The influence of livelihood projects on food security resilience levels in Zimbabwe

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Thesis accepted for the degree *Doctor of Philosophy in Science with Disaster Risk Science* at the North-West University

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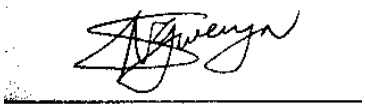
Graduation June 2021

26754584

DECLARATION

I, Sifelani Ngwenya, hereby declare that: “The influence of livelihood projects on food security resilience levels in Zimbabwe,” is my own work, that all sources used or quoted have been indicated and acknowledged by means of complete references, and that this thesis has not been submitted by me or any other person for degree purposes at this or any other university.

Signature  Date 18 Dec.2020

ACKNOWLEDGEMENTS

Thanks be to the Almighty God who gave me the strength and courage to initiate and execute this thesis.

This thesis is the outcome of working with different people:

I would like express my thanks to the North-West University's Potchefstroom campus bursary fund, without which this piece of work would not have been possible.

Many thanks go to Prof. Elize van Eeden, my promoter, and Dr Wilfred Lunga, who helped by providing constructive comments as I worked on the thesis. They patiently read my draft chapters, commented and encouraged me to strive for better. They never tired of reading all drafts. The insightful comments they provided made me feel that I was writing something of great value.

I want to offer my profound thanks to Annelishé van der Spoel, Maria Raubenheimer, Farzanah Loonate, and Sandra Horn for being generous and making the North-West University feel like my second home. May God reward them abundantly for their love and hard work.

I also would like to make a special mention of the sample participants, the Provincial Administrator for Matabeleland South, the district development coordinators, traditional leaders, various employees of the government of Zimbabwe and NGOs. The study was indeed a long process, but they all gave of their valuable time to attend to me amidst their busy schedules. Thank you.

Last but not least, I dedicate this piece of work to my best friend and a soul mate, Ntombie, who has been with me through thick and thin: Indeed, you are my anchor. I also dedicate this piece of work to my lovely son Sodu and daughter Wethe for being there for me and for encouraging me to soldier on when the going was tough: You are very special to me. Let's keep the candle burning.

ABSTRACT

Since 1948, the international fraternity and national governments have demonstrated their commitment to food and nutrition security through pledges and policies. Some of these pledges and policies bear reference to the Universal Declaration of Human Rights in 1948, the Maputo Declaration of 2003, the Malabo Declaration 2013, the Southern African Development Community (SADC) Food Security Strategy of 2014 and Zimbabwe's Food Security and Nutrition Policy of 2013. Stakeholders have designed and executed various sustainable livelihood initiatives to prevent, mitigate, and manage the effect of anthropogenic hazards on community livelihoods. Despite concerted efforts and dedication, food insecurity continues to increase in Zimbabwe. This signals a gloomy future, calling for innovativeness, the commitment of all stakeholders, and strategic sustainable planning.

The heightened recurrence of, and exposure to similar phenomena despite wide support from government and various agencies indicates deficiencies and gaps that need to be addressed to achieve resilience to food insecurity. Hence, the need for an all-stakeholder approach in committing to pooling of resources. This thesis aims to develop a multi-sphere assessment framework for evaluating food security related sustainable livelihood initiatives. The framework will be used to assess the relevance, applicability, evaluability, and impact of programs. The research explored and examined the theoretical constructs of sustainable livelihoods, food security, resilience, assessment, and their components vis-à-vis disaster risk reduction. The study further traces Zimbabwe's food security initiatives and challenges, as well as the three international assessment frameworks. These assessment frameworks were analytically compared, interrogating their significant characteristics, structure, and application. Focus group discussions, observations, and questionnaire were used for data collection, to gain insights into sustainable livelihood assessment practices and measures used in Bulilima, Gwanda, Mangwe, Umzingwane districts of Zimbabwe. The adoption of various data collection methods served as a form of triangulation between prescribed processes and realities in the districts of Zimbabwe. A total of 85 participants participated in the study. Through data coding, classification, and an interpretive process, constructive and correlated research findings emerged, guiding the final development of the integrated sustainable livelihood assessment model for Zimbabwe. Empirical and comparative results on the three international assessment models for food security-related initiatives provided the necessary insight for the development of the multi-sphere assessment model. The emerging issues from the research were that: the contribution of implemented projects towards resilience building are evident at household level but not at macro level; inconsistency in the general understanding of key terms and processes exists among stakeholders; documentation of

implemented projects is weak and done in a haphazard manner, individually and selectively ; a multi-stakeholder approach can provide answers towards building resilience to food insecurity, and the need for an assessment framework modelled three components (approach, guiding principles, and indicators). This thesis provides an all-inclusive sustainable livelihood assessment framework for application in Zimbabwe, flexible enough to be adapted for tactical and operational implementation across disciplines.

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November 2020

Key words

Assessment, disaster risk reduction, food security, stakeholder, resilience, framework, participation, community, sustainable livelihoods, Zimbabwe.

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ABBREVIATIONS

AEZs	-	Agro-ecological zones
Agritex	-	Agriculture extension
CA	-	Conservation agriculture
CAPRI	-	Community and Regional Resilience Institute
CFA	-	Cash for assets
CFS	-	Centre for Food Security
CGBGFA	-	Combined goals-based and goals-free assessment
DDC		District development coordinator
DFID	-	Department for International Development
DRR	-	Disaster risk reduction
EMA	-	Environmental Management Agency
FAO	-	Food and Agriculture Organization
FAD	-	Food Availability Decline
FED	-	Food entitlement decline
FEWSNET	-	Famine Early Warning Systems Network
FFSSA	-	Forum for Food Security in Southern Africa
FFW	-	Food-for-work
FS	-	Food security
FGDs	-	Focus group discussions
FNC	-	Food and Nutrition Council
FNSP	-	Food and Nutrition Security Policy
FTLRP	-	Fast Track Land Reform Programme
GMB	-	Grain Marketing Board
GoZ	-	Government of Zimbabwe
HM	-	Headmaster
IFAD	-	International Fund for Agricultural Development
IFPR	-	International Food Research Policy

IK	-	Indigenous knowledge
IPCC	-	Intergovernmental Panel on Climate Change
ISALs	-	Internal Savings and Landings
ISDR	-	International Strategy for Disaster Reduction
MMA	-	Mixed-methods assessment
MOHCW	-	Ministry of Health and Child Welfare
M& E	-	Monitoring and evaluation
NAFES	-	National Agriculture and Forestry Extension Service
NGO	-	Non-governmental organisation
ODI	-	Overseas Development Institute
PRFT	-	Poverty Reduction Forum Trust
PRP	-	Protracted Relief Programme
RDC CEO	-	Rural District Council Chief Executive Officer.
SADC	-	Southern Africa Development Community
GFDRR	-	Global Facility for Disaster Recovery
SDGs	-	Sustainable development goals
SL	-	Sustainable livelihood
SLF	-	Sustainable livelihood framework
VSLs	-	Village saving and loans
TBA	-	Theory-based assessment
UN	-	United Nations
UNDP	-	United Nations Development Programme
WFP	-	World Food Programme
WHO	-	World Health Organization
Zim ASSET	-	Zimbabwe Agenda for Sustainable Socio-economic Transformation
ZimVAC	-	Zimbabwe Vulnerability Assessment Committee

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CHAPTER ONE

MOTIVATION FOR THE STUDY

1.1 INTRODUCTION

Food insecurity challenges are escalating despite the existence of pledges and sustainable livelihood initiatives. This state of affairs is the impetus for the study. This study examines the availability and necessity of sustainable livelihood projects, and the impact they have on food security resilience in Zimbabwe's agro-ecological regions IV and V. This examination also probes the nature and purpose of such projects at the micro-, meso-, and macro levels. The ultimate focus of the study is the development of a comprehensive assessment framework for issues related to food security. The research problem of the study is outlined in the chapter based on extensive academic and theoretical investigation. The envisaged framework will serve to improve sustainable livelihoods assessment practices and inform the design of new initiatives related to food security.

The study starts with a literature review to gain in-depth theoretical knowledge that can serve as the foundation of the study. Literature on livelihoods and projects that focus on food security resilience is examined and discussed. This is followed by an outline of the relevant methodology, after which the results and findings are presented. The research findings influenced the development of a comprehensive assessment framework for issues related to food security in the selected districts of Zimbabwe. The study concludes with recommendations flowing from the literature study, the empirical research, and the resulting framework.

1.2 AN ORIENTATION OF THE STUDY

The number of hungry people has risen from 785 million in 2015 to 822 million in 2018. Feeding the increasing population presents challenges (Von Grebmer *et al.*, 2019:3). The number of people who suffer from hunger has been growing over the past decade, returning to levels from almost a decade ago (FAO, IFAD, UNICEF, WFP and WHO, 2018:2). This will inevitably spell devastation. Food insecurity challenges are prevalent in sub-Saharan Africa, despite the existence of a pledge to enhance food and nutrition security made in 1948 as part of the Universal Declaration of Human Rights (Conceição *et al*., 2011:237–246; Ignowski, 2012:1; Pangaribowo *et al.*, 2013:1). It is both a moral and a legal obligation for states to ensure

that all people have adequate food supplies (FAO, 2014:3), which means they have to respect, protect and adhere to this international obligation.

The humanitarian crisis in the African Great Lakes region and the low per capita food production has overshadowed this vision (Overseas Development Institute (ODI), 1997:1). A new global commitment to improve food insecurity was made at the 1996 World Food Summit, where 186 countries pledged to reduce world hunger by 50% (to 400 million) by the year 2015 (Bokeloh *et al*., 2009: ii). Despite this global commitment, food statistics for 2011–2013 estimated that 842 million people worldwide suffered from chronic hunger during this period (FAO, 2014: vii). Of these, 2.21 million were from Zimbabwe. This is a 32% increase in food insecurity from 2012 to 2013 (Zimbabwe Vulnerability Assessment Committee, (ZimVAC, 2013:122). Meanwhile, the International Food Policy Research Institute IFPRI (2015:2) asserted that one in every nine children on the planet (almost 10%) experienced food insecurity in 2015. Although the world food production is sufficient to feed all people, countries like Burundi, Comoros, Eritrea, Madagascar, and Zimbabwe remain food insecure (Allen, 2014; Ayodeji *et al.*, 2018:2). These deliberations signal a gloomy food security future that calls for innovativeness, stakeholder commitment, and strategic sustainable planning.

