendai Framework over the next 15 years were the following:

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

Drawing from this, most participants thought that one of the main indicators that must be utilised to measure performance of national sector departments with regard to integration of DRR in national multi-sectoral is the actual reduction of impact associated with disasters. The statements below capture the views of the respondents in this regard.

"The other thing which is important is also going to check as to whether you are actually reducing the impact in terms of dealing with the risk. If one particular disaster has to hit a particular area, how is it being dealt with in relation to previous response, you can say while cost of the disaster was R100 million and now I am at R30 million and you can see the impact - the vulnerable group are no longer feeling the impact like ever before."

"You see we cannot talk of DRR in a vacuum, the impact of disasters are thought at the grassroots level so you must have as well, the indicators for having reduced like I said at the beginning that it's all about mitigation and adaptation."

"Material and tangible reduction of disasters at grassroots level."

"Statistical data to measure if disasters are increasing or decreasing."

Thus the findings revealed that the views of participants regarding the indicators resonate with the expected outcome of the Sendai Framework which revolves around the substantial reduction of disaster risks and losses associated with disasters.

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Linked to overall reduction in losses is the reduction in response and associated activities which are discussed below.

8.3.7.3 Reduction in disaster response and associated activities

Chapter 4 of this study revealed that a number of governmental entities are responsible for addressing South Africa's disaster risks including responding to disasters. With this in mind, some participants argued that if integrating DRR in national multi-sectoral planning is effective, there should be a significant reduction in disaster response and its associated activities as reflected in this statement.

> *"The place where DRR is going to be visible and seen to be effective is the day that our South African Police Services, Fire Services and Emergency Services are out of the job. The day that they do not have job is the day that we have succeeded because then, there is no more risks."*

This statement shows that effective DRR activities must result in a substantial reduction of activities and costs associated with response to disasters and incidents.

8.3.7.4 Adequate institutional mechanisms are available to support the integration of DRR in national multi-sectoral planning

In section 5.4, arguments were presented on the importance of strong and robust institutions at all levels of government to drive the DRR agenda. Furthermore, in section 5.5, it was revealed that each national organ of state must establish a focal point for disaster management that will be responsible for facilitating and coordinating the disaster management function and integrating disaster management planning processes with national and provincial initiatives and Integrated Development Plans. In line with this, most participants identified the creation of adequate institutional mechanisms to integrate DRR in national multi-sectoral planning as one of the key performance indicators. The following statements bear testimony to the importance of institutional arrangements.

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"First of all, it must be a mandated initiative, so institutionally, they must either have a risk reduction focus broadly that incorporates their functions in terms of their hazards. I think the intention must be there at an institutional level."

"I think we can also look at what directives, policies, strategies, instructions are being sent – what did we do in terms of achieving this?"

"There has to be guidelines that say, for you to have achieved xyz, these are the things you need to have dealt with in your sector department and that has to be spelled out and agreed upon in a Memorandum of Understanding (MOU)."

"Institutional arrangements and having focal points in sector departments and across the board including in municipalities and within communities."

These findings resonate with arguments that were presented in section 5.5 of this study where it was revealed that the establishment of a dedicated unit responsible for coordinating DRR initiatives and activities within the Department of Agriculture, Forestry and Fisheries (DAFF) can be regarded as a fundamental achievement for the agricultural sector. Stated differently, the establishment of a dedicated focal point for disaster management is vital for effective integration of DRR in planning activities and programmes of a sector department as discussed below.

8.3.7.5   *DRR is incorporated in strategic planning instruments such as Annual Performance Plans*

Strategic planning forms the basis upon which resources are allocated to national departments hence DRR initiatives must be integrated into national multi-sectoral planning to be effective (see chapter 6). Most participants thought that the incorporation or inclusion of DRR projects in Annual Performance Plans (APPs) of national departments is an essential indicator that could be utilised to monitor performance as reflected in the statements below.

"What you are saying is simply to say, we have got an Annual Performance Plan (APP) of which all these activities must be incorporated so that we can measure this in success or failure."

"I think to make it more practical and to make sure that you get to where you want, the only thing that is going to demonstrate that is when sector departments develop either their Service Delivery Budget Implementation Plans (SDBIP), Annual Performance Plans or their longer-term plans, there needs to be some sort of disaster management assessment of those activities, which will then indicate via a report of some kind whether or not those activities are geared towards DRR."

These statements show the importance of placing DRR issues on the priority agenda of each sector department and ensuing that projects that aim to reduce disaster risks are part APPs of departments. The inclusion of disaster risks related projects on APPs create an opportunity to raise awareness about DRR and could stimulate discussion (on a quarterly basis during compulsory departmental quarterly review meetings) by the senior management of the department on the implementation of the project. This inclusion can also maximise political ownership due to the fact that performance of departments regarding the APP is reported to the Minister responsible for the department, the Presidency, National Treasury and the relevant Portfolio Committees of Parliament in order to facilitate effective performance monitoring, evaluation and corrective action (see chapter 6).

While there is consensus on the centrality of government in DRR, literature and research have demonstrated that communities vulnerable to different hazards have a primary role to play in the development of strategies to reduce such risks. In light of this, the next section explores the mechanisms that must be put in place to ensure that views and experiences of communities are taken into account during planning for DRR.

8.3.7.6 Mechanisms for integrating inputs from vulnerable communities are available

In section 5.5, arguments were presented on the importance of actively involving communities or groups at risk during planning of DRR projects and programmes. With this in mind, some participants argued that the creation of mechanisms or systems to ensure that the views and inputs of communities at risk of disasters are

considered by national departments during DRR planning is essential as highlighted in the statements below.

> *"In provinces, we have household profiles where rural development officials are collecting household information in terms of survey, that's where you can include the satisfaction of communities with regard to DRR."*

> *"I think the inputs from the vulnerable communities or the communities themselves is very critical because we are doing all that for them and they should now participate and in that I think it also create ownership because people do not think that those things are theirs, they own them, they say it's government things and that's why they do not get to own those programmes and participate actively and see how they really benefit them."*

It is clear from these statements that community involvement is crucial for sustainability and ownership of projects that seeks to reduce disaster risks. It is important that objective systems are put in place to measure the implementation of DRR projects and the extent to which these are integrated into planning and programmes of each sector department. The inclusion of DRR in individual performance agreements as well as in the business plans of relevant units with departments is vital as discussed below.

8.3.7.7 DRR is incorporated in performance contracts at both individual and organisational levels

Disaster management is not a separate discipline but a general issue that needs to be considered in many areas and sectors and at all levels of politics, society and economy (see chapter 5). Chapter 7 further enunciated that it is important for every development plan of each department to incorporate elements of DRR. Some participants thought that in order to monitor the integration of DRR into national multi-sectoral planning, it is essential to have an indicator that looks at the extent to which sectors have incorporated aspects related to DRR at both individual and organisational levels.

"Obviously in certain positions, one of the Key Performance Areas (KPAs) need to look towards the DRR side because if it's not on the KPA, then it becomes ad hoc."

"DRR integration must be linked to performance (individual and organisational). If it is not linked, you cannot measure performance."

"I agree that participation should be delegated at the appropriate level and also it should be included in the performance agreement because when you start participating, it's not about attending, when you participate, you have to action whatever that was agreed on, you have to go back and prepare presentation, consult, and implement those things"

From this discussion, it is evident that incorporating DRR into individual as well as organisational performance frameworks is fundamental to determine the extent to which national sector departments are integrating risk reduction measures into their respective planning initiatives and programmes. The issues raised by participants regarding the indicators that can be used to monitor performance including those captured in the statements above can be summarised as follows:

i.   A good indicator must be reliable, well-defined, verifiable, cost-effective, appropriate and relevant;

ii.   The indicators must be aligned to the National Disaster Management Framework and the Sendai Framework for Action;

iii.   Disaster risk assessment and planning by national sector departments is an essential aspect in integrating DRR in national multi-sectoral planning;

iv.   The reduction of impact associated with disasters is a fundamental indicator of effective integration of DRR in sectoral planning;

v.   Institutional ownership is essential for successful integration of DRR in both individual and organisational performance management systems;

vi.   The cross-cutting nature of DRR necessitates that it must be reflected across all sectored programmes and initiatives;

vii.   The logic model expressed in National Treasury's Framework for Managing Programme Performance Information is appropriate to guide the development of performance indicators to measure progress in integrating DRR in national multi-sectoral planning;

viii. The establishment of dedicated disaster management focal points is critical for successful integration of DRR in planning initiatives; and

ix.   Communities possess skills, knowledge (including indigenous), and resources which must be taken into account during integration of DRR in planning be sector departments.

As discussed in Chapter 5, in order to reduce disaster risks, it is essential to mobilise a broad coalition of partners from all sectors of society. To this end, respondents were asked to share their views on what the role of state entities, research organisations, national and international organisations in the implementation of a model for integrating DRR in national multi-sectoral planning. A discussion on this matter follows in the next section.

8.3.8   Thematic area 7: Roles and responsibilities of academic, research organisations, national and international development organisations in the implementation of a model for integrating DRR in national multi-sectoral planning in SA

While the primary responsibility for disaster management in South Africa rests with the government, the legislative framework recognises that active participation of all stakeholders, including all spheres of government, the private sector, civil society formations, technical experts, traditional leaders and communities within the context of cooperative governance is of critical importance for effective implementation of the function (see chapter 5). On this question, respondents unanimously agreed that these organisations have a key role to play in the implementation of a model for integrating DRR in national multi-sectoral planning within the South African environment. While one participant cautioned that international organisations cannot drive programmes of integrating DRR in national multi-sectoral planning as they have different agendas, it was recognised that these organisations have a role to play

within a well-coordinated environment. Notwithstanding this concern, the general consensus among the respondents was that these organisations bring a wealth of knowledge and expertise as outlined in the sub-thematic areas below.

8.3.8.1   Empirical testing of the model

In this regard, some participants indicated that once the model is developed, there will be a need for empirical testing and that research organisations can play an important role as reflected by the statement below.

> *"In terms of research institutions, I think there is a need I mean, you are looking at this model and trying to develop it and even looking at the literature. There is a need to empirically go and test the model if it works or not, I think that will be the duty of research organisations to take the model that you have, test it maybe with practitioners in those sector departments and see if it works or not if it doesn't, then look at elements that might be modified you know and develop further the model."*

From this discussion, the general agreement was that research and academic institutions can play an important role in the empirical testing process of the model. Linked to this is the issue of providing expertise and research which is discussed below.

8.3.8.2   Provision of expertise and research

As discussed in chapter 5, the NDMC must promote research into all aspects of disaster management. With this in mind, all participants agreed that research organisations, academic institutions, national and international organisations can contribute to the implementation of a model for integrating DRR in national multi-sectoral planning through the provision of technical expertise and research. The following statements reflect some of the issues raised by participants regarding the provision of technical expertise and research:

> *"With regard to research, I think those guys (research organisations) are very much critical because these are the bodies that to a certain extent assist in*

acquiring and transmitting that knowledge to different people. Then even actually, there are gaps in terms of dealing with DRR hence they should be able to close those gaps so that we should improve what we are doing."

"All of us tertiary institutions work with Masters and Doctorate students and these guys' main aim is to research. I think the research activities or what the NDMC needs to know needs to be well-aligned with the students because if that's the case, there will be a lot of knowledge generated in terms of the things that the centre needs to know and want to know and actually that could be one of the main roles because we have researchers available."

"I think with climate change, the more research you do, the more accurate it can become. Research is thus critical and must be done by these agencies and research must also inform sector programmes."

"I think that research is very important and is a critical component of informing your plan as well. You need factual and scientific base of information to ensure that you plan accordingly, also you are able to focus with the information that it is provided."

"Research is obviously crucial and it can happen during operations but the result of the research is only going to manifest at the next occurrence or event."

"Look, their role really, particularly the research organisations, is to update us on the trends that are happening out there, success stories, also failures because one also learns from failures because one thing that happens all over the world is that the focus is on success stories and the research organisations can actually make us aware of what are the failures."

"I think the role of research is very important, it's like they place issues on the policy agenda to say, this need to be changed."

"Look, I think these have a very critical role to play. I think as we are aware, state entities are developed to provide technical support, they are a technical or they are supposed to be a technical wing of the state. Looking at your ARC [Agricultural Research Council] and whatever, so they specialised and have to

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provide technical guidance and influence the policies and decisions of government so to me they are relevant."

The findings from this discussion reveal that majority of respondents recognise that research and academic institutions in particular have a key role of undertaking research. Some respondents argued for DRR to be effective, research must inform policy and programme development within the DRR sphere. These responses also reveal the need for partnerships between DRR agencies (led by the NDMC) and research as well as academic institutions for purposes of research and sharing of expertise. While all participants agree that academic and research institutions are primary role players within the research arena, some respondents highlighted that national and international organisations have a key role to play in the integration of DRR in national multi-sectoral planning through the provision of funding. The respondents' views on this sub-thematic area are discussed in the ensuing section.

8.3.8.3   *Provision of financial resources*

The integration of DRR in national multi-sectoral planning requires adequate allocation of resources. While the Sendai Framework for DRR recognises that each state has the primary responsibility to prevent and reduce disaster risks, it (Sendai Framework) also accepted that developing countries, middle-income and other countries facing specific disaster risk challenges need adequate, sustainable and timely provision of support including through finance, technology transfer and capacity building from developed countries and partners (see chapter 7). It is within this context that some respondents thought that national and international organisations in particular have a primary responsibility to support the integration of DRR including through the provision of financial resources. This view is encapsulated in these statements that were made during the interviews.

> *"They also assist sometimes with financial resources."*

> *"They obviously have an important role to play because the state cannot provide all the funding, all the resources, all the money, everybody always look up to the state to solve problems."*

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8.3.8.4 Benchmarking and sharing good practices

The international community accepts the need to share the necessary technology to prevent, reduce and mitigate disaster. This should be made freely available and in a timely manner as an integral part of technical cooperation (see chapter 5). The majority of respondents alluded to the role that research, academic and international development organisations can play in providing benchmarks and sharing good practices. The statements below encapsulate these views.

"That also include your international organisations, these guys garners experience from various countries and say this is how it's done in a particular country and in this particular country, they did it in this particular fashion and if you do it this way, you will fail."

"To provide best practices and expertise in terms of how these can be tailor-made to best suit the South African environment."

"Research organisations and non-governmental organisations can assist with benchmarks."

Research organisations can provide us with checks and balances, can review implementation progress

This discussion has revealed that organisations such as academic, research, national and international organisations have a key role to play in supporting effective integration of DRR in national multi-sectoral planning within the South African environment. The issues raised by participants including those captured in the statements above can be summarised as follows:

i.   Currently, there is weak focus on DRR research;

ii.   Research is an important element of DRR and should inform policy and programme development at sectoral level;

iii.   Research must inform disaster management planning;

iv.   Research institutions have a key role to play in monitoring disaster trends;

v.   Research and academic institutions play a critical role in reviewing implementation progress and in providing checks and balances which are essential for effective DRR;

vi.   International organisations have a significant role in supporting integration of DRR into sectoral planning initiatives through the provision of funding, benchmarking and sharing good practices;

vii. International organisations are objective and independent because they are free from politics;

viii. Effective coordination is essential when multiple role players are involved in DRR initiatives and programmes;

ix.   Research, academic national and international organisations play an important role in placing DRR issues on the policy agenda;

x.   Conscious and sustained efforts are required to encourage research organisations to prioritise DRR research; and

xi.   International organisations play an important role particularly on cross-border DRR initiatives.

Having outlined the roles and responsibilities of research, academic, national and international organisations, the next section presents the last thematic area which deals with the interface between DRR and long-term planning.

8.3.9   Thematic area 8: Linkage between DRR and the National Development Plan

South Africa adopted a National Development Plan (NDP) during 2012 which is a broad strategic framework to guide key choices and actions (see chapter 6). The link between DRR and long-term planning was enunciated in chapter 7 where the importance of incorporating disaster reduction into economic and social development plans at all levels was highlighted. A question was raised to verify if participants see a need for DRR to be reflected in long-term strategic planning instruments such as the NDP in the South African context. Most respondents agreed that DRR must be

reflected in the NDP. To complete the focus of the question, a follow-up question sought to obtain the key DRR aspects that must be reflected in the NDP. A number of issues were raised as set out below:

i.   The NDP represents the highest level of planning within government and DRR issues must be reflected;

ii. Natural and anthropogenic hazards can undermine socio-economic development;

iii. Priorities of action from the Sendai Framework for DRR must be aligned to the NDP;

iv. Understanding current disaster risks is essential for effective integration of DRR in the NDP;

v.   Disaster management centres across all spheres (led by the NDMC) must be central in ensuring that DRR issues are reflected in the NDP;

vi. Political ownership is essential for effective integration of DRR in the NDP;

vii. Placement of the DRR function at the highest possible office is important for effective integration of disaster risks issues in the NDP;

viii. The NDP is a general document which gives guidance to all sectors on what needs to be done;

ix. DRR is cross-cutting and must be addressed across the various sectors of the economy as outlined in the NDP;

x.   Planning must ensure that vulnerability to disaster risks is reduced;

xi. The NDP reflects on various issues (including climate change) which seek to reduce disaster risks even though these are not specifically categorised as DRR;

xii. The NDP integrates Millennium Development Goals which seeks to reduce disaster risks;

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xiv. There is no need to have a separate chapter on DRR due to the cross-cutting nature of the function; and

xv. An integrated approach to planning is critical.

These views of participants reflected that DRR is inextricably linked to sustainable socio-economic development hence it is important for the NDP to reflect somewhat on measures that seeks to reduce disaster risks in the country. With this in mind, and taking into account the issues that has been raised in section 8.3.9 above as well as discussion presented in chapter 7, the key DRR aspects that must be reflected in the NDP are broadly summarised and presented in the next section.

8.3.9.1 Key DRR aspects that must be reflected in the National Development Plan

8.3.9.1.1 Broad policy statement on DRR

The NDP should reflect in general terms the goals of reducing disaster risks in the country as espoused in the Disaster Management Act, 2002 and the National Disaster Management Framework. It is important to provide a macro-framework for relevant sector departments to reflect on DRR during their strategic planning activities.

8.3.9.1.2 Disaster risk identification

Understanding of disaster risks, hazards and vulnerabilities is essential for effective DRR (see chapter 7). Most participants agreed that it is important to ask the question regarding the potential disaster risks associated with different options that are pursued by the country in its endeavour to grow the economy and create jobs as espoused in the NDP. Stated differently, key disaster risks must be identified, mapped and duly considered by sector departments in socio-economic development plans in order to ensure that such initiatives do not increase the vulnerabilities of communities to hazards. This view is evident in the response of one of the respondents.

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"For each specific area, you will map to say, these are the disaster risks and this is how they can be addressed".

Thus it is important to note that most participants thought that the NDMC must lead the process of risk identification and risk assessment as well as ensuring that this is incorporated in the NDP.

8.3.1.9.3 Alignment of the National Development Plan with Sendai Framework for DRR

Similar to the Sendai Framework for DRR, the NDP has a 15 year planning horizon and most participants argued that these must be aligned. This means that the four priority areas for action must form the basis upon which DRR aspects are incorporated into the NDP (see chapter 7 for a detailed discussion on the Sendai Framework for DRR). The alignment and integration of the Sendai Framework for DRR is an approach adopted by India in its 2016 National Disaster Management Plan (see chapter 7).

8.3.1.9.4 DRR advocacy and awareness

Some participants thought that raising awareness about the importance of DRR is important and essential to obtain political support and ownership which is necessary for effective integration of measures to reduce risks in the national long-term planning. Awareness and advocacy are important to raise the profile of the function and demonstrate how it can contribute to achievement of the country's national development agenda. This statement from one of the respondents bears testimony to this.