The adoption of the Sustainable Development Goals 2015–2030 demonstrates the current global commitment to food security (United Nations Development Programme (UNDP), 2015:1–24). Despite all the orchestrated and organised international commitments, food insecurity remains a significant international and continental problem (IFPRI, 2015:2; Haysom, 2016:1). This food insecurity is exacerbated by disasters that seriously affect lives and resources, exacerbate poverty, and set back economic development (IFPRI, 2015:2). These disasters include droughts and floods due to climate change, human immuno virus (HIV) and acquired immuno-deficiency syndrome (Aids) (Sango & Godwell, 2015:1; Manyeruke, Hamauswa & Mhandara, 2013:270). These disasters continue to compound Africa's food insecurity challenges despite scores of sustainable livelihood projects. This is indicative of the lack of a comprehensive and systematic assessment of the food security and resilience levels of communities as part of sustainable livelihood projects. Having given the background to the orientation, it becomes paramount to discuss the orientation of the study.

Zimbabwe is a landlocked Southern African country with an agri-economy and 13 061 239 citizens (Manyeruke *et al.,* 2013:271; ZimStat, 2015: XVI). The country is divided into five agri-ecological regions, known as natural regions (see Figure 1.1).

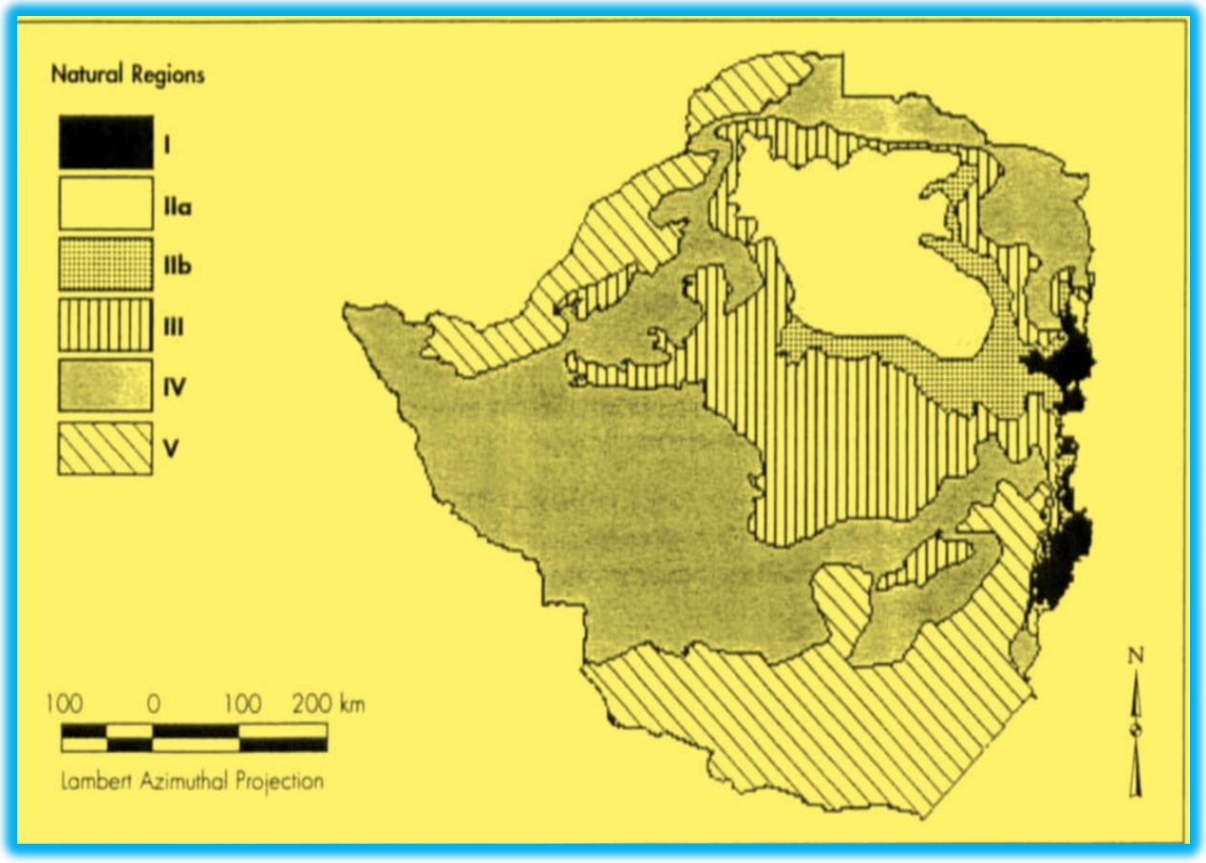

Figure 1. 1: The natural regions of Zimbabwe (Corbett and Carter (1997:207)

The agricultural activities, ecology, soil type, rainfall regime and other climatic factors define the agri-ecological regions (Chikodzi *et al*., 2013:104). Of the five, two of the regions, regions IV and V, have an annual rainfall of between 450–650mm and are characterised by periodic droughts, sodic soil, low soil fertility and biodiversity (Magadza, 2006; Sango & Godwell, 2015:1). These regions are unsuitable for crop production. Manyeruke *et al.* (2013:27) posit that climate change has caused shifts in the regions' rainfall patterns. Consequently, the livelihood patterns of these areas have been negatively affected one way or the other. There has been a 5% decline in precipitation in regions IV and V since 1960 (Sango & Godwell, 2015:1). This justifies adopting and adjusting to compliant strategies to ensure sustainable food security.

Agriculture is the backbone of Zimbabwe's economic stabilisation programmes and food security (Zimbabwe United Nations Development Assistance Framework, ZUNDAF, 2011:9; Matandare, 2017:1255). As such, agriculture is a critical instrument for sustainable development, poverty reduction, and industry linkage perspectives. Since Zimbabwe is an agri-based economy, it is important to fully understand the land issues (Section 2.2.2), their

dynamics and the history behind the settlement of people in the agri-ecological zones. This can shade light on factors that contribute to food insecurity in Zimbabwe. Land in Zimbabwe, like elsewhere in Africa, was expropriated in terms of colonial legislation by outside forces (Maguwu, 2007:13; Marks, 2014). Dube (2019:204) affirms that the land issue in Zimbabwe has its roots in the colonial period of conquest and subjugation (see Chapter 5, Section 5.3.2).

1.3 BACKGROUND TO THE STUDY

The colonial powers secured the arable agri-ecological areas with high development potential, while two-thirds of the indigenous Zimbabwean people were forced into drought prone regions IV and V (Palmer, 1990:164; Chivandi, Fushai, & Masaka, 2010:14). As a result, land ownership imbalances developed and most of the rural black population was concentrated in "communal areas" with low potential for development (Bird & Shepherd, 2003:593). The land ownership imbalances and alienation motivated the drive to repossess the land. Maruve and Chitongo (2017:55986) describe land reform as a purposive change in the way in which agricultural land is held or owned. Moyo (2011:944) affirms this contention, arguing that the land redistribution exercise was an inevitable purposive change to correct the colonial disparities and imbalances to ensure food security. This infers that governments' effort to change laws, regulations or customs on land ownership was a well calculated strategic move to cement the black majority's complete independence. Valuation studies on Southern African countries in the 2000s found fair land distribution to be an effective way of fostering economic development and poverty reduction among local communities (Shackleton *et al.,* 2000:2–4). The proponents and critics of the FTLRP offer various opposing views but they are unanimous that land reform programmes resulted in a major reconfiguration of land use and radically restructured the agricultural production economy (Muchara, 2010: i–ii). According to Scoones *et al.* (2011:2), the FTLRP created new livelihoods and new processes of class formation influenced by gender, age, and ethnic differences. It also brought shifts in agricultural production and marketing patterns. FTLRP has been criticised for turning farmworkers into beatitudes (Poverty Reduction Forum Trust (PRFT), 2013); massive job losses and the creation of acute food shortages (Nciizah, 2014:4); and ushering in new, unskilled cadres into the irrigation (Nhundu *et al.,* 2015:9). The agrarian programme further triggered an imperial backlash in the form of economic sanctions against Zimbabwe, plunging the country further into food insecurity (Mkodzongi & Lawrence, 2019:2). The assumption is that the agrarian land reform somewhat destabilised and undermined Zimbabwe's food production, thereby

subjecting the country to recurrent food insecurities. Since land is a key factor in the creation of livelihoods, it is prudent to review and sustainable livelihoods in depth.

Sustainable livelihoods form the theoretical lens for this research. It is therefore necessary to appreciate the history of the concept (see Chapter 2, Section 2.2). Sazali (2015:8) posits that in the 1990s the concept sustainable livelihoods focused on "the poor people", "participatory development" and "sustainable improvements". However, between 2002 and 2003, the focus shifted to "securing transformation on a national scale and providing greater support for domestic budgetary processes" (Alinovi *et al.*, 2010:5–6). The current focus is on "increasing the sustainability of poor people's livelihoods" (United Nations Development Programme (UNDP), 2015:3). This brought a new vision of a holistic and integrative approach to analyse and understand the complexity of rural development (Solesbury, 2003:14–18; Sazali, 2015:8–9). The sustainable livelihoods approach is dynamic and, in its quest, to understand sustainable development to ensure food security and build community resilience. In the context of this study, livelihoods refer to a set of activities, capabilities, entitlements, and capacity to acquire a livelihood. It considers how and why people organise themselves to transform the environment to meet their livelihood needs (Elasha, *et al.*, 2005:4; Serrat, 2010). Livelihood furthermore refers to material and social resources and the activities required as a means of living (FAO, 2008:5; Alinovi *et al.*, 2010: I), for example food, water, shelter and clothing for life. Capabilities refer to the knowledge, skills and abilities on which people draw to secure their livelihood (Fynn & Abdulai, 2018:147). However, Carswell (1997:10) argues that the definitions of sustainable livelihoods lack clarity, consistency and are relatively narrow. Despite this criticism, the concept of livelihoods offers a powerful lexicon that can be used to meet people's needs in a sustainable a dignified manner (Serrat, 2010; Rakodi, 2014; Odusote, 2016). Drawing on the discussions above, livelihoods depict assets, capabilities, material and social resources and the activities needed for dignified sustainable living. Thus, a person's livelihood is sustainable when the person is able to cope with and recover from shocks and maintain their capabilities and assets in the present and in the future while not undermining the natural resource base (Carney, 1998:4). The inference is that sustainable livelihood activities should be repeated continuously and maintained for long periods to be sustainable. If these activities cannot be sustained, food insecurity will eventually set in.

Factors associated with food insecurity in Zimbabwe include droughts and floods due to climate change, socio-economic, political and health-related factors such as the human

immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (Aids). These factors continue to compound Africa's food insecurity (Sango & Godwell, 2015:1; Manyeruke *et al.,* 2013:270; Bongo *et al*., 2013:5; Von Grebmer, 2015:116–116; Maponga, 2016). As explained by Beaumier and Ford (2010), food insecurity refers to a situation where food systems are distressed and fail to give access to and avail sufficient and quality food. Climate change poses a grave threat to Zimbabwe's food security abilities (Manyeruke, *et al.,* 2013:285) with the potential to destabilise the economy and public finances (Ncube *et al.,* 2016). This phenomenon has negatively affected agriculture (Nyahunda & Tirivangasi, 2019:1), the main source of the livelihoods of Zimbabwe's rural communities. In the context of Zimbabwe climate change is associated with drought. The effects of drought have led to a decrease in maize productivity, resulting in low agricultural yields and heightening food insecurity (Nciizah, 2014:115). In Zimbabwe, agro-ecological regions IV and V experience catastrophic droughts in that the regions' capacity to adapt is low (Manyeruke *et al.,* 2013:27; Nciizah, 2014:43). Muhonda *et al.* (2014:10) profess that floods destroy crops, livestock, houses and infrastructure and cause stagnant agro-based livelihoods and even a loss of life. Thus, food insecurity is the product of various risks factors to which communities may be exposed (see Chapter 3, Section 3.3).

Food security refers to each individual's human right to food and it relates to issues of agricultural policy, economic development and trade (Garwe, 2008:27–28). As indicated in Chapters 3 and 5, availability, access, utilisation, and stability should guide policy development, promote food and nutrition security and shed light on system and structure assessments (Wiggins 2004:6; Sassi, 2015:14). Thus, Food security includes a human right to have access to food and to use it in a stable manner. Lovell *et al.* (2016) argue that most researchers on food security focus on the development and refinement of methods of analysis to accurately predict the likelihood of a country experiencing future losses of food. Researchers heave committed to refining analysis and prediction methodologies for future disasters neglecting to assess the influence of livelihood programmes on food security and resilience levels. An in-depth discussion of resilience is given in Chapter 2, Section 2.4.

The last half of the 20th century saw the development of various assessment programme approaches with a strong inclination towards stakeholder involvement (Madaus, Stufflebeam, & Kellaghan, 2000:81). Assessment refers to the systematic collection and review of data to understand the significance of the project for stakeholders, and the use of programme

information to improve learning and development (Palomba & Banta, 1999:4; Ashley & Hussein, 2000:19). Meanwhile, Joughin (2009:1) defines assessment as process of gathering evidence to make inferences on progress towards specific goals. Bamberger, Rugh and Mabry (2012:2) assert that assessment is a systematic and empirical investigation of the outcomes of an intervention. Assessment is therefore a practice of systematically collecting programme evidence to understand and make inferences on progress towards specific goals with the aim of using the information to improve development.

There are similarities in the way the term assessment is understood and applied across disciplines. First, assessments are done to investigate or judge the merit, worth or significance of an ongoing activity (Simonson, 1997:88; Stufflebeam, 2001; Scriven, 2007; Kahan, 2008). Second, assessments enhance learning from experience, ensure transparency, deepen understanding and improve communication (Austrian Development Agency, 2008:4). LeClair (2015:1) adds that assessments prove accountability or foster programme improvements. Another purpose of assessment is to provide learning to improve development outcomes (United States Agency for International Development (USAID), 2016:4). Derbinski and Reinhardt (2017:12) bring to our attention that assessment should be guided by standards and principles that describe how the process should be structured to achieve high quality. Therefore, assessment standards and principles guide the realisation, selection process and appraisal of assessment (Chapter 7, Section 7.2.1.4). Drawing from the above deliberations, assessment is a critical scanning and management tool that gives the real picture of the project based on which informed decisions can be made. Given this understanding of assessment, all livelihood projects working towards food security and resilience should undergo this process to inform stakeholders on the programme's impact and value and to guide and inform present and future programming.

Resilience stems from a Latin word, "*resiliere"*, meaning to jump back (Klein, *et al.*, 2003) or bounce back (Manyena, 2009: i) and to have an inherent and dynamic attribute to absorb, adapt, anticipate, recover and transform (Community and Regional Resilience Institute (CAPRI), 2013:10). Resilience is a contextually and culturally defined identifiable condition, outcome, and a dynamic (protective) phenomenon (Gwimbi, 2009:74; Theron *et al.*, 2012:1; Bhamra, 2015:1).

Interestingly, Levine *et al.* (2012) denote the capacity of systems to cope with stresses and shocks and to anticipate, prepare, respond and recover from them. This definition is consonant

and consistent with others drawn from diverse scholar perspectives. Meanwhile, in the food security context, resilience denotes the ability to maintain a certain level of wellbeing (i.e., being food secure) to withstand or handle risks (Pain & Levine, 2012:6). Accordingly, resilience cannot be uniformly conceptualised across different contexts, cultures and variables. It should be adapted for various situations. Despite the popularity and frequent use of the term, the theoretical understanding of resilience remains limited (Mayunga, 2007:1; O'Hare & White, 2013:275). Furthermore, there is a lack of clarification and coherence on how resilience should be measured, sustained and enhanced (Mayunga, 2007:1). The need for an adaptable and viable sustainable assessment framework to measure the influence of livelihood programmes on food security and resilience levels is subsequently justified. Such a framework will be a valuable tool to guide and inform future food security, resilience and disaster risk reduction programmes.

Global commitment to disaster risk reduction, food security and resilience has seen the emergence of new charters and frameworks. They include the Hyogo Framework of Action (HFA); the Millennium Development Goals (MDGs) and their current frameworks, the Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (Lovell *et al.*, 2016:1–20). Meanwhile, the Southern African Development Community's commitment to food security is enshrined in the SADC Disaster Risk Management (DRM) Strategy 2012–2015 and its 2015–2025 Food Security Strategy (SADC, 2014:1–51). SADC came up with these instruments to improve regional food security and human wellbeing (IFPRI, 2016:1). The implication of the commitment level indicates international and regional adherence to the protocols of DRR and respect for human rights. Over the years, Zimbabwe and its partners have demonstrated their commitment to international obligations to ensure national food security and the resilience of its citizens. This has been by way of investing in DRR efforts to ensure food security and build resilience (see Chapter 5, Section 5.3.3). The government of Zimbabwe (GoZ), UN Agencies and NGOs have used several external and internal initiatives to ensure national food security (Mudimu, 2003; Manyeruke, 2013:278–281; Ruwo, 2014). Some of the initiatives are conservation agriculture (CA), irrigation schemes, cash for assets (CFA), Village Saving and Loans (VSLs), nutrition gardens, small livestock pass-on schemes, among other things (PRP, 2012:10; Mtonga, 2014:79). There are also the loan and credit facility schemes (MAMID, 2016; Chenga, 2016), Operation Maguta/Inala 2005–2009 (Mabhena, 2013:56–64; Chisango, 2018:76–82), and the Protracted Relief Programme (PRP, 2012). The aim of the PRP was to reduce extreme poverty,

reduce suffering, and build sustainability, resilience and capacity of beneficiaries through various interventions.

Studies conducted between 2003 and 2015 show that livelihood interventions improve livelihoods, build resilience and stimulate rural development (Nchuchuwe & Adejuwon, 2012:48–51; Sazali, 2015:16). Jennings *et al.* (2013) found that internal savings and landings (ISALs) increased the asset base of participants from the baseline of $103 in 2009/2010 to $205 in 2010/2011. Jennings *et al.* (2013) further posit that the extent to which PRP II had contributed to this change is unclear, as the indicator may have picked up on the benefits of economic recovery, and/or the effects of inflation. While it is true that interventions have had positive results, this claim is too general and ambiguous. It lacks clarity on facts and figures in relation to the population of the districts and the country as a whole. Svodziwa (2012:40) argues that many solutions suggested by scientists and development practitioners have not yielded much success. Mazvimavi *et al.* (2010) attribute the failure of food security initiatives to the exclusion of resource-endowed farmers. Dengu and Moyo (2012) point to the magnitude of some projects. Contrary to this observation Mandinyenya (2014:1, 24) see one reason for failures as the limited beneficiary participation in projects (see Chapter 7, Section 7.2.1.5). Mtonga (2014:103) stresses that improper training, limited community support and a lack of guarantee for ongoing project support for implemented projects contributed to the demise of most initiatives.