"Disaster Management must be clear on what we can offer and because we are not clear, we tend to be viewed as a function that it is not important".

The responses set out in this section highlighted the importance of advocacy and awareness to raise the profile of DRR in order to ensure that it is part of the strategic development agenda of the country. In general, participants understood that the NDP is a blueprint for socio-economic development and since development can be

negatively impacted upon by hazards, it is thus important that the plan reflects or recognises the key disaster risks facing South Africa. While most respondents agreed that DRR issues are important and must be incorporated in the NDP, they believed that this can be done successfully without having a dedicated chapter on DRR due to the cross-cutting and multi-sectoral nature of the function. It was further argued that to a large extent, the NDP in its current form does reflect on key issues related to DRR in broad and general terms and each sector department must implement pertinent to its line function and mandate.

8.4   SUMMARY

This chapter commenced with an overview of the research methodology that was utilised in this study. Respondents were able to articulate what DRR entails and in this regard, affirmed that DRR is indeed an important pillar of sustainable development as it seeks to cushion services, critical infrastructure and the environment against harm from natural and anthropogenic hazards respectively. Respondents unanimously agreed that DRR is a multi-thematic and multi-sectoral function which must be integrated in national multi-sectoral planning for it to be effective. Respondents argued that each national sector department must identify disaster risks that can impact on its operations and include these in its planning and programmes. In essence, participants agreed that each sector department must ensure that DRR is included in its risk management plan. Various mechanisms for integrating DRR in national multi-sectoral planning were identified by the participants. Furthermore, respondents agreed that intergovernmental relations structures play a central role in placing DRR issues on the policy agenda as well as ensuring vertical alignment between spheres of government. The findings further confirmed that disaster management centres across all spheres of government in general and the NDMC in particular play a fundamental role of supporting integration of DRR in national multi-sectoral planning.

Furthermore, the findings revealed that South Africa has adequate, robust and enabling DRR legislative and institutional systems to support integration of DRR into planning initiatives of national sector departments as well as for effective implementation of the envisaged model. It also emerged that while the country has

an internationally acclaimed DRR legislative frameworks (Disaster Management Act and the National Disaster Management Framework), weak implementation remains a major challenge. The legislative, policy and institutional frameworks guiding multi-sectoral planning in the country as identified by the respondents were consistent with the frameworks discussed in chapter 6. From this discussion, participants generally agreed that existing planning policies and frameworks are adequate and do support integration of strategies to manage disaster risks. It also emerged that existing strategic planning frameworks particularly the component dealing with and risk management can be utilised as an entry point to integrate DRR.

With regard to the role of the NDMC in supporting integration of DRR in national multi-sectoral planning, the findings reveal that indeed, this entity plays a central and fundamental role. The importance of developing a integrated model for DRR was unanimously affirmed and key aspects that must be covered or addressed by the model as identified by the respondents included institutional and regulatory frameworks, disaster risk identification, early warning systems, mechanisms for funding DRR to name but a few. Furthermore, the findings revealed that the model must provide practical guidance as well as norms and standards to sector departments on how integration of DRR in national multi-sectoral planning must occur. While participants agreed that to a large extent some components of the model will be more relevant to some sectors than others, the findings revealed that the proposed model must be linked to the National Disaster Management Framework. Several indicators that can be utilised to monitor the implementation of the model were identified by the participants. The importance of research in DRR was affirmed and the role of research organisations, academic institutions, national and international organisations in driving this was recognised by all respondents. The interface between DRR and national development planning was outlined and it was emphasised that planning must ensure that vulnerability to disaster risks is reduced. This interface, together with other considerations was used to build a model for integrating DRR in national multi-sectoral planning for South Africa as outlined below.

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CHAPTER 9:

CONCLUSIONS AND RECOMMENDATIONS: A MODEL FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING FOR SOUTH AFRICA

9.1 INTRODUCTION

In the previous Chapter, the empirical research results were analysed and discussed. The strategies and mechanisms for integrating DRR in national multi-sectoral planning were outlined empirically. In addition, the role of the NDMC in driving this integration was also investigated. The vital role that intergovernmental relation structures play in placing disaster risk issues on the policy agenda as well as ensuring vertical alignment between spheres of government was also empirically unravelled. Moreover, Chapter 8 discussed the key aspects needed by the proposed model for integrating DRR in national multi-sectoral planning within the South African environment. This study argues that the integration of DRR in planning initiatives of national sector departments is fundamental for the country to better manage its disaster risks.

In addition to the discussions on the findings as outlined in Chapter 8, the current Chapter explains the contribution of the theoretical and empirical studies to integrate DRR in national multi-sectoral planning. This is achieved through the verification of the study's objectives. It should also be noted that each chapter of the research was structured to achieve a particular objective. The purpose of Chapter 9 therefore is to provide evidence that the objectives of the study have been achieved in full. The Chapter further presents conclusions and recommendations on mechanisms to integrate DRR in national multi-sectoral planning. It also stipulates how the study contributes to the body of knowledge in the field of DRR.

The Chapter opens with an overview of the chapters in which the study has been divided. This is then followed by an assessment to determine how the overall and individual objectives of the study have been achieved. A model for integrating DRR in national multi-sectoral planning in South Africa is then presented. Strategies for the operationalising of the model and the performance indicators are also discussed.

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Then, the Chapter reflects on the contribution of this study to the field of DRR. The Chapter also identifies the limitations of the study followed by areas for further research. Subsequently, the Chapter suggests recommendations on strategies and ways to integrate DRR in national multi-sectoral planning in South Africa. It closes with an overall conclusion of the study.

9.2 OVERVIEW OF CHAPTERS

The structure of chapters in this study was designed in order to ensure that the objectives of the study are fully addressed. Chapter 1 of the study provided an overall overview and acknowledged that DRR is a long-term national investment that needs to be mainstreamed through a country's ministries and activities. The Chapter further revealed that DRR as a multi-disciplinary and multi-sectoral endeavour is categorised as a programme of diverse institutions hence the need to ensure integration across sectors. Thus the Chapter identified the need to integrate DRR strategies in national multi-sectoral planning in South Africa. To fully address the problem, the study identified research questions and five research objectives with the understanding that addressing these questions and objectives would achieve the purpose to attend to the problem statement. The theoretical statements on which the study is grounded were also outlined. The research methodology that was applied to execute the study is also outlined in detail in Chapter 1. The Chapter concludes with the structure of the study according to the chapter layout.

Chapter 2 positioned the theoretical foundation of the study through an investigation of organisation theory, its philosophical constructs, major schools of thought that evolved through different eras, as well as a reflection of contributions that specific identified scholars, researchers or practitioners made who are also involved in this field of study. Chapter 2 critically scrutinised the basic tenets of the three schools of thought that has emerged as dominant paradigms in the evolution of organisation theory. In this Chapter, the organisation theory was defined as researching structure, function and performance of organisations and the behaviour of groups and individuals within them. This Chapter identified the important role that organisations have in society by revealing that they (organisations) exist to (1) bring together resources to achieve desired goals and outcomes, (2) produce goods and services

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efficiently, (3) facilitate innovation and (4) adapt to and influence a changing environment. As such, acquiring knowledge and insight into the way organisations operate will assist to frame the role of different organisations in integrating DRR in national multi-sectoral planning in South Africa. Moreover, the effective implementation of a model for integrating DRR requires a number of diverse organisations to be successful with impact. While the Chapter examined the contribution of eminent scholars and practitioners to organisational theory throughout its evolution, it also presented the various components of organisational theory. Having discussed that organisations exist to achieve desired goals in Chapter 2, it was imperative to focus the discussion in Chapter 3 on how organisations can utilise strategic planning to achieve its objectives in a rapid changing environment.

Chapter 3 focused the discussion on how the theory of strategic planning informs national multi-sectoral planning. In essence, this Chapter examined and explored how organisations can apply strategic planning to survive in a fast changing environment and remain relevant to their stakeholders. As such acquiring an understanding on how organisations undertake strategic planning will assist in framing how national sector departments must integrate DRR in their strategic planning initiatives in order to reduce disaster risks. The Chapter presented a discussion on the origin of the concept of strategy, its importance and the different levels of strategies found within an organisation. Chapter 3 further presented an n-depth discussion of the strategic planning process and a model for undertaking strategic planning (the Bryson model also known as strategy change cycle) which is designed to assists organisations to meet their mandates, fulfil their mission and create public value. While the Chapter explored the benefits of strategic planning, it also provided a critique of strategic planning that must be borne in the mind of those involved in the process.

Chapter 4 presented an overview of South Africa's disaster risk profile with a view to provide context to DRR practices and discourses within the country's environment. South Africa's disaster risk profile is inevitably impacted by its geographic location within the southern Africa region. Against this background, Chapter 4 commenced with a brief analysis of disaster risks within the Southern African Development Community (SADC) to provide a regional perspective to the DRR discourses in the

South African environment. This chapter also presented an in-depth discussion of South Africa's disaster risk profile and covers the key hazards which the country has to face, factors that increases the country's vulnerability to these hazards as well as its impacts. The chapter demonstrated that like in most developing countries, urbanisation and climate change are amongst the key drivers of disaster risks in the country. In view of this, the link between urbanisation and disaster risks was explored before turning attention to the interface between climate change and disaster risks within the South African environment. While noting that there are other hazards (natural and anthropogenic) that can occur and result in disasters, the focus of discussion in Chapter 4 was on the three primary hazards i.e. floods, wildfire and drought as well as aspects that increases vulnerability of the country to these hazards. This Chapter concluded by acknowledging that a number of government entities are responsible to address the country's disaster risks and for the implementation of DRR initiatives.

Whereas Chapter 4 focused on key disaster risks challenging the country, Chapter 5 aimed to provide an understanding of DRR in South Africa with a view to address the research objective to investigate and analyse existing legal instruments and frameworks governing this specific function in the country. This Chapter commenced with a brief discussion on the evolution of DRR with specific focus on practices and discourses in post-Apartheid South Africa in order to provide context and perspective to the approach that the post-1994 government adopted to manage disaster risks. Linked to this was a discussion on key global initiatives that had a fundamental influence on the development of DRR within the South African environment. Secondly, this Chapter provided an overview of key legislation relevant to DRR within the South African environment. Having outlined the evolution of DRR and the legislative imperatives that underpin it, the national institutional and governance arrangements for the function in the country was discussed. As highlighted in Chapter 4, various agencies are responsible for managing disaster risks in the country. In this perspective, Chapter 4 concluded with an exposition on the multi-sectoral nature of DRR within the South African environment.

From the discussion on Chapters 4 and 5, it is evident that within the South African context, DRR is primarily a responsibility of all spheres of government. Chapter 5 has

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shown that for DRR to be successful, it must be integrated into national multi-sectoral planning. Chapter 6 provided the reader with an understanding of how multi-sectoral planning developed within the South African environment. The Chapter gave an overview of the theoretical and practical foundations for the classification of government activities. The state plays a primary role in the implementation of DRR and in view of this, a discussion of the South African state system was provided. This was followed by a discussion of the origin and evolution of government departments within the South African environment. The Chapter concluded by exploring the legislative framework, planning instruments and planning cycle processes supporting multi-sectoral planning in South Africa. A discussion of these frameworks was vital and imperative to understand and identify the entry points from the frameworks that could be utilised to integrate DRR.

Chapter 7 proposed a comparative analysis of international models for integrating DRR in national multi-sectoral planning from Brazil, Russia, India and China (BRIC). The Chapter opened by exploring the three main global instruments that the international community has adopted to reduce disaster risks over the last 20 years i.e. (a) Yokohama Strategy and Plan of Action for a Safer World, 1994, (b) Hyogo Framework for Action and lastly (c) Sendai Framework for DRR. The discussion of these international instruments was imperative to provide context to the analysis of models to integrate DRR in national multi-sectoral planning. In order to contextualise this discussion, the Chapter provided a brief background on the formation and evolution of the BRICS as a platform for cooperation on matters of common and mutual interests. In essence, this chapter profiled each country in terms of its disaster risk profile, existing legislative framework and institutional arrangements for DRR as well as the mechanisms and or models for integrating DRR in national multi-sectoral planning with a view to draw lessons and good practice that could inform the proposed model for South Africa. While the analysis showed that clear and robust legal and institutional frameworks forms the foundation for effective DRR and its integration in national multi-sectoral planning, the Chapter also outlined the important role the various sector departments play in view of the multi-sectoral nature of DRR.

Chapter 8 posed an analysis and interpretation of the research findings. The Chapter provided a brief discussion of the methodology that was applied in order to

strengthen discussions regarding the methodology, presented in Chapter 1. With this in mind, the Chapter commenced with a brief outline of the methodology that was utilised for data collection and data analysis. The findings emanating from both focus group interview sessions and face-to-face interviews are then presented and discussed thematically. Eight major themes emerged from these findings, viz. Integration of DRR in national multi-sectoral planning, DRR legislative and institutional systems, legislative, policy and institutional frameworks for multi-sectoral planning in South Africa, role of the NDMC in supporting integration of DRR in national multi-sectoral planning, key aspects that must be covered by the model, performance indicators proposed by respondents for the envisaged model for integrating DRR in national multi-sectoral planning in South Africa, as well as roles and responsibilities of academic, research organisations, national and international development organisations in the implementation of a model for integrating DRR in national multi-sectoral planning in South Africa, and then finally the between DRR and the National Development Plan (NDP). From this discussion, it emerged that while South Africa has the requisite that legal and institutional frameworks must support the integration of DRR in national multi-sectoral planning, poor implementation and non-compliance with legislative prescripts coupled with weak enforcement mechanisms are some of the key factors hindering the country's disaster management system.

Chapters 2 and 3 gave the theoretical grounding, while the country's disaster risk profile and its DRR systems were discussed in Chapters 4 and 5 respectively. The reader is informed about the framework for multi-sectoral planning in Chapter 6. Then, Chapter 7 draws from international good practices, Based on the empirical findings as discussed in Chapter 8, this Chapter (Chapter 9) proposes a model for integrating DRR in national multi-sectoral planning in South Africa.

9.3 ACHIEVEMENT OF THE OVERALL OBJECTIVE OF THE STUDY

This study developed a model for integrating DRR in national multi-sectoral planning for South Africa with a view to assist national departments in integrating DRR in their sector planning initiatives, thereby reducing disaster risks in the country. Through this

model, understanding disaster risks in South Africa and the alignment of strategies and measures to reduce disaster risks, as well as to integrate them into planning initiatives and systems, has resulted in the various national sector departments to be enhanced. While recognising the multi-sectoral nature of DRR within the South African environment and globally, the development of the model took into consideration the fact that some national sector departments have primary responsibilities for the function in view of the disaster risk profile facing the country.

The overall objective of the study was achieved by addressing the individual objectives of the study and through the development of a model in Chapter 8. This was done through a study of the literature as demonstrated in Chapters 2 to 7 as well as the empirical research whose findings are presented and discussed in chapter 8. The ensuing section demonstrates how each of the individual objectives was addressed.

9.4   ACHIEVEMENT OF INDIVIDUAL OBJECTIVES OF THE STUDY

The study was founded on the achievement of five objectives. All of these objectives were formulated to complement one another in order to achieve the main purpose of the study. To realise the objectives of the study, Chapters were systematically sequenced and contextually aligned to ensure a link between the Chapters, thereby progressively contributing to the development of the model. The achievement of each individual objective as summarised in Chapter 1 of the study is outlined below.

9.4.1   Objective 1: To define, assess, examine and critically analyse the theories of Organisation and Strategic Planning and how they inform national multi-sectoral planning

The definition, examination and analysis of organisation and strategic planning theories were successfully addressed in chapters 2 to 3. As the focus of the study was on integrating DRR in multi-sectoral planning which must primarily be driven by organisations (national government departments), a focus on organisation theory and organisations was premised on its utility in addressing aspects or questions related to how to organise to achieve organisational goals, how to achieve results by

structuring activities and how organisations function as well as how they affect and are affected by the environment in which they operate. Furthermore, a focus on organisation theory was based on the understanding that it makes an important and useful contribution to the study of government and public management.

The dominant currents in organisational thinking since the beginning of this century which have taken the form of a thesis (classical organisation theory), antithesis (neo classical/ human relations theory), and synthesis (modern organisation theory/ open-system theory) were discussed to build a strong theoretical foundation for the study. This exposition included the basic tenets and assumptions of each school of thought and contributions made by major writers/ scholars throughout the historical evolution of organisation theory.

Whereas Chapter 2 provides an overview of the organisation theory and its key components, Chapter 3 gives the reader an overview of strategic planning theory. This chapter examined and explored how organisations can use strategic planning to survive in a fast changing environment. It is worth noting that Chapter 3 presented a strategic planning model viz. Bryson Model also known as the strategy change cycle which is designed to assist organisations to meet their mandates, fulfil their mission and create public value while particularly adaptable to public organisations. This model has several steps and one of these entails the identification of organisational mandates and this resonates with the framework for strategic planning within the South African environment which essentially compels government departments to link their strategic planning with the progressive implementation of their mandates, policies and programmes.

9.4.2   Objective 2: Investigate and analyse existing legal instruments and frameworks governing DRR in South Africa

While chapter 4 provided an overview of South Africa's disaster risk profile in order to provide the reader with context to DRR practices and discourses within the country, it was in chapter 5 where existing legal instruments and frameworks governing DRR in the country were examined. The chapter opened by providing a brief discussion on the evolution of DRR with specific focus on practices and discourses in post-Apartheid South Africa in order to provide context and perspective to the approach

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adopted by the post-1994 government in managing disaster risks. Linked to this was a discussion on key global initiatives that had a fundamental influence on the development of DRR within the South African environment.

The chapter also provided an overview of key legislation relevant to DRR as well as the national institutional and governance arrangements for the function in the country. The analysis of legislation revealed that the South African regulatory framework recognises the multi-sectoral nature of DRR which makes the adoption of an integrated and coordinated approach vital if the country is to reduce disaster risks. Within this analytical framework, the chapter concluded by exploring the multi-sectoral nature of DRR in the country including the DRR roles and responsibilities of national sector departments and organs of state. This discussion revealed that a disaster management plan of an organ of state must form an integral part of its planning and that disaster risk management responsibilities must be integrated into the routine activities of the various sectors and disciplines within national departments and their sub-structures. With this in mind, it was argued in this chapter that each national department must establish a focal/nodal point for disaster management which will be responsible for integrating disaster management planning processes with planning initiatives of other spheres of government. The importance of sector specific legislation in supporting integration of DRR in national multi-sectoral planning was also highlighted in this chapter.

9.4.3 Objective 3: Investigate and analyse how national multi-sectoral planning developed in South Africa

The objective of investigating and analysing how multi-sectoral planning developed in South Africa was achieved through chapter 6. Whereas chapter 2 examined and critically analysed organisational theory given its (organisational theory) utility in addressing aspects or questions related to how to organise to achieve organisational goals and how to achieve results by structuring activities, this objective was made necessary as the focus of the study was on integrating DRR in national multi-sectoral planning. Bearing this in mind, it was thus necessary to understand the theoretical and practical principles that underpinned the classification of government activities (departmentalisation) within the South African environment. Various theoretical foundations for the classification of government activities i.e. classification according

to (1) geographical area or area served (2) commonality of functions or organisation by process (3) client or population group requiring the service or organisation by clientele (4) product or service to be rendered or organisation by purpose and (5) domestic nature of function were discussed in chapter 6 in order to build a strong foundation for the study. In addition to this, practical foundations for the classification of government functions and activities were also explored with a view to understand how they informed the structuring of government departments within the South African environment.