Despite signalled successes, concerted efforts and dedication, poverty and food insecurity has increased (Haysom, 2016:1; Von Grebmer *et al.*, 2019:3). As such, regions IV and V remain the epicentre of poverty, hunger and malnutrition in Zimbabwe. This suggests that the assessments carried out on the implemented programmes, if any, lacked the much-needed instinct that defines assessment (see Chapter 4, Section 4.2). Over the years, assessments have failed to detect challenges, draw lessons, or inform future programmes that aim to address the needs of communities. The uncertainties and constraints identified in this section serves as the impetus for new research in the Zimbabwe agro-ecological regions IV and V and for stretching the timeframe of research from 2000 to 2015. The next section presents the problem statement that springs from this dilemma.

1.4 PROBLEM STATEMENT

Achieving food security remains a global challenge, especially in sub-Saharan Africa, with persistent hunger and malnutrition being the norm for millions (Ignowski, 2012:1; FAO, 2015:1; Haysom, 2016:1). The number of Zimbabweans who faced acute food insecurity increased from 1.5 million with another 1.3 million from July 2015 to February 2016 (Office for the Coordination of Humanitarian Affairs (OCHA), 2016:4). Agro-ecological regions IV and V, where over 70% of Zimbabweans live, remain the epicentre of poverty, hunger and malnutrition (Chivandi *et al.,* 2010:14). Food insecurity in these regions can be attributed to climate change, political and economic crises, unemployment, unclear policies, and the HIV/Aids pandemic (Bongo *et al.*, 2013:5; Sango & Godwell, 2015:1). These causative factors create risks that affect lives and resources, exacerbate poverty, set back economic development and bring about food insecurity (IFPRI, 2015:2). Despite the implementation of scores of food-related sustainable livelihood projects by the GoZ and NGOs, food insecurity has persisted for decades. The persistent trends indicate a downwards trajectory that the GoZ and NGOs cannot stop. The continuous food insecurity in rural areas despite efforts to reduce food insecurity through food distribution schemes and many development projects, has become a threat to rural development (Maruve & Chitongo, 2017:55985).

The repeated implementation of the same programmes that have failed to address food insecurity as described in Chapter 9, Section 9.3.2, points to a tenuous link between programme and assessment practices. It shows that the assessments carried out, if any, lack the much-needed killer instinct that defines the purpose of assessment (as substantiated in Chapter 4, Section 4.2). Assessments serve to identify outcomes and challenges, and to draw lessons from implemented programmes to inform future programming in a sustainable manner. There is a chasm between the implementation of projects and the assessment practices, and a comprehensive assessment framework can bridge this gap. The challenge is to identify, review, develop, modify and implement an appropriate assessment framework that is effective and efficient. This points to the urgent need for an all-inclusive, coordinated, comprehensive and systematic way of assessing livelihood programmes to inform future programming and to ensure sustainable food security. Sazali (2015:19) argues that without active involvement and contributions, development efforts will struggle to succeed. As a result of the identified gap, systematic documentation is lacking, and it creates wide intergenerational gaps between the current and the future programmes. The absence of local systematic documentation, specific

downscaled scientific forecasts, and all-inclusive assessment processes presents an exploration opportunity. All the uncertainties and constraints identified in this section contribute directly to the need for a multi-sphere assessment framework. Its relevance is evident. This framework can also serve to guide and enhance the assessment process and to improve programme planning. The section below presents the aims of the study.

1.5 AIM OF THE STUDY

The overall aim of this study is therefore the development of comprehensive assessment framework for issues related to food security in Zimbabwe. In pursuit of a sustainable livelihood assessment framework, research aims and objectives were formulated as outlined in Sections 1.6 and 1.7.

1.6 RESEARCH QUESTIONS

With the discussion so far as foundation, the primary research question can be formulated as follows: How did livelihood projects affect food security resilience levels in Zimbabwe's agro-ecological regions IV and V from 2000 to 2015?

To respond to the primary research question, the following secondary research questions have been developed:

1.6.1 What scholarly theories may inform the foundations of this study?

1.6.2 Which past impact assessment project frameworks and principles related to food security and livelihood worldwide can provide insight into the assessment of sustainable livelihoods projects in Zimbabwe?

1.6.3 What do the past and present security efforts, challenges, and statutory and regulatory frameworks for supporting food security-related projects entail in Zimbabwe?

1.6.4 What has been the effect of sustainable livelihood projects implemented between 2000 and 2015 to enhance food security resilience in agro-ecological regions IV and V of Zimbabwe?

1.6.5 What performance indicators should be incorporated into a comprehensive multi-sphere project impact assessment framework for Zimbabwe?

1.6.6 How can published livelihoods, resilience and DRR be adapted and contextualised to suit multi-sphered Zimbabwean requirements?

To address these secondary questions as a pathway towards the development of the comprehensive assessment framework for issues related to food security, the research objectives listed below guided the research.

1.7 RESEARCH OBJECTIVES

The search for answers to the research questions was guided by the following objectives:

1.7.1 To examine scholarly theories that may inform the theoretical underpinning of this study;

1.7.2 To analyse past impact assessment project frameworks and principles related to food security and livelihood worldwide for insights that may be useful for the assessment of sustainable livelihoods projects in Zimbabwe;

17.3 To evaluate past and current food security efforts, challenges, and statutory as well as regulatory frameworks for supporting current food security related projects in Zimbabwe;

1.7.4 To assess the success of sustainable livelihood projects implemented between 2000 and 2015 in enhancing food security and resilience in the agro-ecological regions IV and V of Zimbabwe;

1.7.5 To define the performance indicators that should be incorporated into a comprehensive multi-sphere project impact framework for Zimbabwe; and

1.7.6 To adapt and contextualise published livelihoods, resilience, and DRR frameworks to design multi-sphere to suit Zimbabwean requirements.

These objectives culminated in the development of a comprehensive assessment framework that could serve as a guide for the successful assessment of sustainable livelihood projects to ensure food security and resilience in Zimbabwe and beyond.

1.8 RESEARCH DESIGN AND METHOD OF INVESTIGATION

This study adopted a qualitative research paradigm (See section 6.2) which used the phenomenology/interpretivist design to gain insight into the experiences of participants to arrive at sound conclusions. Qualitative methodology in the form of literature study, focus group discussions and questionnaire were used for the purpose of this research. The selection of these techniques is based on the fact that they can aid the process of confirming or rejecting scholarly observations and also uncover a refreshed way of understanding the objectives of this study.

1.8.1 Literature review

Primary literature was used to determine the most recent developments in the field of sustainable livelihood, food security resilience and assessment in answer to research questions 1, 2 and 3 (as per Chapters, 2, 3, 4 and 5). Books, government and international reports, journals, conference proceedings and research reports or documents were consulted to explore the most current developments in sustainable livelihood and food security resilience (compare Maxwell & Frankenberg, 1992; Scoones, 1998; Manyena, 2009; Sassi, 2015). Theories by Thomas Malthus, Amartya Sen, Norman Garmezy, Ralf Tyler among others, formed the backbone of the scholarly understanding that underpins the study. Literature study helped to define relevant concepts, position the study, provide benchmarks for comparing results of a study, and refine the research design and methodology before the empirical data collection process.

1.8.2 Population and Sampling

The target population of this study comprised of male and female participants who had been involved SL, FS programming and assessment, Gwanda, Umzingwane, Mangwe and Bulilima districts of Zimbabwe. For example district coordinators' rural district chief executive officers, councilors, Agritex officers, Environment Management Agency, heads of schools, NGOs and chiefs. A probable and non-probable sampling was employed to select 85 persons from four districts in the agro-ecological regions of IV and V (see Chapter 6.2.3).

1.8.3 Empirical study

One focus group discussion with 5 and 12 participants each was held for each of the districts (See Chapter 6). Thus, 40 persons participated in the four focus group discussions. FGD

members comprised of district agricultural extension officers; Ministry of Health and Child Care (MoHCC), and the Ministry of Youth and Women Affairs; NGOs; social welfare officers; and the Public service commission and police. The purpose of the focus group and the in-depth interviews was to determine the applicability of the concepts identified from literature and international best practice with respect to food security resilience (The focus group schedule appears in Annexure D).

Non participatory observation was done during the five months' fieldwork. The observation focused on five aspects of food security (utilization and availability, access, stability, and coping strategies). Observation allowed the researcher to observe how communities access, utilise food and also the coping strategies that employ in the event of a stressor.

Questionnaires were administered on four district development coordinators, five chiefs, eleven heads of schools, six ward councillors, six NGO managers, four district Agritex officers, four EMA officers, and four chief executive officers to get their perspectives on sustainable livelihoods projects, assessment and food security resilience. These respondents were crucial in this research, for their vast experience in sustainable livelihoods, food security and resilience. Questionnaires were administered face to face and via email to solicit their perspectives. A list of the types of participants is presented in Chapter 6.

The purpose of the focus group discussions, observation and questionnaire was to:

- determine the applicability of the concepts identified from literature and international best practice with respect their contribution towards food security resilience;
- investigate the respondents' perspectives on sustainable livelihood projects and food security resilience;
- test the respondents' perceptions of the additional elements needed for a project impact assessment framework;
- identify the current limitations in the Zimbabwean project impact assessment framework;
- identify sector and sphere-specific elements that should be included in a project impact assessment framework; and

- determine additional guidelines that should be included in a multi-sphere framework.

1.8.4 Ethical considerations

Ethics in research plays an important role and researchers should follow basic ethics principles and observe key standards and rules. Research aims to create new knowledge and challenge what we already know. This aim of research is good in itself, but it is not superior to the welfare of the people who participate in a research study. This research study adhered to ethics standards by explaining the purpose of research and by giving participants the assurance that confidentiality would be maintained. Participants were assured that the information they provided would be used solely for educational purposes. A checklist or a consent form or both were considered to ensure that all ethics guidelines had been observed. An in-depth review of ethics protocol is presented in Chapter 6, Section 6.2.6.

1.8.5 Data analysis

Data analysis was done to bring order, structure and meaning to the collected data (compare De Vos *et al.*, 2011) so that the links between research problems can be studied and conclusions drawn. Content analysis and cognitive mapping techniques were used for the analysis of data. The procedure used during the data analysis of this study was informed by the methods used to collect the data. The NWU's Statistical Consultation Service helped to ensure that the questionnaires were valid, and they assisted with the analysis of the data. This ensured a coherent, consistent, holistic and quality focused approach that advanced constructive research findings and deductions (see Chapter 7).

All the data obtained from the literature study, comparative analysis and focus group interviews were taken into consideration. The data were critically analysed and recommendations (see Chapter 9) were formulated based on the findings.

1.9 VALUE OF THE RESEARCH

Assessing the influence of sustainable livelihood projects on food security resilience levels of communities in Zimbabwe agro-ecological regions IV and V provided useful lessons and insights with a view to enhancing food security and resilience-oriented interventions. One such an intervention was the development of a comprehensive assessment framework to address food security. The research also exposed the limitations of the available literature as it does not direct researchers to a clear model. The challenge was to offer a framework that offers a simple,

flexible and comprehensive approach to project impact assessment and that provides concrete indicators against which success can be measured. The structure of the final framework developed in this study encourages its application after appropriate contextualisation across all sectors and the government (nationally, regionally and internationally) in the development arena. It also facilitates and promotes impact assessment as a step that can guide the process towards improving the influence of development initiatives. The study contributes significantly to the current existing body of knowledge in Zimbabwe, in SADC and internationally by adding to knowledge on DRR. It provides an impetus for further research, investigation and thinking on the project impact assessment of development initiatives.

1.10 CONCLUSION

Chapter 1 provided the reader with an orientation and understanding of the process followed to address the problem statement. The chapter explained the motivation for studying food security towards sustainable livelihoods in Zimbabwe. The resulting focus of the study is the development of a comprehensive assessment framework for issues related to food security. In pursuit of this goal, six research questions and objectives were formulated to guide the study.

The study sets out by gaining in-depth theoretical knowledge as a foundation for the study. Sustainable livelihood, food security and resilience were identified as the main theories that would inform the foundation of the study. The chapter examined the key concepts underlying the study and the process that was followed to achieve the envisaged objectives of the study. A thorough theoretical investigation of the concepts was undertaken to provide a better understanding of the concepts and their aspects. The chapter also gave an overview of the study paradigm, design and the methodology adopted to achieve the objectives and to develop a comprehensive assessment framework. The value of the study to the DRR body of knowledge was also considered. Ethical considerations were addressed by giving participants assurances that confidentiality would be maintained throughout the study. The empirical research findings and literature review aided the development of a comprehensive assessment framework for issues related to food security, within the districts of Zimbabwe. Chapter 2 focuses on the scholarly work that informs sustainable livelihoods as a field of study.

CHAPTER TWO

SUSTAINABLE LIVELIHOODS AS A FIELD OF STUDY: A CONCEPTUAL OVERVIEW

2.1 INTRODUCTION

Chapter 1 introduced the research problem, which stated that achieving food security has remained a challenge for many countries, especially in sub-Saharan Africa (Conceição *et al.*, 2011). Chapter 2 conceptualises sustainable livelihoods as an approach in general and as a theoretical framework for the study. Together with sustainable livelihoods, the concepts of resilience and disaster risk reduction have been used consistently and regularly in development and DRR research papers. The meaning and use of the two concepts as part of the sustainable livelihoods approach (SLA) is examined in this chapter to address research objectives one and two (see Section 1.7). The selection of particularly the SLA is based on the contributions it has made to DRR studies and food security in developing nations. This chapter discusses the intellectual thought by relating and comparing it to aspects of SLA and examining the meaning, value and possible shortcomings of this theory. The chapter includes a critical analysis of frameworks and concepts in SLA to ultimately aid the development of a framework fit for application in the project under discussion. The chapter is divided into the following subsections: the development of the sustainable livelihood approach, the sustainable livelihood framework; conceptual progression and understanding resilience; the origins of disaster risk reduction; resilience and DRR as part of sustainable livelihood approach; and the conclusion.

2.2 DEVELOPMENT OF THE SUSTAINABLE LIVEHOOD APPROACH

SLA is an analytical structure for understanding the influence of livelihood on poverty and identifying where interventions can best be made (ODI, 2009). The SLA promotes a more rigorous analysis that provides a fuller, more nuanced understanding of livelihoods than some evaluation methods (Stoll & Menou, 2002). The SLA stimulates debate and reflection, which improves performance in poverty reduction (DFID, 2009). It analyses formal and informal organisational and institutional factors that influence sustainable livelihood outcomes. However, SLA ensures that important factors are not neglected by taking into cognisance nations' different contexts and livelihood strategies in its endeavour to eliminate poverty among poorer nations (Ashley & Carney, 1999; Odusote, 2016).

The term sustainable livelihood was used for the first time in 1987 by the World Commission on Environment and Development (WCED, 1987). The focus of the commission was resource ownership, basic needs, and rural livelihood security (Conroy & Litvinoff, 1988). Morse *et al.* (2009) state that the concept first appeared in research literature in the 1980s, linked closely to the Department for International Development (DFID). Morse *et al.* (2009) advance that SLA sought to promote sustainable development and eliminate world poverty. Biggs *et al.* (2014) point out that the Brundtland Commission Report of 1987 put SLA firmly on the global policy agenda as it deliberated on the essential present and future needs and limitations of the world's poor. The emphasis of SLA is explained in the Brundtland Commission Report and International Institute for Environment and Development (IIED) 1987 conference publications: The Greening of Aid: Sustainable Livelihoods in Practice" (Conroy & Litvinoff, 1988). The government of the UK endorsed SLA in its 1997 White Paper on International Development and placed considerable emphasis on the development and roll-out of the approach between 1998 and 2002 (DFID, 1999). The DFID was described as, "an international development leader in times of global crisis" (Treasury, 2015).

In the 1970s, the main development concern was to address famines in Africa and Asia by increasing global food supplies (FAO, 2001) (see Section 3.3). However, increased food supplies did not result in adequate food for a healthy life as income or resources remained scarce (FAO, 2001). Because of this, the food perspective widened to encompass a livelihood perspective between 1980s and 1990s (FAO, 2001). Nyerere (1973:58–60) discusses the shift from the perspective of increased global food supplies to pro-poor development and sustainable improvements in livelihoods. He calls for participatory community engagement. Lienert and Burger (2015) in concurrance with this assertion, affirm that this approach was adopted in the 1990s. In 2002–2003, the focus further shifted to the transformation of development at a national scale and providing greater support for domestic budgetary processes (Alinovi *et al.*, 2010). The 21st century started with a focus shift to enabling the poor to secure their own livelihoods (FAO, 2001; UN, 2014).

SLA evolved from shifts in perspectives on poverty, to participation and sustainable development (Sen, 1981; Chambers & Conway, 1992). Community participation refers to the act of taking part or sharing in something (The American Heritage, 2016). In this study participation refers to the involvement of communities in identifying opportunities and strategies to shape their livelihoods (see Section 7.2.1.5). As such, SLA offers a fresh approach,

captured and synthesised in diverse strands of evolving thought and action (Ashley & Carney, 1999) with conceptual, practical and organisational roots. The paradigm shift offers a fresh holistic, integrative approach to analysing poverty (Solesbury, 2003) and an analytical framework for development and for policy decision making (Ashley & Carney, 1999; Clarke & Darney, 2008). Alinovi *et al*. (2009) postulate that the loss of intellectual and political appeal of previous dominant theories and practices necessitated the paradigm shift. Mensah (2012) affirms that SLA has been used extensively to provide analytical contexts for the formulation of sustainable and pro-poor development policies in developing economies. SLA tends towards more towards bottom-up qualitative analyses as compared to top-down approaches (Biggs *et al.*, 2015).

SLA was described at the Environment Conference of the UN in Rio in 1992, at the UN Conference on Environment and Development (Elander & Lidskog, 2000), and at the 1996 World Food Summit. The Environment Conference in Rio in 1992 gave rise to the Commission on Sustainable Development (CSD) (UNCED, 2000). The CSD was tasked with monitoring and reporting on the implementation of agreements at all levels (the local, national, regional and international levels). Commitment to the Rio principles was strongly reaffirmed at the World Summit on Sustainable Development that was held in Johannesburg, South Africa in 2002 (Von Schimding, 2005). The 1996 World Food Summit reaffirmed people's inalienable right to freedom from hunger and malnutrition (UNDESA, 2000). World leaders committed to people-centred sustainable development (UNISDR, 2007). The government leaders pledged their common and national commitment to achieving food security for all and eradicating hunger in all countries (FAO, 1996) by halving the number of the undernourished by no later than 2015. Thus, SLA has become a powerful term in the lexicon of international development policy, DRR and politics in various disciplines as a tool to ensure national food security.

SLA ensures DRR in order to increase the sustainability of poor people's livelihoods (Roe, 1998). As such, SLA provides greater structure than merely gathering stories as advocated in some evaluation methods (Stoll & Menou, 2002). To ensure DRR, SLA affords stakeholders the opportunity to engage in structured and coherent debates about factors that affect livelihoods (DFID, 2001). The SLA approach is of major importance to this study as it provides the parameters to theoretically explore development projects (Fujisaka *et al.*, 2000). SLA cannot be used generically in a fixed and prescriptive way, as it requires interpretation and adaptation to fit any particular context. As such, understanding the development of the SLA

would be incomplete without exploring its strengths and weaknesses. The section that follows focusses on the strengths and weaknesses of SLA.