The fact that multi-sectoral planning occurs within the South African state necessitated a discussion on the concept of the state, its key characteristics and primary functions. As part of this objective, the separation and distribution of powers among the executive, legislative and judicial branches (called *trias* politica) which is one of the fundamental principle underlying modern democratic states was discussed with a view to understand how this influences the functioning and structure of the South African state. This discussion has assisted in providing a better understanding and context to the origin and evolution of government departments within the South African environment. The evolution of departments within the South African state system was traced back to the formation of the Union of South Africa in 1910 till 1994.

Chapter 5 outlined that in terms of the South African constitution, national government has key responsibilities for managing disasters in the country and in view of this, a discussion of the country's governance structures and its fundamental characteristics was provided. The importance of national governance structures in coordinating the work of various government departments and in supporting multi-sectoral planning was acknowledged. Having outlined the national institutional structures that play a primary role in ensuring integrated planning by the various government departments, the logical progression was to examine the framework for multi-sectoral planning in South Africa. The discussion on the framework for multi-sectoral planning was built on the theoretical foundations of chapter 3 which focused on strategic planning theory. This exposition was important to understand how the legislative framework of strategic planning, planning cycle processes, linkage between planning initiatives of departments and long-term planning through the

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MTSF and the NDP, linkage between national, provincial and local government planning frameworks as well as mechanisms for institutionalising this (strategic planning) within the South African government system.

While the discussion on the content of strategic plans revealed that in undertaking strategic planning each department must outlines its vision, mission, values and strategic outcome oriented goals that it aims to achieve over a five year period, it also emerged that the department must outline the risks that must be managed in pursuit of desired goals. The fact that the framework for strategic planning makes provision for risk management provides an opportunity to reflect on disaster risks and integrate measures and strategies that seeks to reduce such risks. Thus this objective was fully addressed through the study of literature in chapter 6.

9.4.4   Objective 4: Explore and examine international models for integrating DRR with national multi-sectoral planning

This objective was addressed through an examination of models for integrating DRR within Brazil, Russia, India and China commonly known as the BRIC in chapter 7. A brief discussion of three international DRR instruments viz. Yokohama Strategy and Plan of Action for a Safer World, Hyogo Framework for Action and the Sendai Framework for DRR was presented to provide context on international practices and discourses on matters associated with DRR. These frameworks reaffirmed that DRR needs to be integrated into sectoral planning programmes for it to be efficient and effective. Moreover, the analysis revealed that while robust legislative and institutional frameworks are vital for DRR, there is no one-size-fits-all hence these must take into consideration the context and dynamics of each country.

The importance of developing a national disaster management plan which promotes the implementation of integrated measures to manage disaster risks was outlined. In chapters 5 and 8 of this study, it was argued that it is important to place the disaster management function at the highest institutional level in order to enable effective horizontal and vertical coordination. This chapter demonstrated that indeed, the placement of the function significantly contributes to improved management of disasters and is essential to maximise political ownership and buy-in. The identification of roles and responsibilities for the various departments as well as the

assignment of ministries to hazards minimises duplication and forms a sound basis for integrating measures to reduce disaster risks in planning initiatives of these departments.

The requirement from India that a development plan of every ministry or department must incorporate elements of DRR including aspects related to early warning systems for different hazards as well as generate community awareness were identified as good practices that South Africa could learn from. The fact that the five year plan of India recognises DRR as a development issue and provides guidelines for mainstreaming this (DRR) into development planning is another example that is applicable to South Africa. The fundamental lesson emanating from the Tenth plan of India is that the design of development projects should take DRR into account, otherwise, such development ceases to be sustainable and eventually causes more hardship and losses to the country. In essence, mainstreaming DRR into development planning within the Indian environment means looking critically at each activity that is being planned, not only from the perspective of reducing the vulnerability of that activity, but also from the perspective of minimising that activity's potential contribution to the hazard. The adoption of a national comprehensive disaster prevention and reduction plan by the People's Republic of China with clear DRR tasks and targets is another area that South Africa can draw lessons from. Thus this objective of exploring and examining international models for integrating DRR with national multi-sectoral planning was fully addressed in chapter 7.

9.4.5 Objective 5: Explore and describe the indicators/performance criteria/parameters to be incorporated into a model for integrating DRR in national multi-sectoral planning in South Africa

In Chapter 1, it was indicated that this study will explore and describe the performance indicators that will be incorporated into a model for integrating DRR in national multi-sectoral planning in South Africa. Flowing from this, in Chapter 6, it was argued that an organisation is required to identify a set of programme performance indicators to monitor its performance on an on-going basis. While an organisation must consult its key stakeholders in the process of identifying performance indicators, it must also ensure that these indicators are reliable, well defined, verifiable, cost effective and appropriate with baseline information and targets

expressed in actual numbers (see Chapter 6). Bearing this in mind, in Chapter 8 (empirical chapter), participants were afforded an opportunity to identify key indicators that can be utilised to monitor implementation of the envisaged model by national sector departments. The section dealing with the operationalisation of a model for integrating DRR in national multi-sectoral planning as discussed hereunder (see section 9.6) outlined the performance indicators of the model based on both theoretical and empirical perspectives of the study. Thus the study has fully addressed this objective through a discussion of the performance indicators in Chapter 8 and in section 9.6 respectively. These performance indicators will assist in measuring the performance of national sector departments in implementing a model for integrating DRR in national multi-sectoral planning within the South African environment. The realisation of the objectives of the study culminated with a model for integrating DRR in national multi-sectoral planning in South Africa as presented in section 9.4 hereunder.

9.5   ACHIEVEMENT OF RESEARCH OBJECTIVES: A MODEL FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING IN SOUTH AFRICA

The development of the model in Chapter 9 is based on the theoretical foundations established in Chapters 2 and 3, an understanding of South Africa's disaster risk profile (Chapter 4) and an analysis of existing legal instruments and frameworks governing DRR in the country (Chapter 5). This chapter also draws from theoretical perspectives presented in Chapter 6, international good practices explored in Chapter 7 and empirical findings discussed in Chapter 8. All these Chapters contributed to the development of a model (see Figure 9.1) for integrating DRR in national multi-sectoral planning in South Africa. The ensuing discussion in this chapter focuses on the constructs of the model in order to provide an understanding to operationalise the integration of DRR in national multi-sectoral planning in South Africa.

A model for integrating disaster risk reduction in national multi-sectoral planning in South Africa

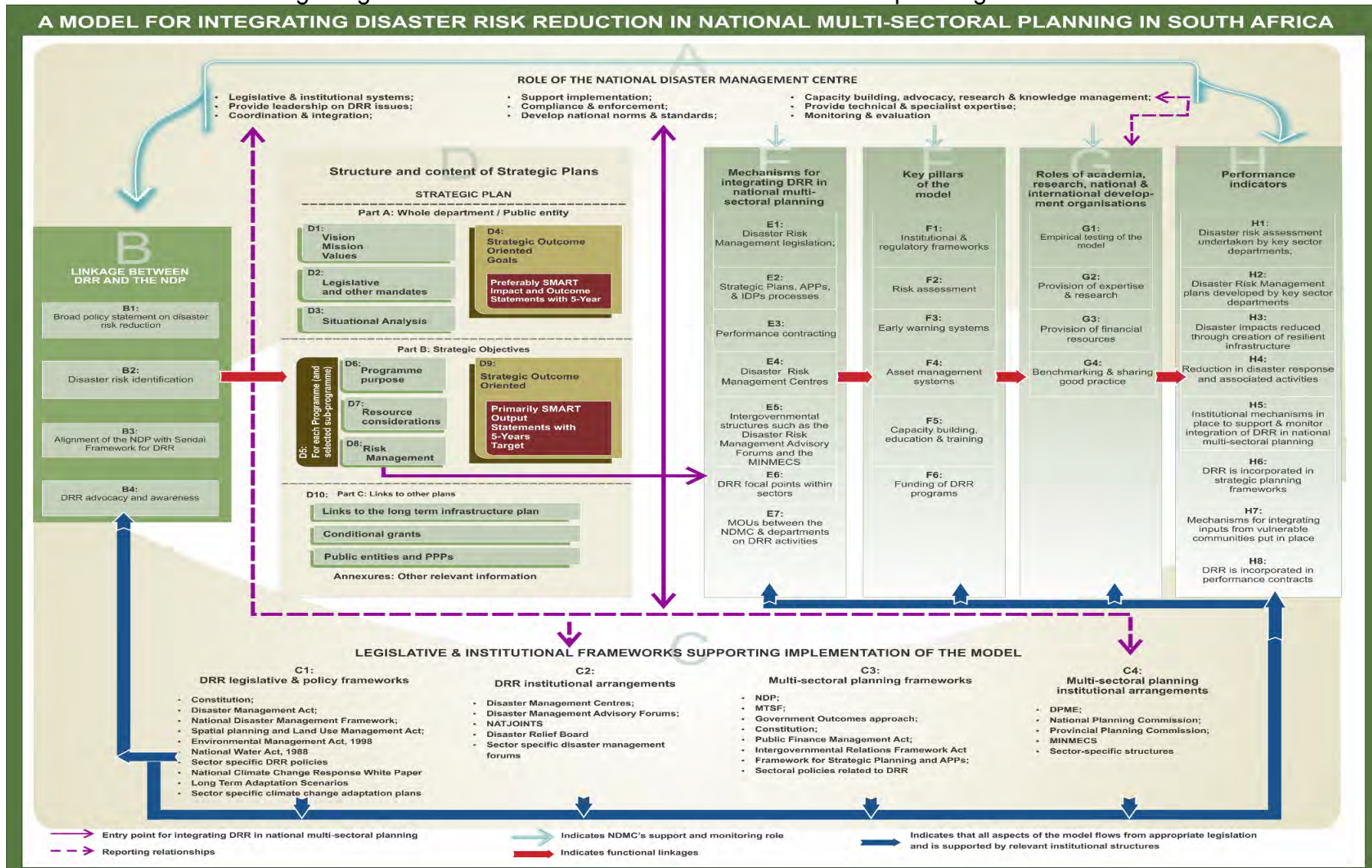

Figure 9.1:   A model for integrating disaster risk reduction in national multi-sectoral planning in South Africa

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The model comprises eight (8) constructs, A to H, in which Block A outlines key responsibilities of the National Disaster Management Centre of South Africa in supporting integration of DRR in national multi-sectoral planning in the country as discussed in sections 5.4 and 8.3. Block B shows the interface or linkage between DRR and South Africa's National Development Plan as discussed in subsection 8.3.9 while Block C outlines the legislative and institutional frameworks that form the basis for and supports the implementation of the model. Block D is the existing structure and content of strategic plans that was discussed in section 6.7 which outlines what each national department must consider during the strategic planning process. The entry point (as discussed in section 8.4) to integrate DRR emanates out of D8 which requires a sector department to reflects on issues related to risk management. It is out of block D, specifically D8 that each national sector department will be able to reflect on to integrate DRR issues using this model. Building on this, Block E outlines the mechanisms that national sector departments must utilise to integrate DRR in their strategic planning process. In other words, Block E focuses on the how to integrate DRR in national multi-sectoral planning utilising the various instruments depicted in the model.

While Block F outlines the key pillars of the model, Block G focuses on the roles and responsibilities of non-state organisations such as the academia, research national and international development organisations. Lastly, Block H provides the performance indicators (aligned to the National Disaster Management Framework) that could be utilised to monitor the implementation of the model. These performance indicators could be utilised by the NDMC, National Treasury and the Department of Planning, Monitoring and Evaluation to monitor the extent to which national sector departments are integrating DRR measures or activities in their routine strategic planning processes and initiatives.

The key to the model is constituted of the following elements:

i.   A solid pink line depicts the entry point into the existing strategic planning framework for a model to integrate DRR in national multi-sectoral planning in South Africa (section 6.7);

ii.   A broken line depicts reporting relationships between the various institutional structures including non-state actors to the National Disaster Management Centre (sections 5.4 and 8.3);

iii.   Light blue shows the National Disaster Management Centre's role in supporting and monitoring implementation of this model (sections 5.4 and 8.3);

iv.   Red represents the functional link between the various aspects constituting this model, and

v.   Dark blue shows that all aspects of the model flows from appropriate and relevant legislative instruments and that the implementation thereof is supported by existing institutional arrangements (Chapters 5, 6,7 and 8).

As with any other programme, it is imperative to identify measures that are fundamental and necessary for the effective implementation of the model. The ensuing sections examine this together with the performance indicators that could be utilised to monitor the implementation of the model.

9.6   THE OPERATIONALISATION OF THE MODEL FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING IN SOUTH AFRICA

The study has revealed that a model for integrating DRR in national multi-sectoral planning as presented above is important. While the study has revealed that South Africa has robust and sound legislative and institutional frameworks to support and enable effective integration of DRR in national planning initiatives of sector departments, it has also emerged that the establishment of DRR focal points in key national sector departments is fundamental to institutionalise the function. Moreover, the study has outlined that the NDMC plays a vital role in supporting integration of DRR in national multi-sectoral planning in the country. With this in mind, the ensuing section drills further into this matter by exploring this in three perspectives notably, establishment of DRR focal points at sector department level, the need to strengthen the capacity of the NDMC and lastly the performance indicators that will be utilised to

monitor the implementation of a model for integrating DRR in national multi-sectoral planning in the country.

9.6.1 The importance of establishing DRR focal points at key national departments to ensure the effective implementation of a model for integrating DRR in national multi-sectoral planning in South Africa

In Chapter 5 of this study, it was argued that the absence of focal points for DRR across most sectors hinders effective multi-sectoral, coordinated and integrated implementation of the disaster management legislation. Additionally, the Chapter revealed that this challenge is compounded by the lack of adequately skilled human resources to drive implementation of DRR programmes and initiatives (see Chapter 5). Building on this, Chapter 8 empirically revealed that the establishment of dedicated nodal points for DRR in each key sector department is of fundamental importance. Furthermore, Chapter 5 presented the roles and responsibilities of national organs of state in DRR as well as the duties of DRR focal points once this is established.

Within this analytical framework, in Chapter 8, participants argued that DRR activities must be integrated/ incorporated into performance contracts of key personnel within a department in order to institutionalise the function and minimise ad hoc approaches which are unsustainable and ineffective. It also emerged in Chapter 8 that for DRR to be successful, it must be integrated into business plans of relevant directorates/ units within a department. There was consensus about the role of NDMC in supporting the establishment of adequate institutional arrangements within key sector departments, and it was acknowledged that the NDMC plays a central role supporting integration of DRR in national multi-sectoral planning hence the need to strengthen its capacity is discussed below.

9.6.2 The need to strengthen the capacity of the National Disaster Management Centre to support integration of DRR in national multi-sectoral planning in South Africa

In Chapter 5, it was outlined that the establishment of the NDMC was the most fundamental aspect of the new legislation. This establishment was characterised as

the genesis of a process to institutionalise the function in the country (see Chapter 5). In Chapter 8, the centrality of the NDMC in driving integration of DRR in national multi-sectoral planning was raised prominently by most respondents. Given the fundamental role of this entity in supporting and enabling integration of DRR in national multi-sectoral planning in the country and informed by empirical views of participants, a thematic area looking at the NDMC's role in this regard was identified. Inevitably, the roles and responsibilities of the NDMC draws from and build upon the general powers and duties outlined in the Disaster Management Act and presented briefly in Chapters 5 and 8. From this discussion, it became evident that the NDMC is the highest administrative entity responsible for DRR in the country. While most participants agreed on the key responsibilities of the NDMC, there was consensus generally that this entity must be adequately capacitated both financially and in terms of human resources for it to provide strategic leadership, ensure a coordinated and multi-sectoral and integrated approach to DRR as contemplated in the Disaster Management Act and the National Disaster Management Framework (see chapter 8). Building on the Disaster Management Act and more specifically the National Disaster Management Framework, the study revealed the importance of adopting reliable, well-defined, verifiable, appropriate and relevant indicators that will be utilised to monitor implementation of the envisaged model. The ensuing discussion presents the performance indicators.

9.6.3 Performance indicators underpinning the model for integrating DRR in national multi-sectoral planning in South Africa

Chapter 6, specifically section 6.7, presented arguments on the importance of identifying a core set of indicators needed to monitor institutional performance. In Chapter 8, participants were afforded an opportunity to identify key indicators that could be utilised to monitor implementation of the model by national sector departments. This discussion also revealed that performance indicators must be aligned to the National Disaster Management Framework and the Sendai Framework for DRR. Table 9.1 provides a summary of these performance indicators, measures and entities that are responsible for the implementation of each indicator.

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Table 9.1: **Performance indicators for a model to integrate DRR in national multi-sectoral planning in South Africa**

Performance indicators	Measures	Responsible entity/ agency
Indicator 1: Institutional mechanisms in place to support and monitor integration of DRR in national multi-sectoral planning (related to Chapters 1, 5,7 and 8)	• Establish DRR institutional forums; • Establish DRR focal points; • Appoint individuals who will act as focal points for DRR; • Participation by key sector departments in NDMAF and ICDM.	Key national sector departments, other relevant agencies under the guidance and leadership of the NDMC
Indicator 2: DRR is incorporated in performance contracts (related to Chapters 5, 7 and 8)	• Determine roles and responsibilities of the national sector department; • Identify key performance indicators based on the Disaster Management Act and the National Disaster Management Framework; • Sign performance contracts; • Assess performance on a quarterly basis.	Key national sector departments, other agencies with the assistance and support of the NDMC.
Indicator 3: Disaster risk assessment undertaken by key sector departments (related to Chapters 4, 5, 7 and 8)	• Identify priority disaster risks; • Prioritise risks; • Uniform risk assessment methodologies identified; • Risk assessment outcomes shared with key stakeholders; • Map identified disaster risks.	Key national sector departments, other relevant agencies with the assistance of the NDMC
Indicator 4: Disaster management plans prepared by key sector departments (related to Chapter 5, 7 and 8)	• Prepare disaster management plans as per National Disaster Management Framework; • Outline roles and responsibilities of the sector; • Identify and communicate existing response capabilities; • Disaster management plan approved and submitted to the NDMC as per Disaster Management Act.	Key national sector departments and other relevant organs of the state.
Indicator 5: Disaster impacts are reduced through creation of resilient infrastructure (related to Chapter 7 and 8)	• Identify sector-specific frameworks for monitoring losses in terms of injuries, mortality, and other losses; • Substantially reduce disaster mortality; • Substantially reduce the number of people affected by disasters;	Key national sector departments, other agencies under the guidance and leadership of the NDMC.

	• Reduction of direct disaster economic loss in relation to national Gross Domestic Product • Substantially reduce disaster damage to critical infrastructure and disruption of basic services; • Creation of hazard resilient infrastructure	
Indicator 6: **Reduction in disaster response and associated activities (related to Chapter 8)**	• Reduce costs of responding to disasters;	Key national sector departments, other agencies and the NDMC
Indicator 7: **DRR is incorporated in strategic planning frameworks (related to Chapter 5, 6, 7 and 8)**	• Integrate DRR planning processes in sectoral planning initiatives; • Align disaster management plans with sector planning; • Align disaster management and strategies with those of identified key sectors; • Reflect on disaster risks that can impact on the achievement of the strategic plan; • MOUs signed outlining key responsibilities of sector departments regarding integration of DRR in national multi-sectoral planning	Key national sector departments and national organs of state under the guidance and leadership of the NDMC
Indicator 8: **Mechanisms for integrating inputs from vulnerable communities put in place (related to Chapter 8)**	• Conduct awareness and campaigns of communities about hazards that may impact on line function activities of the sector department; • Consider inputs of communities including indigenous knowledge systems during development of DRR strategies; • Inputs of communities regarding awareness and campaigns taken into consideration.	Key national sector departments, other agencies with the guidance and assistance of the NDMC

The performance indicators for the model to integrate DRR in national multi-sectoral planning outlines key activities that must be undertaken to ensure effective, integrated and multi-sectoral implementation of DRR in South Africa. As demonstrated, the integration of DRR in national multi-sectoral planning will be made possible through the active involvement of national sector departments and the

NDMC supported by academia, research organisations national and international development organisations (see Chapter 8). The contribution of the study to the body of knowledge on DRR is summarised in the ensuing section.