2.2.1 Strengths and weaknesses of the SLA

The SLA has its own strengths and weaknesses. It puts impact assessment into a more comprehensive context (Fujisaka *et al.,* 2000). This context allows one to consider the impact of projects on people's decision making given the risks they face and the assets they are able to access (Fujisaka *et al.,* 2000). The SLA is used to identify unanticipated effects and eliminate poverty among poorer nations (DFID, 2001). More so, it provides greater structure than gathering stories, as mentioned above (Stoll & Menou, 2002). The SLA help users to understand complex and changing situations, broadens the policy dialogue, identifies the relevance of programmes, as well as key constraints and opportunities (Orr & Mwale, 2001; Devereux, 2006). Clark and Carney (2008) contend that the SLA provides a way to understand poverty and the links between different aspects of people's livelihoods. The SLA remains essential within social and economic research on poverty and food security, as a research strategy or tool (Babulo *et al.*, 2008). Odusote (2016) posits that SLA is a flexible framework that accommodates various local settings. For example, it allows for a more rigorous analysis, and provides a fuller, more nuanced understanding. In Zambia, the SLA has been used by ecologists, anthropologists, agriculturalists and economists to assess the changing rural systems and the accompanying development challenges (Foy *et al.*,1990). Conversely, in India, a classic series of studies evaluated the diverse effects of the Green Revolution (Farmer, 1977, Walker & Ryan 1990). These studies focused on the micro-economics of farm production and patterns of household accumulation (Scoones, 2009). The classic examination of rural change in northern Nigeria offered important insights into the contested patterns of livelihood change (Watts, 1983). Adopting the SLA provides a way to improve the identification, appraisal, implementation and evaluation of development programmes (DFID, 1999:4) to better address the priorities of poor people, both directly and at a policy level. Mensah (2012) posits that the SLA engendered a significant shift in development thinking to focus on poverty reduction by improving household welfare. The SLA was also used in the Mymensingh area of north-central Bangladesh as an analytical tool to identify ways to advance the livelihoods of fish farmers to reduce poverty (Ahmed, 2009). The study found that fish farmers can achieve sustainable livelihoods through access to a range of livelihood assets, potentially providing higher

economic returns and social benefits. However, a lack of resources, vulnerability and poor institutional support were identified as constraints to long-term sustainability (Ahmed, 2009). Brocklesby and Fisher (2003) argue that SLA provides a means of linking socio-economic and environmental concerns. The FAO (2002) asserts that it is a useful analytical tool for understanding the factors that influence a community's ability to enhance livelihoods and eradicate poverty. Goldman *et al.* (2000) argue that the idea of livelihoods offers ways to link socio-economic and ecological aspects into a cohesive policy-relevant structure.

The SLA offers livelihoods thinking that is manageable and more representative of a complex holistic reality (Ashley & Carney, 1999). Chambers (1995) advances that SLA theory endeavours to provide a more appropriate conceptualisation of the perspectives and realities of poor people. Stoll & Menou, (2002) concur, adding that SLA promotes a more rigorous analysis of livelihoods that contributes to a more nuanced understanding than is the case with some other evaluation methods. The SLA gives development beneficiaries greater legitimacy and moral force behind their demands (DFID, 1999). Carney (2001) suggests that SLA provides a set of guiding principles that encapsulate the best way of planning, implementing and evaluating development initiatives at the ground level. Farrington (2001) adds that SLA makes poor people the focal subjects of any policy planning and design. This results in a better scope for large-scale poverty reduction strategies. The SLA is useful for identifying impacts (anticipated and unanticipated) and it helps people think in a bottom-up manner (DFID, 2001; Parkinson, & Ramirez, 2006). Carney (2002) credits SLA for the success of major development approaches and research methodology at all levels (micro-, meso- and macro-). Scoones (2005) argues that SLA helps improve understanding of the dynamic nature of livelihoods and what influences them, building on people's strengths and opportunities to support existing livelihood strategies. Knutsson (2006:90) postulates that the SLA puts forward a policy-oriented livelihood framework that describes and analyses the driving forces, pressures and effects of all types of activities related to the local livelihood situation. The SLA builds capacities, unlike traditional approaches that addressed poverty by identifying and addressing the needs (food, medicine, shelter, water, etc.) and assets of poor people (FAO, 2008). Since the SLA builds capacities, it provides this study with parameters and check points for assessing the influence of an implemented project aimed at food security resilience. For example, it can be used to assess the beneficiary's ability to plan, self-organise, converse, store, farm, and use capital in a sustainable way. The SLA is key for understanding the influence of livelihoods on poverty and identifying where interventions would serve best (ODI, 2009). Geiser *et al.* (2011)

highlight that the SLA invites a holistical analysis of livelihood realities and an understanding of its complexity. The SLA unlocks the complexities of poverty and the interventions to address it (IFAD, 2011). Currently the application of the framework has receded to the periphery of international development practice (Mensah, 2012).

SLA, suffers a plethora of weaknesses, some of which are; being too large and complex to implement, requiring much discretionary expertise and time (Farrington *et al.,* 1999). A study in the city of Cali in the district of Aguablanca in Colombia affirms the contention that SLA is too broad and that there are questions on how far and in how much detail one should go when applying it (Parkinson & Ramirez, 2006). Carswell (1997:10) argues that the ambiguity and inconsistency of its definitions make its scope narrow and shallow. Furthermore, Carney *et al.* (1999) criticise the SLA for negating strategic gender needs and for failing to give guidance on changing gender inequalities. Bebbington (1999) criticises SLA for its failure to adequately address the significance of a cultural perspective in its analysis of livelihoods and its oversimplification of people, their resourcefulness, and their abilities. The SLA does not attempt to provide an exact representation of reality (DFID, 2009:10), but Geiser *et al.* (2011) nevertheless argue that SLA is too pro-assets and pro-poor. The SLA is also criticised for its inability to deal with big shifts in global markets and politics; its lack of focus in linking livelihoods and governance debates to a lack of rigour in accounting for long-term large-scale environmental change; and its failure to adequately relate agrarian changes with long-term shifts in rural economies (Scoones, 2009; Biggs *et al.,* 2014; Horsley *et al.,* 2015). However, Biggs *et al.* (2014) argue that SLA weaknesses can be obviated by explicitly combining elements of the SLA framework with elements from the water, energy and food nexus framework to inform a more holistic model. A study by Frost *et al.* (2007) in rural Zimbabwe present a highly pessimistic view of the sustainability of livelihoods. Furthermore, Frost *et al.* (2007) contend that livelihoods interventions made no difference and that people still remain stuck in a more fundamental trap, which palliative and very expensive measures cannot deal with.

Despite all criticisms, sustainable livelihoods thinking continues to be a powerful lexicon of international development policy and politics. It took centre stage at the world conferences at Kobe, Hyogo, Japan in 2005; SDG and Sendai, Japan in 2015 (UN, 2014). The SLA is familiar to the advocates of the systems-oriented approaches such as farming systems research and household food security (FAO, 2001). The SLA approaches in vogue today therefore build on

the experiences of the past. They are not new methods but draw on the methods that have been refined over years. The concept of sustainable livelihoods is discussed in the section below.

2.2.2 What are Sustainable livelihoods?

Sustainability denotes a system or entity's ability to maintain or enhance resource productivity in the long run (Chambers *et al.,* 1981:1). It includes the ability to endure various shocks and uncertainties and to avoid contributing to long-term depletion of natural resources (Chambers, 1987). Carney (1998:4) suggests that the sustainability of a livelihood depends on its ability to manage external shocks and stresses without compromising other people's livelihoods. The term livelihood has become a buzz word among academics and development practitioners as they try to understand how poor people and rural dwellers create a living (Chambers & Conway, 1992; Rakodi, 2014; Odusote, 2016). Livelihoods refer to assets, access to institutions and processes, strategies used to achieve livelihood outcomes and activities required for a means of living (Ashley & Carney, 1999). There are five core asset categories: the human, social, physical, natural and financial assets (DFID, 2001). Assets present as tangible or intangible stores, resources, claims or access (Chambers & Conway 1992). It is classified as material and social resources (Scoones, 1998; FAO, 2008). In the context of rural Zimbabwean communities, assets are household members, livestock, farming gadgets, tools, cell phones, radio and TVs, education, crops, indigenous knowledge, clubs, or gardens. A livelihood embodies three fundamental attributes: the possession of human abilities (such as education, skills, health, psychological orientation); access to tangible (roads, barns, houses, livestock) and intangible assets (village committees, leadership; indigenous, literacy) and the existence of economic activities (market gardening, farming, brick moulding, gold panning, buying and selling, vending, insect and fruit gathering network coverage). In the context of this study, livelihoods are a set of activities, abilities, entitlements (water, food, fodder, medicine, shelter, clothing, assets) and the capacity to acquire it (Serrat, 2008), and refers to how and why people organise themselves to transform the environment to meet their livelihood needs (Palmer,1990:4). Gandhi (2012) concludes that livelihoods are used to make a living through a variety of economic activities. Land and natural resources are key assets that shape the livelihoods and household economies of rural dwellers (Shackleton *et al.,* 2000). Rural dwellers' livelihoods are structured around an assortment of agrarian activities and complementary subsistence occupation (Hilson & Banchirigah, 2009:4). As such, people use multiple assets to construct livelihoods, to ensure sustainability, to protect and improve environmental management and to eradicate poverty (Holland & Blackburn, 1998). This effort

is key to poverty eradication and DRR efforts. Tang *et al*. (2013) advance the view that agrarian practices have to be effective if they are to enable and sustain rural livelihoods. A study conducted in Yangou in China observed a decline in the community's dependence on grain and subsidies income due to diversified livelihoods and the improved environmental indices (Tang *et al.,* 2013). Thus, a household's livelihood strategies are defined by the interaction between access to assets, human abilities and the existence of economic activities in the midst of risks, fragilities and vulnerabilities. However, an understanding of livelihoods is incomplete without understanding its determinants. The section below discusses the determinants of livelihoods.

2.2.3 Determinants of livelihoods

Livelihoods are determined by birth, gender and inheritance (Kamal, 2011). For example, in India children may be born in a caste with assigned roles such as porters, shepherds, washer of people, and so forth. Gender is socially constructed (West & Zimmermann, 1987), which means that it is constructed through things we do and say with other people (Zevallos, 2014). A person can be born, socialised and apprenticed into inherited livelihoods, for example as a cultivator of land, pastoralist with animals, forest dwellers with trees, fishermen with boats, among others. Chandima (2010) indicates that modern people condemn the socially constructed aspect as an outdated and inadequate source of income. The assumption is that cultural traditions are an impediment due to the rigidity of their structures that fail to negotiate risks, and often hamper effective social relations reciprocity and the livelihood choices (Huntington, 2000). Perez and Cahn (2000) add that the traditions and habits of communities perpetuate unsustainable and unproductive livelihood patterns. Family customs and traditional practices have helped communities to modify or alter their adaptive strategies to accommodate economic fluctuations (Chandima, 2010). A study in the rural Kandyan villages in Central Sri Lanka found that family customs and traditional practices have helped the community to modify their adaptive strategies to accommodate economic fluctuations (Chandima, 2010). It is therefore evident that culture is strongly engrained in the livelihood patterns of communities, from there the need to adapt DRR to cultural aspects to ensure resilience in the midst of disaster risks. Drawing on these arguments it becomes clear that livelihood determinants cannot be applied generically across systems. Cognisance should be taken to scrutinise the key determinants in line with the SLA before drawing any conclusion or prescribing a DRR programme/project. Being informed on the determinants is key to this study in that it provides a checklist of important issues and delineate their nexuses, drawing attention to core influences

and processes and emphasising the multiple interactions between the various factors that affect livelihoods. Such information is key to understanding the environment in which projects are implemented. Since the study seeks to assess the influence of SLA projects on food security resilience, it is imperative to define the characteristics of sustainable communities that are food secure. The section below discusses the characteristics of sustainable communities.

2.2.4 Features of sustainable communities

The development of the SLA brought a significant shift in development thinking towards improving the household welfare of the poor (Mensah, 2012). The SLA provides a means of linking socio-economic and environmental concerns (Brocklesby & Fisher, 2003). As such, the SLA underpins the success of major national and multi-national development approaches and research methodologies (Carney, 2002). Thus, understanding the characteristics of the thinking in the SLA is paramount to this study as the lexicon continues to be powerful, for example in international development policy and politics. The concept of sustainable livelihoods is a composite of many ideas and interests (see Scoones, 1998; Misselhorn, 2005; Smithers & Smit, 1997; Manyena, 2009; UNDP, 2011; Twigg, 2015, among others). A sustainable community is food secure and resilient, able to cope with, adapt to and recover from stresses and shocks. More so, a sustainable community has the ability to maintain or enhance its resource productivity and assets (current standard of living) on a long-term basis (Chambers *et al.*, 1981:1). Meanwhile, a food secure household or community has physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences at all times (FAO 2000; FAO, 2001). Access to sufficient, safe and nutritious food should be ensured in a socially acceptable way (for example without resorting to emergency food supplies, scavenging, stealing or similar coping strategies) (FAO, 2001). However, Misselhorn (2005) argues that the focus of FS is the acquisition of sufficient calories to meet energy requirements, in other words enough food for good health at all times. There is a need for stability in the availability, accessibility and use of food commodities at all times (see Section 3.3.3). Drawing on definitions, a resilient household or community has the ability to anticipate, prepare, manage, maintain, transform, limit impact, adapt, bounce back and forward in the face of turbulent change, and to maintain wellbeing or good living standards. More so, a resilient community is one that understands its context, is able to identify the disturbance to which it is prone, has an ability to deal with disturbance by using a range of possible responses. Smithers and Smit (1997) assert that adaptation ability is associated with entrenchment or “resistance”.

Thus, a sustainable community is resilient (Riebsame, 1991). A resilient system must have structures (capacity) with the ability to adapt, manage, maintain normalcy, transform, prepare for and recover from shocks and stresses at the same time as maintaining wellbeing or living standards. According to FAO (2010), a household's resilience to food security shocks and stresses is influenced by income and access to food; assets such as land and livestock; social safety nets such as food assistance and social security; access to basic services such as water, health care, electricity, etc., and the adaptive capacity of households, which is linked to education and diversity of income sources, and the stability of all these factors over time. This feeds into popular understandings of the term, for example a resilient person exposed to risk is flexible and able to 'bounce back' or possess so-called "bounce-forward ability" (Manyena *et al.*, 2011). Further, Manyena *et al.* posits that a resilient person is flexible and able to "bounce back" or possess "bounce forward ability" when exposed to risk. Thus, to be sustainable, being food secure and resilient denotes an entity's ability to maintain its current standard of living without undermining the natural resource base. A stable food system ensures availability, accessibility and the use of culturally acceptable and nutritious food at all times. Defining a sustainable, food secure and a resilient household or community gives the study the ideal indicators of best practice. It also brings to light the key characteristics of a sustainable, food secure and a resilient household or community. These characteristics can be used as the standard or benchmark against which a sustainable project's impact on the household or community can be assessed. These benchmarks provide means of analysing, measuring and implementing the sustainability and resilience of such systems. This is the foundation on which the research questionnaire and multisectoral project assessment framework (see Annexure E, D & C and Chapter 8) were designed. As such, these factors are combined into an index that gives an overall quantitative sustainability score and food security and resilience score, which can be used to assess each variable's levels after the implementation of a project. Decision makers can use these scores to draw lessons, strategize or determine where they can invest to build resilience. The sustainable livelihoods framework (SLF) is the core of the SLA (GLOPP, 2008). The SLF is significant to this thesis as it shows the nexuses between its components. The section below provides an in-depth discussion on the SLF.

2.3 THE SUSTAINABLE LIVELIHOODS FRAMEWORK

The SLF shows how sustainable livelihoods are achieved in different contexts using different livelihood strategies (Ashley & Carney, 1999). This ensures that important factors are not neglected. The SLF sets out to conceptualise how people operate in a vulnerability context that

is shaped by different factors (de Stagé *et al.*, 2002) and how they draw on different types of livelihood assets or capitals in different combinations. The livelihoods framework encompasses the skills, assets (both material and social) and the approaches individuals and communities use to survive (Elizondo, 2015:4). The SLF is a tool or checklist to understand poverty before responding to poor people's views and their own understanding of poverty (GLOPP, 2008). The SLF highlights the contributions of capital assets to the dynamic system, shaping the livelihoods of communities. The SLF is presented in schematic form in Figure 2.1 and discussed in more detail afterwards.

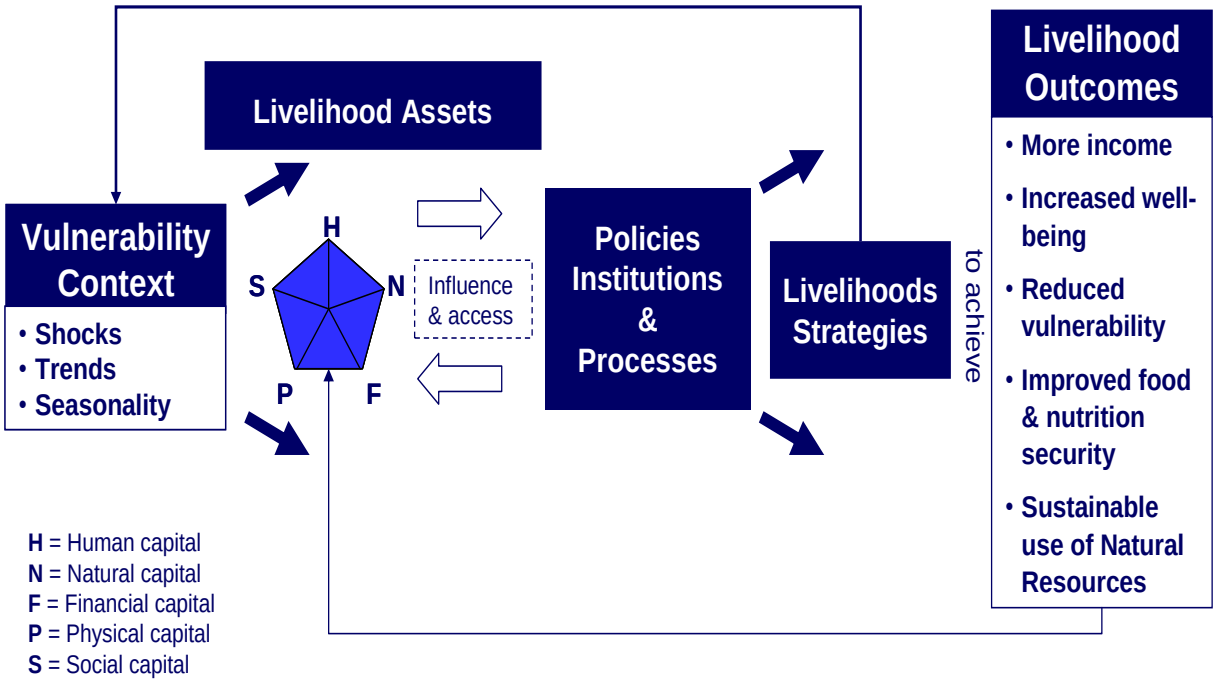

Figure 2. 1: The sustainable livelihoods frameworks (DFID, 1999:2)

2.3.1 Vulnerability context

Vulnerability in the SLF is the starting point for creating a dynamic system using the concept of livelihoods (Lunga, 2015). The vulnerability context frames the external environment in which people live (DFID, 2009). Shocks are interruptions that force communities to use or lose some of their assets as they try to cope with the negative effects of disaster risks (Twigg, 2004), for example conflict, drought, economic shocks, natural shocks, etcetera. Shocks, trends and seasonality are unpredictable events that can undermine livelihoods and cause households to fall into poverty (FAO, 2006). As such, people pursue their livelihoods in the context of trends shock and seasonality over which they have limited or no control (Alinovi *et al.*, 2009; ODI, 2009). Trends denote large-scale factors that influence livelihoods, such as economic or resource trends (ODI, 2009). When hazards like drought, insect infestations or floods occur, they affect the availability of assets and this is beyond people's

control (DFID, 2009:10). Seasonality refers to seasonal fluctuations in prices, production, health, and employment opportunities (ODI, 2009). In the Zimbabwean context, shocks are climate change induced hazards like droughts, floods, pest infestations (such as fall armyworm) animal diseases (such as foot and mouth, anthrax, lumpy skin, and ¼ evil, among others). These events can alter trends, destroy livelihood assets and/or fundamentally alter community traits (Mitchell, 2015). This provides information on the broad issues of concern to communities. The vulnerability context in this thesis is the setting in which individuals live with their assets (Bulilima, Gwanda, Mangwe and Umzingwane). This setting includes critical issues over which people or communities have limited or no control.