9.7 CONTRIBUTION OF THE STUDY TO THE BODY OF KNOWLEDGE OF DRR

The study demonstrated that DRR efforts and initiatives are not systematically integrated into sectoral plans and programmes of various departments and in Chapter 1, the importance of integrating DRR into national multi-sectoral planning was identified. Moreover, in this chapter (Chapter 1), it was argued that there is an apparent need to develop a model which will assist national departments in integrating DRR in their sectoral planning initiatives, thereby reducing disaster risks in the country. Through this model, understanding of disaster risk in South Africa and the alignment of DRR strategies will also be enhanced. The study reaffirmed that DRR is a multi-disciplinary and multi-sectoral endeavour falling under the programme of diverse institutions hence the importance of integrating it in planning initiatives of these sectors. Moreover, the chapter identified gaps in the scholarship with regard to the existence of a coherent and robust model to monitor and guide the integration of DRR in national multi-sectoral planning internationally and in South Africa.

The theoretical and empirical study has revealed that South Africa has adequate and robust regulatory and institutional systems to enable the integration of DRR in national multi-sectoral planning. Key to the success of this model as demonstrated in chapters 5 and 8 is the effective functioning of the NDMC in order for it to give effect to its mandate and support the integration of DRR in national multi-sectoral planning in the country. The study has therefore contributed in a number of ways into the body of knowledge on DRR, as it:

i.   Provided the theoretical basis through the literature study, on the integration of DRR in national multi-sectoral planning in South Africa;

ii.   Provided the theoretical and practical foundations for the classification of government activities (departmentalisation) within the South African environment;

iii.   Explored international good practices that South Africa can learn from in its endeavour to effectively integrate DRR in national multi-sectoral planning;

iv.   Provided a model for integrating DRR in national multi-sectoral planning in South Africa, and

v.   Provided performance indicators to monitor the implementation of a model for integrating DRR in national multi-sectoral planning in South Africa.

The study has also revealed areas of further research which are necessary to enhance the model for integrating DRR in national multi-sectoral planning in South Africa and elsewhere. Those identified areas are discussed hereunder.

9.8   AREAS FOR FURTHER RESEARCH

Some areas for further research have emerged during the theoretical and empirical perspectives of the study. The areas of further research are outlined below:

i.   The importance of preparing a National Disaster Management Plan (NDMP) for South Africa. During the review of international good practices, it was revealed that the Indian Disaster Management Act makes it mandatory to prepare a NDMP for the whole of India in consultation with the State Government and expert bodies or organisations in the field of disaster management. The NDMP outlines (1) measures to be taken for the prevention of disasters, or the mitigation of their effects, (2) measures to be taken for the integration of mitigation measures in the development plans, (3) measures to be taken for preparedness and capacity building to effectively respond to any threatening disaster situations or disaster and (4) roles and responsibilities of different ministries or departments of the Government of India in respect of measures specified in a-c above. Further research is required on what a NDMP for South

Africa must entail and how this (NDMP) can be utilised as a basis to integrate DRR in national multi-sectoral planning in the country;

ii.   This study has revealed that the design of development projects should take DRR into consideration or the development ceases to be sustainable and eventually causes more hardship and losses to the country. In view of this, it is therefore important that further research is undertaken to explore in-depth the interface between DRR and South Africa's National Development Plan; and

iii.   Demonstrate empirically that integrating DRR in national multi-sectoral planning in South Africa contributes to reduced disaster risks in the country.

9.9   LIMITATIONS OF THE STUDY

DRR is an intergovernmental function within the South African environment with all spheres having different but complementary role powers and duties. This means that effective DRR requires that each sphere execute its legal responsibilities as set out in the legislation. In this regard, it is important to note that this study is limited by its focus on how to integrate DRR in national multi-sectoral planning at a national level without reflecting in-depth on how such integration can be achieved in other spheres (provincial and local governments). More research need to be done on the integration on DRR at sub-national levels particularly at local government level given the fact that provincial and national governments utilise the same planning framework which was discussed in chapter 6 and has formed the basis for this model. The fact that Brazil and Russia do not use English as their main *lingua franca* made it difficult to obtain sufficient literature to examine as part of the analysis of international strategies and mechanisms for integrating DRR in national multi-sectoral planning.

9.10   CONCLUSIONS

Given the fact that South Africa continue to incur losses as a result of disasters, the need to integrate efforts to reduce disaster risks in national multi-sectoral planning initiatives becomes increasingly urgent and apparent. The study has provided detailed insight and knowledge on the importance of integration and also outlined a

CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS: A MODEL FOR INTEGRATING DRR IN NATIONAL MULTI-SECTORAL PLANNING FOR SOUTH AFRICA

variety of mechanisms for integrating DRR in national multi-sectoral planning in South Africa. While the study employed both theory and empirical research to clarify existing national legal instruments and institutional arrangements for strategic planning by national sector departments, it also explored the regulatory and governance systems supporting the implementation of DRR in the country. Through a review of literature and participant's contributions, the study re-affirmed the importance of integrating DRR in national planning initiatives of the various line function departments.

An analysis of mechanisms for integrating DRR in national multi-sectoral planning in the BRIC countries revealed the importance of having sound legislation and robust and contextually relevant institutions in order for a country to better manage its disaster risks. Furthermore, the study was also able to establish empirically the various ways and means in which DRR should be integrated in national multi-sectoral planning in the country. This was found to be resonating with the good practices that were suggested in the scholarly literature. This study also examined in detail the existing national frameworks regulating how national sector departments undertake strategic planning. These frameworks were also consistent with the academic literature that was presented in Chapter 3 of this study. These frameworks together with the empirical findings of the study were used as a basis for the development of a model for integrating DRR in national multi-sectoral planning in South Africa. The successful implementation of this model hinges on four enablers: Firstly, **legal and institutional frameworks** form the basis for integrating DRR in national multi-sectoral planning. Secondly, the establishment of dedicated focal points for DRR in key national sector departments is fundamental and vital for the effective integration of DRR in planning initiatives of departments. **Thirdly**, and given its powers and duties in terms of legislation, the **strengthening of the NDMC's capacity** to give effect to its mandate in general and to support integration of DRR sectoral planning initiatives in particular is of fundamental importance. **Fourthly, the need to ensure active participation** of all key national sector departments and non-state organisations including research and academic institutions, national and internal development organisations in the implementation of this model is essential. **Fifthly, the importance of reflecting DRR issues in the broader national development**

plan and related frameworks of the country in order to ensure that all development initiatives contributes to reducing risks as opposed to increasing vulnerability to natural and anthropogenic hazards.

To this end, the study contributed to the body of knowledge on DRR by **firstly** clarifying the theoretical basis on the integration of DRR in national multi-sectoral planning in South Africa, **secondly**, by exploring international good practices that South Africa can learn from in its endeavour to effectively integrate DRR in national multi-sectoral planning, **thirdly and most importantly**, by providing a model that will assist South Africa's national sector departments in their efforts to integrate DRR in sectoral planning initiatives. Moreover the study was able to also provide performance indicators to monitor the implementation of a model for integrating DRR in national multi-sectoral planning in South Africa.

REFERENCE LIST

Acts see South Africa.

African Union (AU). 2004. Africa Regional Strategy for Disaster Risk Reduction. Ethiopia: African Union.

Agarwal, R., Grassl, W. & Pahl, J. 2012. Meta-SWOT: introducing a new strategic planning tool. *Journal of business strategy*, 33(2):12-21.

Ahern, M., Kovats, R.S., Wilkinson, P., Few, R. & Matthies, F. 2005. Global health impacts of floods: Epidemiologic evidence. *Epidemiologic Reviews*, 27:36-46.

Akimov, V. & Porfiriev, B. 2012. The institutional framework and governance model of Russia's crisis policy: Disaster focus. (*In* Porfiriev, B. & Simons, G., eds. 2012).

Arksey, H. & Knight, P. 1999. Interviewing for social scientists. An introductory resource with examples. London: Sage Publications.

Austin, W.D. 2008. Drought in South Africa: Lessons lost and / or learnt from 1990 to 2005. Johannesburg: University of Witwatersrand. (Thesis – MSc).

Baker, J.L., ed. 2012. Climate Change, Disaster risk, and the urban poor. Cities building resilience for a changing world. The World Bank: Washington.

Balkaran, S. 2013. The praxis of governance in surmounting new frontiers: implications for the South African public service as a member of the BRICS states. *Journal of Public Administration,* 48(1):118-137.

Barnard, C.I. 1938. The economy of incentives. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 139-160).

Barnett, W.P. & Burgelman, R.A. 1996. Evolutionary perspectives on strategy. *Strategic management journal*, 17(Special issue):5-19.

Barnett, T. & Whiteside, A. 2006. AIDS in the Twenty-First Century, Disease and Globalization. New York: Palgrave Macmillan publishers.

Becker, P. 2009. Grasping the hydra: the need for a holistic and systematic approach to disaster risk reduction. *Jamba: Journal of Disaster Risk Studies*, 2(1):1-13.

Becker, P. 2012. The importance on integrating multiple administrative levels in capacity assessment for disaster risk reduction and climate change adaptation. *Disaster Prevention and Management*, 21(2):226-233.

Bedeian, A.G. & Zammuto, R.F. 1991. Organisations: theory and design. Chicago: Dryden Press.

Benjamin, M.A. 2008. Analysing urban flood risk in low-cost settlements of George, Western Cape, South Africa: Investigating physical and social dimensions. Cape Town: UCT. (Thesis – MSC).

Benson, C. & Twigg, J. 2007. Tools for mainstreaming disaster risk reduction: Guideline notes for development organisations. Switzerland. http://www.proventionweb.net/files/1066_toolsformainstreamingDRR.pdf Date of access: 9 Jun. 2012

Berry, S.B. 2007. Strategic planning as a tool for managing organisational change. *International journal of public administration*, 30(3):331-346.

Bhattacherjee, A. 2012. Social science research: Principles, methods, and practices. http://scholarcommons.usf.edu/oa_textbooks/3 Date of access: 31 Mar. 2017.

Birkinshaw, J., *ed*. 2004. Strategic management, Volume 1. Cheltenham: Edward Elgar.

Blau, P.M. & Scott, R. 1962. The concept of formal organisation. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 2-8).

Bohler-Muller, N. & Kornegay, F.A. *eds.* 2013. Laying the BRICS of a new global order. Africa Institute of South Africa. Pretoria.

Botes, P.S., Brynard, P.A., Fourie, D.J, & Roux, N.L. 1992. Public administration and management: A guide to central, regional and municipal administration and management. Pretoria: Kagiso Tertiary.

Botes, P.S. 1997. The powers of the state and its administration (*In* Roux, N., Brynard, P., Botes, P. & Fourie, D., eds. Critical issues in public management and administration in South Africa. Cape Town: Kagiso Tertiary. p. 267-276).

Bouchard, A., Goncalo, A., Susienka, M. & Wilson, K. 2007. Improving Flood Risk Management in Informal Settlements of Cape Town. An Interactive Qualifying Project submitted to the faculty of Worcester Polytechnic Institute (WPI) in partial fulfilment of the requirements for the Degree of Bachelor of Science. Cape Town.

Bouckaert, G., Peters, B.G. & Verhoest, K. 2010. The coordination of public sector organisations: shifting patterns of public management. Palgrave Macmillan.

Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2):77-101.

Brynard, P.A. 1992. The government departments. (*In* Botes, P.S., Brynard, P.A., Fourie, D.J. & Roux, N.L. 1992. Public administration and management. A guide to central, regional and municipal administration and management. Cape Town: Kagiso Tertiary. p. 369-375).

Bryson, J.M. 2004. Strategic planning for public and non-profit organisations: a guide to strengthening and sustaining organisational achievement. 3rd ed. San Francisco: Jossey-Bass.

Bryson, J.M. 2011. Strategic planning for public and non-profit organisations: A guide to strengthening and sustaining organisational achievement. 4th ed. San Francisco: Jossey-Bass.

Bryson, J.M. 2010. The future of public and non-profit strategic planning in the United States. *Public administration review*, 70(suppl.1):s255-s267.

Bryson, J.M. & Einsweiler, R.C., eds. 1988. Strategic planning: threats and opportunities for planners. Chicago: Planners Press.

Bryson, J.M. & Roering, W.D. 1988. Initiation of strategic planning by governments. *Public administration review*, 48(6):995-1004.

Bryson, J.M., Crosby, B.C. & Bryson, J.K. 2009. Understanding strategic planning and the formulation and implementation of strategic plans as a way of knowing: the contributions of actor-network theory. *International public management journal*, 12(2):172-207.

Bryson, J.M. & Alston, F.K. 2005. Creating and implementing your strategic plan. A workbook for public and non-profit organisations. 2nd ed. San Francisco: Jossey-Bass.

Burger, A. & Silima, T. 2006. Sampling and sampling design. *Journal for Public Administration*, 41(3.1):656-668.

Burns, T. & Stalker, G.M. 1961. Mechanistic and organic systems. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 119-125).

Burton, R.M & Obel, B. 1998. Technology as a contingency factor. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 224-234).

Caelli, K., Ray, L. & Mill, J. 2003. Clear as mud: Toward greater clarity in generic qualitative research. *International Journal of Qualitative Methods*, 2(2):1-23.

Cameron, K.S. & Whetten, D.A., *eds.* 1983. Organisational effectiveness: a comparison of multiple models. New York: Academic Press.

Cameron, R. 1991. Implementing devolution: constraints and possibilities. (*In* Cloete, F., Schlemmer, L. & van Vuuren, D. 1991. Policy options for a new South Africa. Pretoria: Human Sciences Research Council. p. 143-162).

Cameron, R.G. & Stone, A.B. 1995. Serving the public: A guide for practitioners and students. Pretoria: J.L. van Schaik Publishers.

Carl von Clausewitz, 1976. On War. Edited and translated by M. Howard and P. Paret. New Jersey: Princetown University Press.

Carrell, M.R., Jennings, D.F. & Heavrin, C. 1997. Fundamentals of organisational behaviour. Upper Saddle River, NJ: Prentice Hall.

Carroll, A.B. & Hall, J. 1982. Strategic management processes for corporate social policy. (*In* King, W.R. & Cleland, D.I. 1987. Strategic planning and management handbook. New York: Van Nostrand Reinhold Company. p. 129-144).

Carstens, M.J. 2000. Administrative reform: Guidelines for South Africa. Pretoria: UP. (Thesis – PhD).

Carter, H. 1999. Strategic planning reborn. *Work study*, 48(2):46-48.

Centre for Research on the Epidemiology of Disasters (CRED). EM-DAT: The International Disaster Database. [Web: http://www.cred.be/] Date of access: 15 Mar. 2012.

Certo, S.C. & Peter, J.P. 1991. Strategic management: concepts and applications. 2nd ed. New York: McGraw-Hill.

Chagutah, T. 2013. Land tenure insecurity, vulnerability to climate induced disaster and opportunities for redress in southern Africa. *Jamba: Journal of Disaster Risk Studies* 5(2).

Chakravarthy, B.S. 1987. On tailoring a strategic planning system to its context: some empirical evidence. *Strategic management journal*, 8(6):517-534.

China. 2006. Disaster Reduction Action Plan of the People's Republic of China (2006-2015). Office of the China National Committee for Disaster Reduction.

Climate & Development Knowledge Network. 2012. Managing Climate Extremes and disasters in Africa: Lessons from the IPCC SREX Report. Overseas Development Institute.

Cloete, J.J.N. 1992. Central, regional and local government institutions of South Africa. 2nd revised ed. Hatfield: Van Schaik Publishers.

Cloete, J.J.N. 1994. Public administration and management: new constitutional dispensation. 8th ed. Pretoria: J.L. van Schaik.

Cloete, J.J.N. 1996. Accountable government and administration for the Republic of South Africa. Pretoria: J.L. van Schaik.

Coetzee, C. & Van Niekerk, D. 2012. Tracking the evolution of the disaster management cycle: a general system theory approach. *Jamba: Journal of disaster risk studies*, 4(1):78-86.

Coetzee, C., Van Niekerk, D., Murphree, M.J., Becker, C., Hildebrandt, L., Shoroma, B., Fourie, K., Annadale, E., Wentink, G. & Shapiro, M. 2013. Feasibility study on the decentralization and institutional capacity development for the Directorate Agricultural Disaster Risk Management. Pretoria: Department of Agriculture, Forestry and Fisheries.

Cooper, D.R. & Schindler, P. S. 2001. Business research methods. 7th ed. New York: McGraw Hill.

Cope, R.G. 1989. High involvement strategic planning: when people and their ideas matter. Cambridge: Basil Blackwell.

Coppola, D.P. 2007. Introduction to international disaster management. Butterworth: Heinemann Publications.

Creswell, J.W. 2009. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 3rd ed. California: Sage Publications.

Crowther, D. & Green, M. 2004. Organisational theory. London: Chartered Institute of Personnel and Development.

Daft, R.L., Murphy, J. & Willmott, H. 2010. Organisation theory and design. South-Western: Cengage Learning.

REFERENCE LIST

Daft, R.L. 2006. The new era of management. International ed. South Western: Thomson.

Daft, R.L. & Steers, R.M. 1986. Organisations: a micro/ macro approach. London: Scott, Foreman & Company.

Daft, R.L., Murphy, J. & Willmott, H. 2010. Organisation theory and design. Cincinatti, OH: South-Western College Pub.

David, F.R. 2013. Strategic management: concepts. 14th ed. New York: Pearson.

Davis, A. & Cronje, S. 2010. Strategy implementation: study guide. Pretoria: University of South Africa.

De Araujo, R.O. & Da Silva Rosa. T.C. 2014. Socio-environmental vulnerability and disaster risk reduction: the role of Espirito Santo State (Brazil)*. Ambiente & Sociedade. Sao Paulo,* v. XVII (4):117-132.

Degaut, M. 2015. Do the BRICS still matter? A report of the CSIS Americas Programme. https://csis-prod.s3.amazonaws.com/s3fs public/legacy_files/files/publication/151020_Degaut_DoBRICSMatter_Web.pdf Date of access: 10 Aug. 2016.

Denhardt, R.B. & Denhardt, J.V. 2009. Public administration: an action orientation. 6th ed. Belmont, CA: Thomson Wadsworth.

De Nys, E. & Engle, N. 2015. Living with the semi-arid and proactive drought management in Northeast Brazil: A new perspective. Agua Series Brazil. Washington D.C: World Bank Group. http://documents.worldbank.org/curated/en/487591468017986166/Living-with-the-semi-arid-and-proactive-drought-management-in-Northeast-Brazil-a-new-perspective Date of access: 15 Jul. 2016.

De Oliveira, O.F. 2015. An overview of Brazilian experience in organising the flood management: An institutional and technical approach. Ministerio do Melo Ambiente.

Desouza, S. 2009. Organising women for empowerment: a study of an experiment in Goa. Mumbai: Tata Institute of Social Sciences. (Thesis – PhD).

De Villiers, P.F.A. 1987. Governmental institutions in the Republic of South Africa. (*In* Hanekom, S.X., Rowland, R.W. & Bain, E.G. eds. Key aspects of public administration. Halfway House: Southern Book Publishers. p. 85-104).

De Vos, A.S., Strydom, H., Fouche, C.B. & Delport, C.S.L. 2005. Research at grass roots: for the social sciences and human service professions. 3rd ed. Hatfield: Van Schaik.

De Wet, C. 2014. Public Administration in a Democratic Developmental State. (*In* Thornhill et al. Public Administration and Management in South Africa: A Developmental Perspective. Cape Town: Oxford University Press. p. 25-50).

DFID (Department for International Development, UK). 2004. Disaster risk reduction: A development concern DFID: London.

Dhliwayo, S. 2007. The relationship between the practice of strategic planning and levels of corporate entrepreneurship in South African public companies. Pretoria: University of Pretoria. (Thesis - PhD).

Dicks, R. 2014. Presidency. Implementing the National Development Plan: Medium Term Strategic Framework 2014-2019. [PowerPoint presentation].

Dlamini, P.P. 2011. Evaluating the implementation of the Hyogo Framework for Action in the Kabokweni location: Views from the frontline perspective. North-West University, Potchefstroom (Dissertation - MA).

Donaldson, L. 1985. In defence of organisation theory: a reply to the critics. Cambridge: Cambridge University Press.

Donnelly, R.M. 1984. Guidebook to planning: strategic planning and budgeting basics for the growing firm. New York: Van Nostrand Reinhold.

Donner, W. & Rodriguez, H. 2008. Population Composition, Migration and Inequality: The Influence of Demographic Changes on Disaster Risk and Vulnerability. *Social forces*, 87(2):1089-1114.

Douglas, I., Alam, K., Maghenda, M., Mcdonnell, Y., Mclean, L. & Campbell, J. 2008. Unjust waters: climate change, flooding and the urban poor in Africa. *Environment and urbanisation*, 20(1):187-205.

Duggan, N. 2015. BRICS and the evolution of a new agenda within global governance. *The European Union and the BRICS*. Switzerland.

Dutton, J.E. & Duncan, R.B. 1987. The influence of the strategic planning process on strategic change. *Strategic management journal*, 8(2):103-116.

Edigheji, O. 2007. The emerging South African democratic developmental state and the people's contract. Centre for Policy Studies. Johannesburg.

Ehlers, T. & Lazenby, K., *eds*. 2010. Strategic management: Southern African concepts and cases. Pretoria: Van Schaik.

Elenkov, D.S. 1997. Strategic uncertainty and environmental scanning: the case for institutional influences on scanning behaviour. *Strategic management journal*, 18(4):287-302.

Engelbrecht, F. 2008. Climate change over South Africa: Projections and perceptions. 2008. Conference organised by the Parasitological Society of Southern Africa, University of Pretoria, 7-9 October 2008.

Eskridge, R.L. 1987. The strategic planning review process. (*In* King, W.R. & Cleland, D.I. New York: Van Nostrand Reinhold. p. 103-115).

European Union. 2013. Natural and man-made risk assessment in the Russian Federation. European Union strategy for the Baltic Sea Region. Saint-Petersburg.

Fahey, L. 1989. The strategic planning management reader. Englewood Cliffs, New Jersey: Prentice Hall.

Faling, W., Tempelhoff, J.W.N. & Van Niekerk, D. 2012. Rhetoric or action: Are South African municipalities planning for climate change? *Development Southern Africa*, 29 (2):241-257.

Farber, D. 2012. Disaster law and emerging issues in Brazil. *Revista de Estudos Constitucionais, Hermeneutica e Teoria do Direito*, 4(1):2-15.

Farjoun, M. 2002. Towards an organic perspective on strategy. *Strategic management journal*, 23(7):561-594.

Farazmand, A. 2003. Chaos and transformation theories: a theoretical analysis with implications for organisation theory and public management. *Public organisation review: a global journal*, 3(4):339-372.

Fayol, H. 1949 (1916). General and industrial management, trans. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 19-42).

Feng, H. 2005. Disaster Management in China. *Emergency Management.* Wikipedia http://en.wikipedia.org/wiki/Emergency_management Date of access: 15 Aug. 2016.

Few, R. 2003. Flooding, vulnerability and coping strategies: local responses to a global threat. *Progress in development studies,* 3(1):43-58.

Follett, M.P. 1926. The giving of orders. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 156-161).

Food and Agriculture Organisation (FAO). Undated. Drought impact mitigation and prevention in the Limpopo River Basin. Food and Agriculture Organisation of the United Nations. Rome.

Food and Agriculture Organisation (FAO). 2006. Fire Management: voluntary guidelines. Principles and strategic actions. Fire Management Working Paper 17. Rome.

Food and Agriculture Organisation (FAO). 2008. Disaster Risk Management Systems Analysis. Food and Agriculture Organisation of the United Nations. Rome.

Forsyth G.G, van Wilgen, B.W, Scholes, R.J, Levendal. M.R, Bosch. J.M. Jayiya T.P & le Roux R. 2006. Integrated Veldfire Management in South Africa. An assessment of the current conditions and future approaches. Council for Scientific and Industrial Research (CSIR) Natural Resources and Environment.

Forsyth, G.G., Kruger F.J. & Le Maitre D.C. 2010. Assessing exposure of social, economic and environmental assets to veldfire hazards in South Africa. Council for Scientific and Industrial Research (CSIR) Natural Resources and Environment.

Fox, W. & Meyer, I. H. 1995. Public Administration Dictionary. Cape Town: Juta & Co LTD.

Foss, N.J. 2003. Bounded rationality in the economics of organisation: "much cited and little used". *Journal of economic psychology*, 24(2):245-264.

Fourie, D., eds. Critical issues in public management and administration in South Africa). Cape Town: Kagiso Tertiary. p. 46-52.

Frank, H.E. 1971. Organisation structuring. London: McGraw-Hill.

Freeman, K., Martin, L. A., Mechler, R., Warner, K. & Hausmann, P. 2002. Catastrophes and Development: Integrating Natural Catastrophes into Development Planning. Disaster Risk Management Working Paper Series No. 4. World Bank: Washington DC. www.worldbank.org/dmf Date of access: 10 Aug. 2016.

French, J.R.P., Jr. & Bertram, R. 1959. The bases of social power. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 284-292).

French, J.R.P., Jr. & Raven, B. 1959. The bases of social power. (*In* Ott, J.S., Parkes, S.J. & Simpson, R.B., eds. 2008. Classic readings in organisational behaviour. 4th ed. Belmont: Wadsworth. p. 346-354).

French, S. 2009. Critiquing the language of strategic management. *Journal of management development*, 28(1):6-17.

Gibson, J.L. 1966. Organisation theory and the nature of man. *The academy of management journal*, 9(3):233-245.

Gibson, J.L., Ivancevich, J.M. & Donnelly, J.H. 1994. Organisations. 8th ed. Boston, MA: Irwin.

Gildenhuys, J.S.H. & Knipe, A. 2000. The organisation of government. Pretoria: Van Schaik Publishers.

Glesne, C. 2011. Becoming qualitative researchers: an introduction. 4th ed. London: Pearson.

Global Facility for Disaster Risk Reduction (GFDRR). 2014. Coping with losses: Options for disaster risk financing in Brazil. Washington DC.

Global Facility for Disaster Risk Reduction (GFDRR). 2013. Incorporating disaster risk management in the transport sector in Brazil. Challenges and opportunities. World Bank. Washington DC.

Goldammer, J.G. & de Ronde, C. eds. 2004. Wildland Fire Management Handbook for Sub-Sahara Africa. A publication of the Global Fire Monitoring Centre (GFMC). Freiburg University.

Goldman, G.A., Maritz, R., Nienaber, H., Pretorius, M., Priilaid, D. & Williams, D. 2010. Strategic management: supplement for Southern Africa. Cape Town: Pearson.

Goodstein, L.D. 1993. Applied strategic planning: a comprehensive guide. New York: McGraw-Hill.

Gortner, H.F., Mahler, J. & Nicholson, J.B. 1987. Organisation theory: A public perspective. Illinois: The Dorsey Press.

Graham, P., ed. 1996. Marry Parker Follett: prophet of management. Massachusetts: Harvard Business School Press.

Grundy, T. 2006. Rethinking and reinventing Michael Porter's five forces model. *Strategic change journal*, 15:213-229.

Gulick, L. 1937. Notes on the theory of organisation. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 3-13).

Hague, R. & Harrop, M. 2013. Comparative government and politics. An introduction. Palgrave Macmillan.

Hall, H.R. 2002. Organisations: structures, processes, and outcomes. 8th ed. Upper Saddle River, NJ: Pearson Prentice Hall.

Hatch, M.J. 2006. Organisation theory. 2nd ed. Oxford: Oxford University Press.

Hellriegel, D., Jackson, E.S., Slocum, J., Staude, G., Amos, T., Klopper, H.B., Louw, L. & Oosthuizen, T. 2004. Management. 2nd ed. Cape Town: Oxford University Press Southern Africa.

Henry, N. 2004. Public administration and public affairs. 9th ed. Upper Saddle River, New Jersey: Pearson Prentice Hall.

Hicks, H.G. & Gullett, C.R. 1975. Organisations: theory and behavior. Auckland: McGraw-Hill.

Hicks, J., Daniel, J., Buccus, I. & Venter, A. 2011. The executive. (*In* Venter, A. & Landsberg, C. eds. Government and politics in South Africa. Hatfield: Van Schaik Publishers. p 44-58).

Hillman, A.J., Withers, M.C. & Collins, B.J. 2009. Resource dependence theory: a review. *Journal of management*, 35(6):1404-1427.

Hitt, W.D. 1995. The Learning organisation: some reflections on organisational renewal. *Leadership & organisation development journal*, 16(8):17-25.

Hodge, B.J. & Anthony, W.P. 1979. Organisation theory: an environmental approach. Boston: Allyn & Bacon.

Hodge, B.J. & Anthony, W.P. 1991. Organisation theory: a strategic approach. 4th ed. New Jersey: Prentice Hall.

Holloway, C. 1986. Strategic planning. Chicago: Nelson-Hall.

Holloway, A. 2003. Disaster Risk Reduction in Southern Africa. Hot rhetoric – cold reality. *African Security Review.* 12(1):29-38.

Holloway A., Chasi V., de Waal J., Drimie S., Fortune G., Mafuleka G., Morojele M., Penicela Nhambiu B., Randrianalijaona M., Vogel C. & Zweig P. 2013. Humanitarian Trends in Southern Africa: Challenges and Opportunities. Regional Interagency Standing Committee, Southern Africa. Rome, FAO.

Hughes, O.E. 1998. Public management and administration. 2nd ed. New York: St. Martin's Press.

Hunger, D. & Wheelen, T.L. 2007. Essentials of strategic management. 4th ed. New Jersey: Pearson.

India. 2005. The Disaster Management Act. Government of India. New Delhi.

India. 2006. Report of the Working Group on Disaster Management for the Eleventh Five Year Plan (2007-2012). New Delhi.

India. 2008. National Disaster Management Guidelines. Management of floods. National Disaster Management Authority. Government of India.

India. 2014. Mainstreaming Disaster Risk Reduction in Environment Sector: Guidance and Tools. National Institute of Disaster Management. New Delhi.

India. 2015. National Disaster Management Plan. A publication of the National Disaster Management Authority, Government of India. New Delhi.

India. 2016. National Disaster Management Plan. A publication of the National Disaster Management Authority, Government of India. New Delhi.

International Federation of Red Cross and Red Crescent Societies (IFRC). 2011a. Analysis of legislation related to disaster risk reduction in South Africa. International Federation of Red Cross and Red Crescent Societies, Geneva.

International Federation of Red Cross and Red Crescent Societies (IFRC). 2011b. Disasters in Africa: the case for legal preparedness. Geneva, Switzerland.

International Federation of Red Cross and Red Crescent Societies (IFRC). 2012a. Analysis of legislation related to disaster risk reduction in Brazil. Geneva, Switzerland.

International Federation of Red Cross and Red Crescent Societies (IFRC). 2012b. Background report. Law and regulation for the reduction of risk from natural disasters in People's Republic of China. A national law desk survey. Geneva, Switzerland.

International Panel on Climate Change (IPCC). 2007. Climate change 2007: Synthesis Report. www.ipcc.org Date of access: 25 May 2012.

Intergovernmental Panel on Climate Change (IPCC) 2014. Summary for policymakers. In Climate change 2014: Impacts, adaptation and vulnerability. Part A: Global and sectoral aspects. Contribution of Working Group II contribution to the fifth assessment report of the IPCC. P. 1-32.

Jaffee, D. 2001. Organisation theory: tension and change. New York: McGraw Hill.

Jiang, L. 2013. Implementation of disaster reduction measures and enhancement of integrated risk governance in China. *International Journal of Disaster Risk Sciences*, 4(2):101-104.

Jones, G.R., George, J.M. & Hill, C.W.L.1998. Contemporary management. New York: Irwin, McGraw-Hill.

Jones, G.R. 2001. Organisation theory: text and cases. 3rd ed. New Jersey: Prentice Hall.

Jonker, A. 2001. Governance and state structures. (*In* van Niekerk, D., van der Waldt, G. & Jonker, A. Governance, politics and policy in South Africa. Oxford: University Press. p. 63-85).

Jonkman, S.N. 2005. Global perspectives on loss of human life caused by floods. *Natural hazards,* 34:151-175.

Johnson, G. & Scholes, K. 2002. Exploring Corporate Strategy: Text and Cases. London: Pearson Education.

Johnston, J. 1998. Strategy, planning, leadership, and the financial management improvement plan: the Australian Public Service 1983 to 1996. *Public productivity & management review*, 21(4):352-368.

Jordaan, A.J. 2012. Drought Risk Reduction in the Northern Cape, South Africa. Bloemfontein: UFS. (Thesis –PhD).

Jugder, N. 2016. The thematic analysis of interview data: an approach used to examine the influence of the market on curricular provision in Mongolian higher education institutions. University of Leeds.

Kahn, S., Madue, S.M. & Kalema, R. 2011. Intergovernmental relations in South Africa. Hatfield: Van Schaik.

Kang, Y. 2015. Disaster Management in China in a changing era. *Springer Briefs in Political Science*. 21-48.

Karimanzira, M. 1999. Sustainable development and disasters: challenges for southern Africa. (*In* Holloway, A., ed. Cape Town: University of Cape Town. P 17-24).

Kassem, S. 1977. Organisation theory: American and European styles: why are we interested in European contributions? Management international review, 17(3):11-18.

Kast, F.E. & Rosenzweig, J.E. 1972. General systems theory: applications for organisation and management. *The academy of management journal*, 15(4):447-465.

Katsioloudes, M.I. 2006. Strategic management: global cultural perspectives for profit and non-profit organisations. London: Elsevier.

Katz, D & Kahn, R.L. 1966. Organisations and the system concept. (*In* Ott, J.S., Shafritz, J M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 14-29).

Kellet, J. & Sparks, D. 2012. Disaster risk reduction: Spending where it should count. Briefing Paper. Workstream, Global trends. United Kingdom, Keward Court.

Kenny, G. 2005. Strategic planning and performance management: develop and measure winning strategy. New York: Elsevier.

Khandlhela, M. & May, J. 2006. Poverty, vulnerability and the impact of flooding in the Limpopo Province, South Africa. *Natural hazards,* 39:275-287.

Kieser, A. 1994. Why organisation theory needs historical analyses – and how this should be performed. *Organisation science*, 5(4):608-620.

King, W.R. 1984. Strategic issue management. (*In* King, W.R. & Cleland, D.I., *eds*. New York: Van Nostrand Reinhold. p. 252-264).

King, W.R. & Cleland, D.I. 1978. Strategic planning and policy. New York: Van Nostrand Reinhold.

King, W.R. & Cleland, D.I. 1987. Strategic planning and management handbook. New York: Van Nostrand Reinhold.

Korosec, R.L. 2006. Is department-based strategic planning more effective than organisation-wide strategic planning? *Public performance & management review*, 30(2):221-244.

Lafferty, M. & Meadowcroft, J., *eds*. 2000. Implementing Sustainable Development: Strategies and initiatives in High Consumption Societies. New York: Oxford University Press.

Lake, N. 2012. The strategic planning workbook. 3rd ed. London: Kogan.

Lavell, A. & Maskrey, A. 2014. The future of Disaster Risk Management. *Environmental hazards,* 13(4):267-280.

Leedy, P.D., & Ormrod, J. E. 2005. Practical Research: Planning and design. 8th ed. New Jersey: Pearson Educational International and Prentice Hall.

Le Maitre, D.C., KRUGER, F.J. & Forsyth, G.G. 2014. Interfacing ecology and policy: Developing an ecological framework and evidence base to support wildfire management in South Africa. Austral Ecology. *A journal of ecology in southern hemisphere*, 39:424-436.

Levin, R.M. 2009. Transforming the public service to support the developmental state. *Journal of public administration*, 44(4.1):943-968.

Lewis, P.S., Goodman, S.H. & Fandt, P.M. 2004. Management: challenges for tomorrow's leaders. 4th ed. South Western: Thomson.

Lin, Y., Deng, X. & Jin, Q. 2013. Economic effects of drought on agriculture in North China. *International journal of disaster risk sciences,* 4(2):59-67.

Lindgren, M. & Bandhold, H. 2009. Scenario planning: the link between future and strategy. Sine loco: Palgrave Macmillan.

Lixin, Y., Lingling, G., Dong, Z., Junxue, Z., & Zhanwu, G. 2012. An analysis on disaster management system in China. *Nat hazards*, 60:295-309.

Louw, L. & Venter, P. 2010. Strategic management: developing sustainability in Southern Africa. 2nd ed. Cape Town: Oxford University Press.

Lozier, G.G. & Chittipeddi, K. 1986. Issues management in strategic planning. *Research in higher education*, 24(1):3-14.

Lundgren, E.F. 1974. Organisational management: systems and process. New York: Harper & Row.

Lunenburg, F.C. & Irby, B.J. 2008. Writing a successful thesis or dissertation: tips and strategies for students in the Social and Behavioural Sciences. United Kingdom: Sage Ltd.

Lundstedt, S. 1972. Consequences of reductionism in organisation theory. *Public administration review*, 32(4):328-333.

Lune, H. 2010. Understanding organisations. Malden, MA: Polity Press.

Lutabingwa, J. & T. Nethonzhe, T. 2006. Ethical issues in social research. *Journal for public administration*, 41(3.1):694-702.

Lu, W. 2010. Improved SWOT approach for conducting strategic planning in the construction industry. *Journal of construction engineering and management*, 136(12):1317-1328.

Mackenzie, K.D. 1998. The prime directive for organisations. *The international journal of organisational analysis*, 6(4):289-309.

Mahon, J.F. & Murray, E.A., Jr. 1981. Strategic planning for regulated companies. *Strategic management journal*, 2(3):251-262.

Majam, T. & Theron, F. 2006. The purpose and relevance of a scientific literature: A holistic approach to research. *Journal of Public Administration*, 41(3):603-615.

Makridakis, S. & Heau, D. 1987. The evolution of strategic planning and management. (*In* King, W.R. & Cleland, D.I., *eds*. Strategic planning and management handbook. New York: Van Nostrand Reinhold Company. p. 3-20).

Malan, L. 2014. The intergovernmental structure of the state: National, regional and local. (*In* Thornhill et al. Public Administration and Management in South Africa: A Developmental Perspective. Cape Town: Oxford University Press. p. 53-74).

Manyena, S.B., Mavhura, E., Muzenda C., & Mabaso, E. 2013. Disaster risk reduction legislation: Is there a move from events to processes? *Global environment change,* 23:1786-1794.

Marshall, C. & Rossman, G.B. 2011. Designing qualitative research. 5th ed. London: Sage Publications.

Marshall, M.N. 1996. Sampling for qualitative research. *Family practice*, 13(6):522-525.

Masadeh, M.A. 2012. Focus Group: Reviews and practices. *International journal of applied science and technology*, 2(10):63-68.

Maslow, A.H. 1943. A theory of human motivation. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 370-396).

Masters, L. 2013. Reaching the crossroads: The development of climate governance in South Africa. (*In* Held, D., Roger, C. & Nag, E.M. Climate governance in the developing world. eds. p. 258-276).

McAuley, J., Duberley, J. & Johnson, P. 2007. Organisation theory: challenges and perspectives. New York: Pearson Education.

McCallum, D.C. 1856. Superintendent's report. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 46-47).

McGregor, D.M. 1957. The human side of enterprise. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 183-188).

McNichols, T.J. 1983. Executive policy and strategic planning. 2nd ed. New York: McGraw-Hill.

Mehta, A. 2013. Strategic management. New Delhi: Discovery Publishing House.

Melcher, B.H. & Kerzner, H. 1988. Strategic Planning: Development and implementation. Pennsylvania: TAB Professional and Reference Books.

Mello, D.M. & Maserumule, M.H. 2010. Intergovernmental relations and Integrated Development Planning in South Africa. *Journal of public administration*, 45(1.1):283-294.

Mendelow, A.L. 1987. Stakeholder analysis for strategic planning and implementation. (*In* King, W.R. & Cleland, D.I., *eds*. Strategic planning and management handbook. New York: Van Nostrand Reinhold Company. p. 176-191).

Mendiondo. E.M. 2015. Governance and policy for disaster risk reduction and adaptation to extremes of climate variability. A presentation made at the ZCAS workshop. National Centre for Monitoring and Alerts of Natural Disasters.

Michaelson, G.A. 2001. Sun Tzu, The Art of War for managers: 50 strategic rules. Massachusetts: Adams Media Corporation.

Mintzberg, H. 1979. The five basic parts of the organisation. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 18-34).

Mintzberg, H. 1987. The strategy concept II: Another look at why organisations need strategies. (*In* Thompson, A.A, Jr., Fulmer, W.E. & Strickland III, A.J., *eds*. 1990. Readings in strategic management. Boston: BPI Irwin. p. 53-60).

Mintzberg, H. 1994. The rise and fall of strategic planning. New York: Prentice Hall International.

Mintzberg, H., Ahlstrand, B. & Lampel, J. 2005. Strategy bites back: it is a lot more, and less, than you ever imagined. London: Prentice Hall.

Mojapelo, P.M. 2013. The doctrine of separation of powers (a South African perspective). Paper delivered at the Middle Temple South Africa Conference, September 2012. Advocate, April 2013, p 37-46).

Moore, S. 2000. Analysing strategic activity through narrative analysis. (*In* Flood, P.C., Dromgoole, T., Carroll, S.J. & Gorman, L., *eds*. Managing strategy implementation. Oxford: Blackwell Publishers. p. 44-56).

Morazan, P., Knoke, I., Knoblauch, D. & Schafer, T. 2012. The role of the BRICS in the developing world. Directorate-General for external policies. European Union. Belgium.

Morgan, G. 1989. Creative organisation theory: a resource book. London: Sage.

Morgan, G. 1990. Organisations in society. London: Macmillan Press.

Morgan, D.L. 1996. Focus Groups. *Annual Review of Sociology*, 22:129-152.

Morrill, C. 2008. Culture and organisation theory. *The annals of the American Academy of Political and Social Science*, 619(15):15-40.

Mouton, J. 2001. How to succeed in your master's and doctoral studies: A South African guide and resource book. Pretoria: Van Schaik.

Mphaisha, C. 2014. Functioning between the branches of government: Ensuring democracy. (*In* Thornhill et al. Public Administration and Management in South Africa: A Developmental Perspective. Cape Town: Oxford University Press. p. 75-104).

Muller, K. 2014. Strategic management and national planning: Foresighting and scenario planning. (*In* Thornhill et al. Public Administration and Management in South Africa: A Developmental Perspective. Cape Town: Oxford University Press. p. 209-232).

Nemakonde, L. 2016. Creswell & Clark's designing and conducting mixed methods research. London: Sage Publications.

Ngaka, M. 2012. Drought preparedness, impact and response: A case of the Eastern Cape and Free State provinces of South Africa, *Jamba: Journal of disaster risk studies* 4(1).

Nieboer, N. 2011. Strategic planning process models: a step further. *Property management*, 29(4):371-383.

Nightingale, D.V. & Toulouse, J.M. 1977. Toward a multilevel congruence theory of organisation. *Administrative science quarterly*, 22(2):264-280.

Nutt, P.C. 1984. A strategic planning network for non-profit organisations. *Strategic management journal*, 5(1):57-75.

O'Creevy, M.F. 2000. Middle management resistance to strategic change initiatives: saboteurs or scapegoats? (*In* Flood, P.C., Dromgoole, T., Carroll, S.J. & Gorman, L., *eds*. Managing strategy implementation. Oxford: Blackwell Publishers. p. 154-167).

Olowu, D. 2010. The Hyogo Framework for Action and its implications for disaster management and reduction in Africa. *Jamba. Journal of disaster risk studies*, 3 (1):303-320.

Onwuegbuzie, A.J., Dickinson, W.B., Leech, N.C. & Zoran, A.G. 2009. A qualitative framework for collecting and analysing data in focus group research. *International journal of qualitative methods*, 8(3):1-20.

Osborn, R.N., Hunt, J.G. & Jauch, L.R. 1980. Organisation theory. New York: John Wiley.

Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. London: Wadsworth/Cengage.

Pacios, A.R. 2004. Strategic plans and long-range plans: is there a difference? *Library management*, 25(6-7):259-269.

Parker, D.J. ed. 2000. Floods. Volume I. Routledge Hazards and Disasters Series. London: Routledge.

Paterson, A. 2009. A review of strategic planning practices that may be applied by the South African National Planning Commission. Development Planning Division Working Series No.6, Development Bank of Southern Africa: Midrand.

Pearce, J.A., II, Robinson, R.B, Jr. & Roth, K. 1987. The company mission as a guide to strategic action. (*In* King, W.R. & Cleland, D.I., *eds*. Strategic planning and management handbook. New York: Van Nostrand Reinhold Company. p. 70-88).

Pelling, M. & Holloway, A. 2006. Legislation for mainstreaming disaster risk reduction. Tearfund. United Kingdom: Middlesex.

Pelling, M. 2007. Making disaster risk reduction work: a review and discussion of key themes, challenges and potential contributions to be made by Provention in promoting disaster risk reduction. Switzerland. http://www.proventionconsortium.org/forum2007 Date of access: 09 Jun. 2012.

Pelling, M. 2012. Hazards, risk and urbanisation. (*In* Wisner, B., Gaillard, J.C. & Kelman, I, eds. The Routledge Handbook of Hazards and Disaster Risk Reduction. London: Routledge. p. 145-155).

Peters, B.G. 2010. The politics bureaucracy. An introduction to comparative public administration. 6th ed. London: Routledge.

Pfeffer, J. & Salanick, G.R. 1978. External control of organisations: a resource dependence perspective. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 1-22).

Pferrer, J. 1981. Understanding the role of power in decision making. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 1-32).

Picard, L.A. 2005. The state of the state: institutional transformation, capacity and political change in South Africa. Johannesburg: Wits University Press.

Pienaar, D. & Geldenbloem, E. 2009. 15 year review. A review of changes in the macro-organisation of the state: 1994-2008. Department of Public Service and Administration. Pretoria.

Pinera, F.J. & Reed, A. R. 2007. Maximizing aid benefits after urban disasters through partnerships with local water sector utilities. *Disaster prevention and management,* 16(3):401 – 411.

Poister, T.H. & Streib, G.D. 1999. Strategic management in the public sector: Concepts, models and processes. *Public productivity & management Review*, 22(3): 308-325.

Porter, M.E. 1979. How competitive forces shape strategy. (*In* Birkinshaw, J., *ed*. 2004. Strategic management, Volume I. Cheltenham: Edward Elgar. p. 36-44).

Porter, M.E. 1987. From competitive advantage to corporate strategy. (*In* Thompson, A.A, Jr., Fulmer, W.E. & Strickland III, A.J., *eds*. 1990. Readings in strategic management. Boston: BPI Irwin. p. 209-235).

Priesmeyer, H.R. 1992. Organisations and chaos: defining the methods of nonlinear management. London: Quorum Books.

Pyne, S.J., Goldammer, J.G., de Ronde, C., Geldenhuys, C.J., Bond, W.J. & Trollope, S.W. 2004. Introduction. (*In* Goldammer, J.G & de Ronde, C., eds. Wildland Fire Management Handbook for Sub-Sahara Africa. A publication of the Global Fire Monitoring Centre (GFMC).

Pugh, D.S., ed. 1984. Organisation theory: selected readings. Harmondsworth, Middlesex: Penguin Books.

Radford, K.J. 1980. Strategic planning: an analytical approach. Reston, VA: Reston Publishers.

Rainey, H.G. 2003. Understanding & managing public organisation. 3rd ed. San Francisco: Jossey-Bass.

Rapoport, A. & Horvath, W.J. 1959. Thoughts on organisation theory, *General systems*, 4:87-91.

Rea, P. & Kerzner, H. 1997. Strategic planning: a practical guide. New York: Van Nostrand Reinhold.

Reid, D.M. 1989. Operationalising strategic planning. *Strategic management journal*, 10(6):553-567.

Rewizorski, M., ed. 2015. United or divided we stand? Perspectives on the European Union's challenges. Switzerland: Springer International Publishing.

Rezvani, M., Gilaninia, S. & Mousavian, S.J. 2011. Strategic planning: a tool for managing organisations in competitive environments. *Australian journal of basic and applied sciences*, 5(9):1537-1546.

Robbins, S.P. 1987. Organisation theory: structure, design and applications. 2nd ed. New Jersey: Prentice Hall.

Robbins, S.P. & Coultar, M. 1996. Management. 5th ed. New Jersey: Pearson Prentice Hall.

Robbins, S.P. & Barnwell, N. 2002. Organisation theory: concepts and cases. 4th ed. French Forest, NSW: Pearson Education.

Robbins, S.P. & DeCenzo, D.A. 2008. Fundamentals of management: essential concepts and applications. 6th ed. New Jersey: Pearson Prentice Hall.

Roethlisberger, F.J. 1941. The Hawthorne experiments. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 7-26).

Rosenbloom, D.H. & Kravchuk, R.S. 2002. Public administration: Understanding management, politics, and law in the public sector. 5th ed. New York: McGraw-Hill

Rothaermel, F.T. 2013. Strategic management: concepts. New York: McGraw-Hill.

Roux, B. 1971. Parliament and the Executive. (*In* Worrall, M.A., ed. South Africa: Government and politics. Pretoria: van Schaik Publishers. p. 29-74).

Roux, B. 1971. The central administration, provincial and local authorities and the judiciary. (*In* Worrall, M.A., ed. South Africa: Government and politics. Pretoria: Van Schaik Publishers. p 75-132).

Roux, N.L., Brynard, P.A., Botes, P.S. & Fourie, D.J*., eds.* 1997. Critical issues in public management and administration in South Africa. Pretoria: Kagiso Tertiary.

Russian Federation. Undated. Brief national report about the participation in the International Decade for Natural Disaster Reduction.

Russian Federation. 1994. The national report of the Russian Federation for the medium term review of IDNDR and the World Conference on Reduction of Natural Disasters Danger for the year 1994.

Russia. 2004. National report of the Russian Federation at the World Conference on Disaster Reduction. Ministry of Emergency of Russia.

Russian Federation. 2006. Russia's Country Report to the Asian Disaster Reduction Centre. Available on http://www.adrc.asia/countryreport/RUS/2005/english.pdf Date of access: 10 Jul. 2016.

Schmuck, H. 2012. Flood. (*In* Wisner, B., Gaillard, J.C. & Kelman, I, *eds*. The Routledge Handbook of Hazards and Disaster Risk Reduction. London: Routledge. p. 244-256).

Scott, W.G. 1961. Organisation theory: an overview and an appraisal, *Journal of the academy of management*, 4(1):7-26.

Scott, W.G. & Mitchell, T.R. 1987. The universal Barnard: his macro theories of organisation, *Public administration quarterly*, 11(1):34-58.

Scott, R.W. & Davis, G.F. 2007. Organisations and organising: rational, natural, and open system perspectives. New Jersey: Pearson Prentice Hall.

Selznick, P. 1948. Foundations of the theory of organisation. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 25-35).

Shafritz, J.M., Russell, E.W. & Borick, C.P. 2011. Introducing public administration. 7th ed. New York: Pearson.

Sheppard, J.P. 1995. A resource dependence approach to organisational failure. *Social science research*, 24(1):28-62.

Shi, P., Liu, J., Yao, Q., Tang, D. & Yang, X. 2007. Integrated Disaster Risk Management of China. Session III: Financial management. Role of insurance industry, financial markets and governments. Hyderabad, India.

Shim, J.K. 2012. Strategic management: concepts and tools. Hawkhurst: Global Professional Publishing.

Silverman, D. 1970. The theories of organisations. London: Heinemann.

Simon, H.A. 1946. The proverbs of administration. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 53-67).

Simon, H. 1993. Strategy and organisational evolution. *Strategic management journal*, 14(special issue):131-142.

Simon, D. 2012. Hazards, risk and climate change. (*In* Wisner, B., Gaillard, J.C. & Kelman, I, eds. The Routledge Handbook of Hazards and Disaster Risk Reduction. London: Routledge. p. 207-219).

Singh, S.P. & Dube, M. 2014. BRICS and the World Order: A Beginners Guide. Available at SSRN: https://ssrn.com/abstract=2443652 Date of access 31 Mar. 2016.

Smit, P.J., Cronje, de J.G.J., Brevis, T. & Vrba, M.J. 2007. Management principles: a contemporary edition for Africa. 4th ed. Cape Town: Juta.

Smith, A. 1776. Of the division of labour. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 41-45).

Smith, W. 2001. Chaos theory and postmodern organisation. *International journal of organisation theory and behaviour*, 4(3 & 4):259-286.

Smith, K. & Petley, D.N. 2009. Environmental Hazards. Assessing risk and reducing disaster. 5th ed. London: Routledge.

Smucker, T.A. 2012. Drought. (*In* Wisner, B., Gaillard, J.C. & Kelman, I, eds. The Routledge Handbook of Hazards and Disaster Risk Reduction. London: Routledge. p. 257-268).

Sokhela, P. 2014. Coordinating governmental actions: The role of the cabinet and its clusters. (*In* Thornhill et al. Public Administration and Management in South Africa: A Developmental Perspective. Cape Town: Oxford University Press. p. 105-126).

Soriano, E. & Hoffman, W.A.M. 2015. The evolution of the protection systems against natural disasters in Brazil: laws, agencies, information and knowledge. *Disaster management and human health risk IV:* 49-57.

South Africa. Undated. Public Service Commission. Report on the rationalisation of public administration in the Republic of South Africa 1994-1996. Pretoria.

South Africa.1987. Fire Brigade Services Act 99 of 1987.

South Africa.1994. Public Service Act 103 of 1994.

South Africa.1995. White Paper on the Transformation of the Public Service. Pretoria.

South Africa. 1996a. Constitution of the Republic of South Africa 1996.

South Africa. 1996b. Mine Health and Safety Act 29 of 1996.

South Africa. 1998a. Green Paper on Disaster Management.

South Africa. 1998b. National Veld and Forest Fire Act 101 of 1998.

South Africa. 1998c. Presidency. Developing a culture of good governance. Report of the Presidential Review Commission on the reform and transformation of the public service in South Africa. Pretoria.

South Africa. 1998d. National Water Act 36 of 1998.

South Africa. 1998e. National Environmental Management Act 107 of 1998.

South Africa. 1999a. White Paper on Disaster Management.

South Africa. 1999b. Public Finance Management Act 1 of 1999.

South Africa. 2001. Presidency. A Guide to the National Planning Framework.

South Africa. 2002. Disaster Management Act 57 of 2002.

South Africa. 2004. National Water Resources Strategy. 1st ed. September 2004. Department of Water Affairs and Forestry.

South Africa. 2005. National Disaster Management Framework.

South Africa. 2007. Presidency. National Spatial Development Perspective.

South Africa. National Treasury. 2007. Chapter 5 of the Treasury Regulations for departments, trading entities, constitutional institutions and public entities. Pretoria.

South Africa. 2008a. Department of Provincial and Local Government. 15 year review report on the state of intergovernmental relations in South Africa. Pretoria.

South Africa. 2008b. Intergovernmental relations working together for development: an intergovernmental perspective. A series of six case studies. Pretoria.

South Africa. 2009a. Presidency. Medium Term Strategic Framework (MTSF). Pretoria.

South Africa. 2009b. Green Paper on National Strategic Planning.

South Africa. 2010a. Department of Science & Technology. Risk & Vulnerability Atlas.

South Africa. 2010b. National Treasury. The Framework for Strategic Plans and Annual Performance Plans.

South Africa. 2010c. Presidency. Guide to Outcomes Approach.

South Africa. 2010d. Safety at Sports and Recreational Events Act 2 of 2010.

South Africa. 2011a. South Africa's second national communication under the United Nations framework convention on climate change. Department of Environmental Affairs. Republic of South Africa, Pretoria.

South Africa. 2011b. White Paper on International Relations.

South Africa. 2012a. White Paper on National Climate Change Response.

South Africa. 2012b. National Development Plan.

REFERENCE LIST

South Africa. 2012c. Government Communications Information Services. Guide to government. www.info.gov.za Date of access: 1 Oct. 2015.

South Africa. 2012d. Sectoral Disaster Risk Management Plan. (Notice 749 of 2012). *Government Gazette*, 35688:3, 14 Sept.

South Africa. Presidency. 2013a. Speech by Trevor Manuel, Minister in the Presidency: National Planning Commission on implications of the national development plan for the public service, conference of the senior management service, Pretoria. http://www.thepresidency.gov.za/pebble.asp?relid=15170 Date of access: 1 Jun. 2013.

South Africa. 2013b. South Africa Year Book, 2012/13.

South Africa. 2013c. Spatial planning and Land use Management Act 16 of 2013.

South Africa National Disaster Management Centre. 2014a. Data on declared disasters. Unpublished.

South Africa. Department of Agriculture, Forestry and Fisheries. 2014b. Purpose of Directorate: Climate Change and Disaster Management. (Unpublished). www.daff.gov.za Date of access: 25 Jan. 2015.

South Africa. 2014c. Presidency. Medium Term Strategic Framework. Pretoria.

South Africa. 2015. Disaster Management Amendment Act 16 of 2015.

South Africa. Department of Cooperative Governance. 2016. Integrated Urban Development Framework.

Southern African Development Community (SADC). 2003. Regional Indicative Strategic Development Plan. SADC Secretariat: Gaborone.

Southern African Development Community 2008. Southern Africa Environment Outlook. SADC Secretariat: Gaborone.

Southern African Development Community (SADC). 2009. HIV and AIDS Strategic Framework 2010-2015. SADC Secretariat: Gaborone.

Southern African Development Community (SADC) 2010a. Southern Africa Sub-Regional Framework of Climate Change Programmes: Adaptation and mitigation actions, supported by enabling measures of implementation. SADC Secretariat: Gaborone.

Southern African Development Community (SADC) 2010b. SADC Regional Fire Management Programme Document. SADC Secretariat: Gaborone.

Starbuck, W.H. 2003. The origins of organisation theory. (*In* Tsoukas, H. & Knudsen, C., eds. The Oxford handbook of organisation theory: meta theoretical perspectives. Oxford: Oxford University Press. p. 143-182).

Steiner, G.A. 1979. Strategic planning: what every manager must know. New York: The Free Press

Steiss, A.W. 2003. Strategic management for public and non-profit organisations. Basel: Marcel Dekker.

Stern, R.N. & Barley, S.R. 1996. Organisations and social systems: organisation theory's neglected mandate. *Administrative science quarterly*, 41(1):146-162.

Stiles, P. 2000. Constraints on strategy implementation: the 'problem' of the middle manager. (*In* Flood, P.C., Dromgoole, T., Carroll, S.J. & Gorman, L., *eds*. Managing strategy implementation. Oxford: Blackwell. p. 168-180).

Stryker, S. 2012. Plan to succeed: a guide to strategic planning. Lanham, MD: Government Institutes.

Swiss Reinsurance. 2011. Flood risk in Brazil. Fact sheet. http://media.swissre.com/documents/Flood_Risk_in_Brazil.pdf Date of access: 30 Jun. 2016.

Taljaard, R., Venter, A. & Jolobe, Z. 2011. Parliament. (*In* Venter, A. & Landsberg, C. eds. Government and politics in South Africa. Hatfield: van Schaik Publishers. p. 20-42).

Tarrow, S. 1974. Local constraints on regional reform: A comparison of Italy and France. *Comparative Politics*, 1(7):1-36.

Tau, M.E. 2014. An institutional model for collaborative disaster risk management in the Southern African Development Community (SADC). Potchefstroom: NWU. (Thesis-PhD).

Taylor, F.W. 1916. The principles of scientific management. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 65-76).

Taylor, B. 1987. An overview of strategic planning styles. (*In* King, W.R. & Cleland, D.I., *eds*. Strategic planning and management handbook. New York: Van Nostrand Reinhold Company. p. 21-35).

Thietart, R.A. & Forgues, B. 1995. Chaos theory and organisation. *Organisation science*, 6(1):19-31).

Thompson, J. & Martin, F. 2010. Strategic management: awareness and change. 6th ed. London: South-Western Cengage Learning.

Thornhill, W. 1985. Public administration. Cambridge: ICSA Publishing.

Thornhill, C. & Hanekom, S.X. 1995. The public sector manager. Durban: Butterworths.

Thornhill, C. 2002. Intergovernmental relations in South Africa: an introduction. (*In* Kuye, J.O., Thornhill, C. & Fourie, D. eds. Critical perspectives on public administration. Issues for consideration. Johannesburg: Heinemann. p. 27-51).

Thornhill, C. 2012. JJN Cloete's South African Public Administration and Management. 10th ed. Hatfield: Van Schaik.

Towne, H.R. 1886. The engineer as economist. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 428-432).

Turnbull, M., Sterrett, C.L. & Hilleboe, A. 2013. Toward Resilience. A guide to Disaster Risk Reduction and climate change adaptation. Warwickshire: Practical Action Publishing Ltd.

Turok, I. 2012. Urbanisation and Development in South Africa: Economic Imperatives, Spatial Distortions and Strategic Responses. International Institute for Environment and Development. London.

Twigg, J. 2004. Good practice review: Disaster risk reduction- mitigation and preparedness in development and emergency programming. London: Overseas Development Institute.

University of Cape Town (UCT). 1999. Risk Sustainable Development and Disasters. Cape Town: Peri Peri publications.

United Nations. 1989. International Decade for Natural Disaster Reduction. Resolutions adopted on the reports of the Second Committee. United Nations: New York.

United Nations. 1994. Yokohama Strategy and Plan of Action for a Safer World. Guidelines for natural disaster prevention, preparedness and mitigation. World Conference on Natural Disaster Reduction, Yokohama, Japan 23-27 May.

United Nations. 2004c. Living with Risk: A Global Review of Disaster Reduction Initiatives 2004. National Review, South Africa. United Nations.

United Nations. 2010. Natural hazards, unnatural disasters: The economics of effective prevention. World Bank: Washington DC.

United Nations Development Programme (UNDP). 2002. Government of India –

UNDP Disaster risk management programme. 2002-2009. Evaluation and review of lesson learnt.

United Nations Development Programme (UNDP). 2004. Reducing disaster risk: A challenge for development. A global report. http://www.undp.org Date of access: 14 Feb. 2012.

United Nations Development Programme (UNDP). 2005. A UN reading of Brazil's challenges and potential. Common country assessment by Brazil's UN Country Team.

United Nations Development Programme. 2007. A global review: UNDP support to institutional and legislative systems for disaster risk management.

United Nations Environment Programme (UNEP). 2008. Southern Africa Environment Outlook. Southern African Research and Documentation Centre, Southern Africa Development Community (SADC): Gaborone.

United Nations Environment Programme (UNEP). 2014. The ecosystem-based disaster risk reduction. Case study and exercise source book.

United Nations Framework Convention on Climate Change (UNFCCC). 2008. Integrating practices, tools and systems for climate risk assessment and management and strategies for disaster risk reduction into national policies and programmes. A technical paper. www.unfcc.org Date of access: 09 Jun. 2012.

United Nations Human Settlements Programme (UN-HABITAT). 2007. Global Report on Human Settlements 2007. Enhancing Urban Safety and Security. London: Earthscan.

United Nations Human Settlements Programme (UN-HABITAT). 2014. The state of African cities. Re-imagining sustainable urban transitions. Kenya: Nairobi.

United Nations International Strategy for Disaster Reduction (UNISDR). 2002. Living with risk: A global review of disaster reduction initiatives. Preliminary version. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2004a. Poverty and disaster risk reduction. UN/ISDR Africa Educational Series, Volume 2, Issue 5, December 2004. Cape Town.

United Nations International Strategy for Disaster Reduction (UNISDR). 2004b. Guidelines for mainstreaming disaster risk assessment in development. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2005. Hyogo Framework for Action (HFA) 2005-2015, Building the Resilience of Nations and Communities to Disasters. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2008. Integrating disaster risk reduction into the fight against poverty. Global facility for disaster reduction and recovery. Annual report 2008. United Nations: Washington DC.

United Nations International Strategy for Disaster Reduction (UNISDR). 2009a. Global Assessment Report on Disaster Risk Reduction. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2009. Disaster reduction in Africa, ISDR Informs Issue. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2010. Toolkit for national platforms for disaster risk reduction in Africa. Contributing to the implementation of the Hyogo Framework for Action and the Africa Regional Strategy and Programme of Action for Disaster Risk Reduction. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2011a. Hyogo Framework for Action. Mid-Term Review 2010-2011. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2011b. Global Assessment Report on Disaster Risk Reduction. United Nations: Geneva.

United Nations International Strategy for Disaster Reduction (UNISDR). 2015a. Disaster risk reduction and resilience in the 2030 Agenda for sustainable development.

United Nations International Strategy for Disaster Reduction (UNISDR). 2015b. Sendai Framework for Disaster Risk Reduction 2015-2030.

United Nations International Strategy for Disaster Reduction (UNISDR). 2015c. Reading the Sendai Framework for Disaster Risk Reduction 2015-2030.

United Nations System Chief Executives Board for Coordination. 2013. United Nations Plan of Action on Disaster Risk Reduction for Resilience.

United Nations. Transforming our world. The 2030 Agenda for sustainable development.

Uys, F. 2005. Disaster management: An overview. *Journal of public administration*, 40(3.2):404-417.

Van Dam, N. & Marcus, J. 2007. Organisation and management. Groningen: Wolters-Noordhof.

Van Huyssteen, E., Le Roux, A. & Van Niekerk, W. 2013. Analysing risk and vulnerability of South African settlements: Attempts, explorations and reflections, *Jamba: journal of disaster risk studies* 5(2):1-8.

Van der Waldt, G. & Helmbold, R. 1995. The Constitution and a new public administration. Cape Town: Juta & Co Ltd.

Van der Waldt, G. 2000. Strategic Public Management IV. Florida: Technikon South Africa, Florida Campus. (Study guide Strategic Public Management IV).

Van der Westhuizen, J., ed. 1986. Management Course in Civil Defence - Part 1: Strategy. Pretoria: University of South Africa.

Van Niekerk, D. 2001. The state and government. (*In* van Niekerk, D., van der Waldt, G. & Jonker, A. Governance, politics and policy in South Africa. Oxford: University Press. p. 40-62).

Van Niekerk, D., Mokonyama, T. & Reid, P. 2002. Disasters: A theoretical perspective. African Centre for Disaster Studies. Potchefstroom: Potchefstroom Universiteit.

Van Niekerk, D. 2005. A comprehensive framework for multi-sphere disaster risk reduction in South Africa. North West University, Potchefstroom (Thesis - Ph.D).

Van Niekerk, D. 2006. Disaster Risk Management in South Africa: The function and the activity - towards an integrated approach. *Journal of the departments of political sciences and public administration,* (*POLITEIA*), 25(2):95-115.

Van Niekerk. D., Tempelhoff, J., Falling, W., Thompson, L., Jordaan, D., Coetzee, C. & Maartens, Y. 2009. The effects of climate change in two flood laden and drought stricken areas in South Africa: Responses to climate change – past, present and future. Potchefstroom University.

Van Niekerk, D. 2014. A critical analysis of the South African Disaster Management Act and Policy Framework. *Disasters*, 38(4):858-877.

Van Rensburg, M.J., Davis, A. & Cronje, S. 2010. Strategic management. Pretoria: School of Management Sciences, University of South Africa.

Van Riet, G. 2012. Recurrent drought in the Dr Ruth Segomotsi Mompati District Municipality of the North West province in South Africa: An environmental justice perspective. Jamba. Journal of Disaster Risk Studies 4(1):Art. #52, 9 pages.

Van Zyl, D., Malherbe, J. & Newby, T.S. 2011. Living with Drought. Adaptation, alleviation and monitoring. (*In* Zietsman, L., ed. Observations on environmental change in South Africa). Stellenbosch: Sun media. P. 26-36.

Varoufakis, Y. 2008. Game theory: can it unify the social sciences? Organisation studies, 29(8 & 9):1255-1277.

Venter, A. 1989. South African government and politics: An introduction to its institutions, processes and policies. Edited. Johannesburg: Southern Book Publishers.

Venter, D. 1996. Central government transformation. (*In* Burger, A.P.J., Theron, F. & van Rooyen, A. eds. Challenges in change. Bellville: University of Stellenbosch. p 41-54).

Venter, A. 2011. The context of South African government and politics. (*In* Venter, A. & Landsberg, C. eds. Government and politics in South Africa. Hatfield: van Schaik Publishers. p 3-19).

Venter, A. 2011. Administering national government. (*In* Venter, A. & Landsberg, C. eds. Government and politics in South Africa. Hatfield: van Schaik Publishers. p. 80-101).

Vermaak, J. & van Niekerk, D. 2004. Disaster risk reduction initiatives in South Africa. *Development Southern Africa,* 21(3):555-574.

Viljoen, G.F. 2003. Management of Water Extremes: A South African Perspective on Guidelines for Policy and Strategy Development. Paper presented at Pre-IAAE Conference on African Agricultural Economics, Bloemfontein, South Africa, and August 13-14, 2003.

Vogel, C., Laing, M. & Monnik, K. 2000. Drought in South Africa, with special reference to the 1980-94 period. (*In* Wilhite D.A. ed. Drought Volume I. London: Routledge. p. 348-366).

Vogel, C. 2011. Climate change. Risk, adaptation and sustainability. (*In* Zietsman, L. ed. Observations on environmental change in South Africa. P. 36-40).

Walker, A.H. & Lorsch, J.W. 1968. Organisational choice: product versus function. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 211-221).

Wamsler, C. & Lawson, N. 2012. Complementing institutional with localised strategies for climate change adaptation: a South North comparison. *Disasters*, 36 (1):28-53.

Walsh, J.P., Meyer, A.D. & Schoonhoven, C.B. 2006. A future for organisation theory: living in and living with changing organisations. *Organisation*, 17(5):657-671.

Wang, M., Shi, P., Ye, T., Liu, M. & Zhou, M. 2011. Agriculture insurance in China: History, experience and lesson learned. *International journal of disaster risk sciences,* 2(2):10-22.

Waterman, R.H., Jr., Peters, T.J. & Phillips, J.R. 1980. Structure is not organisation. *Business horizons*, 23(3):14-26.

Weber, M. 1922. Bureaucracy. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge. p. 77-82).

Wei, Y-M., Jin, J.L. & Wang, Q. 2012. Impacts of natural disasters and disaster risk management in China: The case of China's experience in Wenchuan Earthquake. (*In Sawada, Y. & Oum, S. eds.* Economic and Welfare Impacts of Disasters in East Asia and Policy Responses*. ERIA Research Project Report 2011-8, Jakarta: ERIA).

Welman, C., Kruger, F. & Mitchell, B. 2005. Research Methodology. 3rd ed. Cape Town: Oxford University Press.

Wheelwright, S.C. 1984. Strategy, management, and strategic planning approaches. *Interfaces*, 14(1):19-33.

Wilkinson, G. & Monkhouse, E. 1994. Strategic planning in public sector organisations. *Executive development*, 7(6):16-19.

Whitcomb, E.A. 1974. Napoleon's Prefects. *The American historical review*, 79 (4):1089-1118.

Whittaker, J.B. 1978. Strategic planning in a rapidly changing environment. Lexington, MA: Lexington Books.

Wisner, B. 2000. From "Acts of God" to "Water Wars". The urgent analytical and policy role of political ecology in mitigating losses from flood: A view of South Africa from Central Africa. (*In* Parker, D.J., ed. Floods Volume I. London: Routledge. p. 89-99).

Wisner, B., Blaikie, P., Cannon, T. & Davis, I. 2004. At Risk: Natural hazards, people's vulnerability and disasters. 2nd ed. London: Routledge.

World Bank. 2008. Climate change impacts in drought and flood affected areas: case studies in India. Report No. 43946-IN.

World Bank. 2012. The Sendai Report. Managing disaster risks for a resilient future. Washington DC.

World Bank. 2012. Climate change, disaster risk and the urban poor. Cities building resilience for a changing world. Judy L. Baker, editor. Washington D.C.

World Meteorological Organisation (WMO). 2014. Atlas of mortality and economic losses from weather, climate and water extremes (1970–2012). WMO-No. 1123. Geneva: Switzerland.

World Wide Fund South Africa. 2011. Managing water risk: Business response to the risk of climate change in South Africa – A synthesis. South Africa: Cape Town.

Xenophon. 1869. The analysis or expedition of Cyrus and the memorabilia of Socrates. (*In* Ott, J.S., Shafritz, J.M. & Jang, Y.S., eds. 2011. Classic readings in organisation theory. 7th ed. New York: Routledge p. 430-433).

Yadav, R.J. ed. 2011. Disaster Management in India. Acts, Policies and Guidelines. Jaipur: Paradise Publishers.

Young, RD. 2003. Perspectives on strategic planning in the public sector. http://www.ipspr.sc.edu/publication/perspectives%200n%Strategic%20Planning.pdf Date of access: 1 Mar. 2013.

Zhang, Q., Hu,Y., Lu,Q. undated. Implementation of disaster governance for community resilience: A disaster risk management approach based on the Chinese experience. School of Social Development and Public Policy. Beijing Normal University.

Zou, M. & Yuan, Y. 2010. China's comprehensive disaster reduction. *International journal for disaster risk science*, 1(1):24-32.

Zuma, B.M., Luyt, C.D., Chirenda, T. & Tandlich, R. 2012. Flood Disaster Management in South Africa: Legislative Framework and Current Challenges. Paper presented at the International Conference on Applied Life Sciences, Turkey, September 10-12, 2012.

Ziervogel, G., New, M., van Garderen, E, A., Midgley, G., Taylor, A., Harmann, R., Stuart-Hill, S., Myers, J. & Warburton, M. 2014. Climate change impacts and adaptation in South Africa. WIREs *Climate Change* 2014.11.

ANNEXURE A: RESEARCH DATA COLLECTION DIRECTIVE

RESEARCH DATA COLLECTION DIRECTIVE

RESEARCH TOPIC

A MODEL FOR INTEGRATING DISASTER RISK REDUCTION IN NATIONAL
MULTI-SECTORAL PLANNING IN SOUTH AFRICA

STUDENT	STUDY LEADERS
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1.   INTRODUCTION

The research seeks to develop a model for integrating Disaster Risk Reduction (DRR) in national multi-sectoral planning in South Africa. It is based on the realisation that DRR as a multi-disciplinary and multi-sectoral endeavour requires to be integrated in national multi-sectoral planning for it to be effective.

To realise its objectives, the research reviewed theoretical models relating to organisation and strategic planning theories, DRR and multi-sectoral planning frameworks within the South African environment. This was done in order to determine how the principles of organisation and strategic planning theories, DRR and national multi-sectoral planning frameworks can inform the envisaged model. To give practical meaning to the theoretical perspective of the research, an empirical study will be undertaken with the identified Disaster Risk Management (DRM) focal points and Strategic Planning units of national sector departments in South Africa.

The objective of the empirical research is to solicit inputs from DRM focal points, Strategic Planning focal persons and units, as well as organisations involved in DRM and related work on the feasibility and possible structure of a model for integrating DRR in national multi-sectoral planning in South Africa.

This research data collection directive outlines the approach and focus of the data collection process that will be followed in the collection of relevant information for the study.

2.   RESEARCH AIMS AND OBJECTIVES

The research aims to develop a comprehensive model that would guide the integration of DRR in national multi-sectoral planning in South Africa.

In order to reach the above aims, the objectives of the research are to:

- To define, assess, examine and critically analyse the theories of Organisation and Strategic Planning and how they inform national multi-sectoral planning;

- Investigate and analyse existing legal instruments and frameworks governing DRR in South Africa;

- Investigate and analyse how national multi-sectoral planning developed in South Africa;

- Explore and examine international models for integrating DRR in national multi-sectoral planning; and

- Explore and describe the indicators/performance criteria/parameters to be incorporated into a model for integrating DRR in national multi-sectoral planning in South Africa.

3. RESEARCH DESIGN AND METHODOLOGY

A qualitative research design will be used to conduct the research. Qualitative methodology in the form *literature study*, *documents*, *interviews* and focus group interviews will be employed in this study (de Vos et al. 2005; Morgan, 1996; Welman et al. 2005). This will involve DRM focal units (where they exist) and officials responsible for Strategic Planning units/ sections of key national sector departments in South Africa. Furthermore, inputs will also be sourced from identified organisations involved in DRM and related work outside the public service.

4. RESEARCH QUESTIONS

The following key questions will be answered by the research (i.e. literature review, observation and field study):

- How do the theories of Organisation and Strategic Planning inform national multi-sectoral planning in South Africa? **(through literature review)**;

- What are the existing legal instruments and frameworks governing DRR in the South African Government? **(through literature review, focus group discussions and interviews)**;
- How did multi-sectoral planning develop in the South African Government? **(through literature review and focus group discussions)**;
- What are the international models for integrating DRR with national multi-sectoral planning? **(through literature review)**; and
- What indicators/performance criteria or parameters should be incorporated in the envisaged model for integrating DRR in national multi-sectoral planning in South Africa? **(Through literature review, focus group discussions and interviews)**.

Interview questions are as follows:

Question 1	What is Disaster Risk Reduction (DRR) in your own view?
Question 2	Do you consider DRR as a function that must be integrated in national multi-sectoral planning initiatives of national sector departments?
Question 3	If the answer is **YES**, why do you think such integration is necessary? Provide practical and theoretical reasons. If the answer is **NO**, please explain why do you hold this view
Question 4	How do you believe DRR integration into your sectors should occur?
Question 5	What are the existing frameworks and institutional arrangements supporting DRR in the country?
Question 6	What are the legislative instruments, policies and institutional arrangements that drive multi-sectoral planning by national departments?
Question 7	What do you think is the role of the National Disaster Management Centre in supporting integration of DRR in national multi-sectoral planning?
Question 8	Do you think that developing a model for integrating DRR in national multi-sectoral planning is important?
	If the answer is **yes**, what key DRR aspects must be covered in such a model?
Question 9	What indicators/performance criteria or parameters should be incorporated in the envisaged model for integrating DRR in national multi-sectoral planning in

	South Africa
Question 10	What legal frameworks and institutional arrangements are required to ensure effective implementation of the envisaged model?
Question 11	What do you think is the role of state entities, research organisations, international and national development organisations, etc in the implementation of a model for integrating DRR in national multi-sectoral planning?
Question 12	Do you believe that DRR must be reflected in long term strategic planning instruments such as the National Development Plan (NDP) in the South African context? If the answer is **yes**, what key DRR aspects must be reflected in the NDP?

MUSIWALO MOSES KHANGALE

PHD Student: North West University

ANNEXURE B: GENERIC GUIDE FOR STRATEGIC PLAN

Name of department/entity

Strategic Plan

for the
fiscal years
20XX – 20YY
[5 years beginning with XX]

Name of province (where relevant)

Date of tabling

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Foreword

Strategic planning in government is currently guided by the Medium Term Strategic Framework (MTSF) which reflects political outcomes priorities. In line with changes in Government's approach to planning, monitoring and evaluation, the MTSF will in future be supplemented or replaced by other short, medium and long term planning initiatives, aimed at translating the governing party's election mandate into reality. Executive authorities should take overall responsibility for developing strategic priorities for the five-year period of their term of office and beyond, developing policy and obtaining approval for the planned outcomes of the department within the political collective – either the national Cabinet or the provincial executive committee.

The executive authority should set out clearly the policy priorities that have guided development of the Strategic Plan. The executive authority is responsible for ensuring that the policy priorities set out in the plan are in line with the national/provincial priorities, and the foreword should indicate how the plan is aligned to such priorities.

The executive authority should also use this opportunity to endorse the Strategic Plan and indicate his or her commitment to ensuring its implementation.

XXXX (signature)
Executive Authority of (Department or Public Entity)

Official sign-off

It is hereby certified that this Strategic Plan:

Was developed by the management of the [name of institution] under the guidance of [name of the executive authority]

Takes into account all the relevant policies, legislation and other mandates for which the [name of institution] is responsible

Accurately reflects the strategic outcome oriented goals and objectives which the [name of institution] will endeavour to achieve over the period [years covered by the plan].

[Fill in name] **Chief Financial Officer**	Signature: _____
[Fill in name] **[Head Official responsible for Planning]**	Signature: _____
[Fill in name] **Accounting Officer** **Approved by:**	Signature: _____
[Fill in name] **Executive Authority**	Signature: _____

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Contents

A table of contents should be provided that identifies the individual strategic planning elements, appendices and any other additional material. For example:

Part A: Strategic overview

1. Vision

State the institution's vision.

2. Mission

State the institution's mission.

3. Values

List the institution's values.

4. Legislative and other mandates

Set out the specific constitutional and other legislative, functional and policy mandates of the institution. Focus on the legislative and other mandates that the department is directly responsible for implementing, managing or overseeing – not the entire list of legislation that the institution is subject to in the course of its operations.

4.1 Constitutional mandates

State the relevant section(s) of the Constitution and how the department or public entity is directly responsible for ensuring compliance with this section(s).

4.2 Legislative mandates

State the name of the relevant act and outline the key responsibilities this legislation places on the institution.

4.3 Policy mandates

State the name of the policy and outline the key responsibilities it places on the institution.

4.4 Relevant court rulings

Complete this section if there are any specific court rulings that have a significant, ongoing impact on operations or service delivery obligations.

Name of court case: [outline the impact the court ruling has on the institution's operations or service delivery obligations]

4.5 Planned policy initiatives

Indicate in point form the most important policy initiatives the department plans to continue or initiate in the period covered by the plan. This section applies to departments only.

5. Situational analysis

Present broad information on the performance and broader institutional environment based on the detailed information gathered in the strategic planning process. Institutions' various medium and long term policies and plans should also be considered. Budget planning should be informed by identified key policies and plans of institutions.

National and provincial departments in each concurrent function sector should work together to standardise the kinds of information presented here. For example, it would be useful if all departments in a particular sector could present information on different aspects of their services and structure using the same sets of institutional and explanatory indicators.

5.1 Performance environment

Summarise key issues in the delivery environment, providing important background information on demand for services and other factors that have informed the development of the Strategic Plan. Present a range of explanatory indicators that reflect the demand for services and the nature of the challenges to be addressed.

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5.2 Organisational environment

Summarise the structure of the institution and highlight any important issues. The objective is to provide information on the capacity of the institution and other internal factors that have informed the development of the Strategic Plan.

5.3 Description of the strategic planning process

Describe the activities and processes followed to develop the Strategic Plan, including timetables and stakeholders consulted.

6. Strategic outcome oriented goals of the institution

State the institution's strategic outcome oriented goals.

Departmental outcomes identified by the Presidency must be reflected here as goal statements.

Strategic Outcome Oriented Goal 1	Provide a short title for the outcomes stated goal
Goal statement	Write the outcomes stated goal out in full – ideally this statement should be SMART

Provide similar information for each strategic outcome oriented goal set by the institution. For each strategic outcome oriented goal complete a technical indicator description (see Annexure E for examples), which should be posted on the institution's website along with the Strategic Plan.

Part B: Strategic objectives

This section covers the strategic objectives identified to achieve the set goals. The strategic objectives that have been identified should be related to and discussed within the context of the approved budget programme structure.

7. Programme X (insert name of programme)

State the programme purpose as stated in the budget documentation. Provide a brief description of the programme: how it is structured, what institutions are responsible for the performance delivery and whether there are any key categories of personnel where the trends need to be monitored. Wherever possible use succinct tables, graphs and maps to present the information. The description should not exceed three pages.

7.1 Strategic objectives

State the institution's strategic objectives for the programme.

Strategic Objective 1.1	Provide a short title for the strategic objective
Objective statement	Write the objective out in full – this statement should be SMART
Baseline	What is the present baseline level of performance in relation to this strategic objective?

And so on, for as many strategic objectives as there are for the programme.

For each indicator the institution must complete a technical indicator description (see Annexure E), which should be posted on the institution's website along with the Strategic Plan.

7.2 Resource considerations

Discuss the resourcing issues considered when developing the strategic objectives. The discussion should deal with the following issues, as appropriate:

Expenditure trends in the programme's budget and how these can be expected to evolve over the five-year period (this analysis should also focus on trends in expenditure by economic classification)

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Trends in the numbers of key staff

Trends in the supply of key inputs.

Discuss issues under these headings if they are important to the realisation of the strategic objectives relevant to this programme. Additional headings may be added to this section to address other important resource-related issues. Present the information in succinct tables where possible.

7.3 Risk management

It is important to list and discuss the five key risks that may affect realisation of the strategic objectives stated for this programme. For each item, include a paragraph describing the risk and a paragraph indicating how the department intends to mitigate its effects.

And so on, for each programme.

Part C: Links to other plans

It is important to outline links to other plans such as the institution's long-term infrastructure and other capital plans, its conditional grants, plans to review its public entities and the management of its public-private partnerships.

8. Links to the long-term infrastructure and other capital plans

Each department and public entity should have long-term infrastructure and other capital plans that should outline its infrastructure investment needs for the next 10, 20 or even 30 years. Here indicate which of the projects outlined in its long-term capital investment plan the institutions intends implementing or initiating during the period of the Strategic Plan.

Table X: Links to long-term infrastructure plan

No.	Project name	Programme	Municipality	Project description/ type of structure	Outputs	Estimated project cost	Expenditure to date (if any)	Project duration	
								Start	Finish
1. New and replacement assets (R thousand)									
1									
...									
n									
Total new and replacement assets									
2. Maintenance and repairs (R thousand)									
1									
n									
Total maintenance and repairs									
3. Upgrades and additions (R thousand)									
1									
n									
Total upgrades and additions									
4. Rehabilitation, renovations and refurbishments (R thousand)									
1									
n									
Total rehabilitation, renovations and refurbishments									

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9. Conditional grants

The section applies to departments only. It is important to list and briefly describe each of the relevant conditional grants, also indicating whether the grant will be continued or ended during the period of the plan.

Name of grant	Provide name of conditional grant
Purpose	State purpose of conditional grant
Performance indicator	Give at least one performance indicator that measures performance in relation to the above purpose – this indicator statement must be SMART
Continuation	State whether the grant programme is to continue or be discontinued during the period covered by the Strategic Plan
Motivation	State the motivation for continuing or discontinuing the grant programme

10. Public entities

The section applies to departments only. It is important to list and briefly describe each of the public entities that are the responsibility of the department, also providing a list of the public entities to be evaluated during the upcoming five-year period.

Name of public entity	Mandate	Outputs	Current annual budget (R thousand)	Date of next evaluation

11. Public-private partnerships

It is important to list and briefly describe each of the public-private partnerships managed by the department, and indicate which partnerships will be ending during the five-year period. Also outline the steps that are being put in place to ensure a smooth transfer of responsibilities in the case of agreements that will expire during the five years covered by the plan.

Name of PPP	Purpose	Outputs	Current value of agreement (R thousand)	Date when agreement expires

Annexure

Institutions may add annexures to present other information deemed relevant to their Strategic Plan, as well as the technical indicator descriptions.

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ANNEXURE C: GENERIC GUIDE FOR ANNUAL PERFORMANCE PLANS

Name of department/entity

Annual Performance Plan

for
20XX
[XX = budget year – i.e. next financial year]

Name of province (where relevant)

Date of tabling

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Foreword

Annual Performance Plans should be guided by the Strategic Plans, which reflect the government's long term plans, the MTSF and subsequently political priorities. Executive authorities should take overall responsibility for developing the performance targets for the present budget year of an institution within the political collective – either the national Cabinet or the provincial executive committee.

At the beginning of the Annual Performance Plan, the executive authority should set out clearly which priorities have guided development of the plan. The executive authority is responsible for ensuring that these priorities are in line with the Strategic Plan. The foreword should indicate the key steps the department will be implementing in the budget year to realise the objectives set out in the Strategic Plan.

The executive authority should also use this opportunity to endorse the Annual Performance Plan and indicate his or her commitment to supporting and ensuring its implementation.

XXXX (signature)
Executive Authority of (Department or Public Entity)

Official sign-off

It is hereby certified that this Annual Performance Plan:

Was developed by the management of [name of an institution] under the guidance of [name of the executive authority]
Was prepared in line with the current Strategic Plan of [name of an institution]
Accurately reflects the performance targets which [name of an institution] will endeavour to achieve given the resources made available in the budget for [budget year].

[Fill in name] Signature: _____
Chief Financial Officer

[Fill in name] Signature: _____
[Head Official responsible for Planning]

[Fill in name] Signature: _____
Accounting Officer
Approved by:

[Fill in name] Signature: _____
Executive Authority

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Contents

A table of contents should be provided that identifies the individual strategic planning elements, appendices and any other additional material. For example

Part A: Strategic overview

1. Updated situational analysis

Present updated information on the performance delivery and institutional environment, based on the information gathered during the annual performance-planning process.

The information presented should broadly correlate with what was presented in the Strategic Plan, but it should not be as detailed. The focus should be on noting any changes in the external and/or internal environments that might affect performance.

1.1 Performance delivery environment

Update the explanatory indicators presented in the Strategic Plan to reflect present demand for services and challenges that need to be addressed. Indicate clearly which information has been updated, relative to that presented in its Strategic Plan, and which remains the same. Where information has been updated, analyse the emerging trends to show how these affect performance objectives.

1.2 Organisational environment

Update this information if there have been any significant changes relative to the information presented in the Strategic Plan.

2. Revisions to legislative and other mandates

Notes in point form should be made of any significant revisions to the legislative and other mandates since the Strategic Plan was compiled. Any pending court cases that could have significant implications should be noted.

If there have not been any significant revisions to the legislative or other mandates, simply state: "There have been no significant changes to the [an institution's] legislative and other mandates."

3. Overview of 20XX budget and MTEF estimates

3.1 Expenditure estimates

Table Y.1 [Name of department or public entity]

Programme	Audited outcomes			Adjusted appropriation	Medium-term expenditure estimate		
R thousand	20XX	20XX	20XX	20XX	20XX	20XX	20XX
1. Administration							
2							
3							
Subtotal	-	-	-	-	-	-	-
Direct charges against the National Revenue Fund	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-
Change to 20XX-1 budget estimate				-	-	-	-

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Programme	Audited outcomes			Adjusted appropriation	Medium-term expenditure estimate		
R thousand	20XX	20XX	20XX	20XX	20XX	20XX	20XX
Economic classification							
Current payments	–	–	–	–	–	–	–	–
Compensation of employees							
Goods and services							
of which:							
Communication							
Computer services							
Consultants, contractors and special services							
Inventory							
Maintenance repair and running cost							
Operating leases							
Travel and subsistence							
Specify							
Specify							
Other							
Interest and rent on land							
Financial transactions in assets and liabilities							
Transfers and subsidies to:	–	–	–	–	–	–	–	–
Provinces and municipalities							
Departmental agencies and accounts							
Universities and technikons							
Public corporations and private enterprises							
Foreign governments and international organisations							
Non-profit institutions							
Households							
Payments for capital assets	–	–	–	–	–	–	–	–
Buildings and other fixed structures							
Machinery and equipment							
Cultivated assets							
Software and other intangible assets							
Land and subsoil assets							
of which: Capitalised compensation	–	–	–	–	–	–	–	–
Total	–	–	–	–	–	–	–	–

3.2 Relating expenditure trends to strategic outcome oriented goals

In point form, indicate how the above budget and MTEF allocations contribute to the realisation of the institution's strategic outcome oriented goals. Focus on any change in funding levels.

Part B: Programme and subprogramme plans

This section of the Annual Performance Plan is used to set performance targets for the upcoming budget year and over the MTEF for each strategic objective identified in Part B of the Strategic Plan. This is also where institutions should set out performance indicators that will facilitate the assessment of the overall performance of each programme, including issues of equity and value for money in relation to the use of resources.

In the case of departments, the specification of these programme performance indicators needs to be developed in consultation with the National Treasury prior to them being included in an institution's Annual Performance Plan. In the case of public entities, they need to be developed in consultation with the oversight department.

4. Programme X (insert name of programme)

Provide the programme purpose as stated in the budget documentation. Describe briefly any updates to the information presented in the Strategic Plan. The new information should be presented in largely the same format. If the budget programme structure has not changed, state that there are no changes.

4.1 Strategic objective annual targets for 20XX

It is important to list targets for the budget year and over the MTEF period for each strategic objective specified for this programme in the Strategic Plan. Refer to Annexure D for examples.

Strategic objective		Audited/Actual performance			Estimated performance 20XX-1	Medium-term targets		
		20XX-4	20XX-3	20XX-2		20XX	20YY	20ZZ
1.1	Short name							
1.2	Short name							

4.2 Programme performance indicators and annual targets for 20XX

It is important to list the core programme performance indicators and any other chosen indicators. Refer to Annexure D for examples.

Programme performance indicator		Audited/Actual performance			Estimated performance 20XX-1	Medium-term targets		
		20XX-4	20XX-3	20XX-2		20XX	20YY	20ZZ
1.1	Short name							
1.2	Short name							

For each indicator, complete a technical indicator definition (see Annexure E for examples), which should be posted on the institution's website along with the Annual Performance Plan.

Indicate in point form how the allocations in the Budget and MTEF have affected performance targets, and what measures are being put in place to realise the strategic objectives set in the Strategic Plan.

4.3 Quarterly targets for 20XX

Set out quarterly targets for the programme performance indicators identified above.

The following table can be used for programme and subprogramme performance indicators

Performance indicator		Reporting period	Annual target 20XX	Quarterly targets			
				1st	2nd	3rd	4th
1.1	Short name	Quarterly					
1.2	Short name	Biannual					
1.3	Short name	Annual					

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4.4 Reconciling performance targets with the Budget and MTEF

Expenditure estimates

Table Y.4: Programme name

Subprogramme	Expenditure outcome			Adjusted appropriation	Medium-term expenditure estimate		
R thousand	20XX	20XX	20XX	20XX	20XX	20XX	20XX
Minister [1]							
Deputy minister [2]							
Management							
Corporate services							
Property management							
Total	-	-	-	-	-	-	-
Change to 2005 budget estimate				-	-	-	-

1 *Payable as from 1 April 2005. Salary: R Car allowance: R*

2 *Payable as from 1 April 2005. Salary: R Car allowance: R*

Economic classification

Current payments	-	-	-	-	-	-	-
Compensation of employees							
Goods and services							
of which:							
Communication							
Computer services							
Consultants, contractors and special services							
Inventory							
Maintenance repair and running cost							
Operating leases							
Travel and subsistence							
Specify							
Other							
Interest and rent on land							
Financial transactions in assets and liabilities							
Transfers and subsidies to:	-	-	-	-	-	-	-
Provinces and municipalities							
Departmental agencies and accounts							
Universities and technikons							
Public corporations and private enterprises							
Foreign governments and international organisations							
Non-profit institutions							
Households							
Payments for capital assets	-	-	-	-	-	-	-
Buildings and other fixed structures							
Machinery and equipment							
Cultivated assets							
Software and other intangible assets							
Land and subsoil assets							
of which: Capitalised compensation	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

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Performance and expenditure trends

Indicate in point form how budget allocations impacted on performance targets and measures that will be put in place to ensure that the strategic objectives continue to be realised.

And so on, for each additional programme.

Part C: Links to other plans

5. Links to the long-term infrastructure and other capital plans

This section should reconcile the budget and MTEF with the infrastructure and other capital projects set out in the Strategic Plan. Discuss in point form any relevant factors influencing the institution's ability to deliver on its infrastructure/capital plan.

Table X: Links to long-term infrastructure plan

No.	Project name	Programme	Municipality	Outputs	Outcome			Main appropriation	Adjusted appropriation	Revised estimate	Medium-term estimates		
					2005/06	2006/07	2007/08		2008/09		2009/10	2010/11	2011/12
1	New and replacement assets (R thousand)												
1													
n													
	Total new and replacement assets												
2	Maintenance and repairs (R thousand)												
1													
n													
	Total maintenance and repairs												
3	Upgrades and additions (R thousand)												
1													
n													
	Total upgrades and additions												
4	Rehabilitation, renovations and refurbishments (R thousand)												
1													
n													
	Total rehabilitation, renovations and refurbishments												

6. Conditional grants

The section applies to departments only. Provide specific information on any significant changes to the status quo relating to the relevant conditional grants. Pay specific attention to plans to introduce or end a particular grant and the plans in place to manage the process. Also outline outputs to be achieved through a conditional grant.

7. Public entities

The section applies to departments only. Provide specific information on any significant changes to the status quo relating to public entities overseen by the department. Pay specific attention to plans to evaluate public entities.

8. Public-private partnerships

The section applies to departments only. Indicate which public-private partnerships will be ending during the five-year period, and briefly outline the steps being put in place to ensure a smooth transfer of responsibilities in the case of agreements that will expire. Also outline outputs to be achieved through public private partnership projects.

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ANNEXURE D: INFORMED CONSENT

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INFORMED CONSENT

Dear Respondent

You are hereby invited to participate in the research project described below. Your participation is completely voluntary and anonymous. This consent letter is for those willing to participate in the research project on "**A model for integrating disaster risk reduction in national multi-sectoral planning in South Africa**".

The main objective of this research is to develop a model for integrating Disaster Risk Reduction (DRR) in national multi-sectoral planning in South Africa. It is based on the realisation that DRR as a multi-disciplinary and multi-sectoral endeavour requires to be integrated in national multi-sectoral planning for it to be effective.

The ethical guidelines followed in this study are provided for by the North West University Ethical Committee

Anonymity and Confidentiality: The information collected in the study will be used anonymously and for the purpose of the study and publication of articles. No names or respondents and names of their organisations will be published. Your response will be grouped with other responses from the sample.

Voluntary Participation: Your participation in the study is entirely voluntary. You are free to choose if you want to participate or not. If you decide to participate you are requested to respond to the questions on page 4-5 of the attached Research Directive.

Thank you in advance for agreeing to participate in the study.

Kind regards,

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