2.3.2 Livelihood capitals

The term "capital" is used as the common designation for assets in the literature (DFID, 1999:5). Access to assets help support and sustain livelihoods, which is crucial for DRR (Carter & May, 1999). Assets represent the abilities of the communities (Twigg, 2004), which can be modified to change the potential outcomes. Livelihood capital comprise of human, economic, natural, social and physical (the pentagon asset (Dutta & Guchhait-Barddhaman, 2018:203). Odero (2006) argues that "information" should be included as a 6th asset because information provides leverage that can be used to access the other forms of capital. In the context of this study, capital and assets refer to the people or community's strengths used to achieve positive livelihood outcomes. People can build up five types of capital assets (ODI, 2009), which does not mean that all the assets are capital stocks in the strict economic sense of the term. Assets play a crucial role in the livelihood framework (Alinovi *et al.*, 2009) and they constitute livelihood building blocks that can be substituted for each other. Alinovi *et al*. (2009) contend that those with more assets are more likely to have greater livelihood options with which to pursue their goals and reduce poverty. The poor may draw on social capital such as family or neighbourhood security mechanisms at times when financial capital is in short supply (ODI, 2009). Therefore, assets help protect people's livelihoods against shocks, while on the other hand, shocks cause people to lose their assets (Doss *et al.*, 2018). Therefore, the ability to pursue different livelihood strategies is dependent on the key resources that people have.

Capital is the product of investment, which yields a flow of benefits over time (Hodgson, 2014). As such, capital assets provide the basis on which to determine the capacity of an entity or determine the resilience levels influenced by sustainable livelihoods (SL) projects. Different capital assets and institutional contexts determine an entity's capacity to cope with disaster risks, including issues of access. The section that follows focusses on transforming structures and institutions.

2.3.3 Transforming structures

Within the SLF there are policies, institutions and processes (PIPs) that shape livelihoods (Chambers & Conway, 1992) and that work at all levels. The PIPs determine access to livelihoods, livelihood strategies and terms of exchange and can reduce or worsen the impact of disaster risk on vulnerable communities (Carter & May, 1999). In the Zimbabwean context, policies could refer to Zimbabwe's Land Reform Policy of 2000; Input Credit Facilities (after 2000); Operation Maguta 2005; Basic Commodities Supply Side Intervention (BACOSSI) 2007; Agricultural Sector Productivity Enhancement Facility (ASPEF) 2008 and the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (Zim ASSET) 2013–2018. These policies are discussed in depth in Chapter 5. Some examples of institutions and processes are the Reserve Bank of Zimbabwe's Grain Marketing Board (GMB), Agricultural Extension Services (Agritex), NGOs, the Department of Social Welfare (DSW) and the rural district councils (RDCs). A study by Manyena (2006) found that the RDCs' role of building resilience had been hindered as a result of policies, an unstable political system, and a lack of finance. The community or individual's ability to use assets to achieve positive livelihood outcomes is affected by these structures. PIPs define the way in which rural people interrelate and act (FAO, 2008). It influences how, where, when and by whom assets are accessed, used, controlled and decided upon (Christensen & Pozarny, 2008), shaping livelihoods (DFID, 2009). Transforming structures refer to the complex social, economic and political context within which people pursue their livelihood strategies (Alinovi *et al.,* 2008; ODI, 2009). Thus, transforming structures and processes determine access and influence rates of asset accumulation at the global, national, regional, district and local levels (Alinovi *et al.,* 2009), subsequently determining the success or failure of any project. Despite all these challenges, communities develop livelihood strategies. This is discussed in Section 2.3.4.

2.3.4 Livelihood Strategies

Livelihood strategies denote structured actions for achieving a future or long-term perspective (Tittonell, 2014) to cope with disaster. Strategies influence people's choices of which activities to combine, which outcomes to pursue, and which assets to invest in (Soini, 2005). Livelihood strategies denote ways in which individuals and communities seek or are persuaded to use their assets to earn their livelihoods (Twigg, 2007). Ultimately, people's choice of livelihood strategies is influenced by their access to assets and PIPs (FAO, 2008). Meanwhile, Alinovi (*et al.,* 2009) assert that livelihood strategies are a combination of activities that people pursue in order to achieve their livelihood goals. For example, productive activities (farming), investment strategies, and reproductive choices (see Section 2.3.3). PIPs effectively determine access, terms of exchange, and returns to any given livelihood strategy (DFID, 2009). Thus, livelihoods approaches try to understand the strategies

pursued and the factors behind people's decisions to reinforce the positive aspects and mitigate the constraints. Therefore, livelihood strategies serve to better manage risks and improve the welfare of communities with things such as improved nutrition. This means that it is important not super-impose any given strategy at all levels (from the household to the international). The livelihood strategy that an entity adopts determines its livelihood outcome as discussed in the next section.

2.3.5 Livelihood outcomes

Livelihood outcomes are the achievements or outputs gained as a result of using livelihood strategies (DFID, 2009). Alinovi *et al.* (2009) posits that livelihood outcomes refer to the goals to which people aspire, the results of pursuing their livelihood strategies. Examples include increased income, reduced vulnerability, increased wellbeing, improved food security, and more sustainable use of natural resources (Hussein, 2002). Alinovi *et al.* (2009) emphasises that livelihood outcomes help us understand the results of people's livelihoods strategies in a particular context. This means that systems respond to opportunities or constraints using particular strategies and their own priorities. Thus, outcomes should be described by the local people themselves, since these include much more than income. Livelihood outcomes (improved food security) emanate from livelihood strategies pursued by individuals or households. Since SLA has linkages with the concepts of resilience, it is imperative to understand the meaning of resilience, its value and shortcomings and the contribution to the food security matrix. The section below provides conceptual progressions and sets forth an understanding of resilience.

2.4 CONCEPTUAL PROGRESSIONS AND UNDERSTANDING OF RESILIENCE

Manyena (2009) explains that the concept of resilience is founded in certain assumptions of reality and is loosely used across disciplines such as ecology (Holling, 1973; Djalante *et al.*, 2012), physics (Van der Leeuw & Leygonie, 2000; Johnson & Wielchelt, 2004) and psychology (Yates & Masten, 2004). The rise in the use of the term resilience makes it "fashionable" and "attractive" to current thinking in DRR (McLean & Guha-Sapir, 2013; Alexander, 2013; Schipper & Langston, 2015). The term has been used nearly 30 000 times from 1997 to 2015 (Lovell *et al.*, 2016). Key frameworks in which resilience is an important theme are the Sendai Framework for Disaster Risk Reduction, SDGs, and the Congress of the Parties for the United Nations Framework Convention on Climate Change (COP21). Thus, a review of the origins, concepts and perspectives on resilience becomes imperative

for this study. It can shed light on aspects that define a resilient system, which are used in the study to evaluate the influence of projects on food security resilience in Zimbabwe.

Resilience was first introduced as a descriptive ecological term (Holling, 1973). In DRR, resilience is one of the most important research topics in the context of achieving sustainability (Kates *et al.*, 2001; Twigg, 2015). The term has undergone frequent redefining and extension by heuristic, metaphorical, or normative dimensions (Pickett *et al.*, 2004; Hughes *et al.*, 2005). It is used transdisciplinary term to analyse ecological as well as social-ecological systems (Walker *et al.*, 2006; Folke, 2006). Thus, it promotes research efforts across disciplines and between science and policy (Brand & Jax, 2007). The resilience construct is relatively new in the disaster and development discourse (Manyena, 2009). Disaster resilience was articulated by the HFA 2005–2015 (UNISDR, 2005) and has become part of both theory and practice in DRR (Manyena, 2009). The space in theory is affirmed by a plethora of definitions from various contexts (see Table 2.1).

The development of new terms such as "sustainable and resilient communities", "resilient livelihoods" and "building community resilience" further affirm resilience in theory (Folke 2006; Manyena *et al*., 2011; Juncos, 2017). The presence of the term in practice aspect is evident (HFA 2005; the Sandai Framework 2013; the European Union Global Strategy (EUGS), 2016) from multiple sustainable livelihood development projects across the continents. For example, land use planning, CA, dam rehabilitation, market gardening, networking, to mention but a few). Such livelihood projects build resilience that enhances food security and DRR efforts. The EUGS introduced resilience-building alongside an emphasis on flexibility, tailor-made approaches and the need for local ownership, capacity building and comprehensiveness (Juncos, 2017), proposing principled pragmatism as a new operating principle in its foreign policy. In practical terms, resilience is neither an alternative to intervention nor a new paradigm that stands alone, but an increasingly important component of any all-encompassing approach to reducing the impact of disasters on the most vulnerable (Combaz, 2014). It is therefore imperative to understand resilience before drawing practical conclusions about building it. The next section focuses the conceptualisation of resilience.

2.4.1 Conceptualisation of resilience

The concept of resilience has gradually colonised the foreign policy discourse and practice of most Western states, international organisations, UN reports on climate change, disaster preparedness and development policy (UNDP, 2013; White House, 2015). The concept now frames thoughts on

sustainability in development and DRR (McLean & Guha-Sapir, 2013:7). As such, it has become everyone's talk in the development and DRR arena (Mitchell, 2013). Resilience refers to the continuation of relationships in a system and an ability to absorb driving variables and parameters while still persisting (Holling, 1973). Oshaug (1985) defines resilience as the internal structures of the system that sustain it so that it can undergo a perturbation without a decline in the degree of progress. It denotes the system's ability to resist and maintain "normal" operations via other means (Riebsame, 1991; Smithers & Smit, 1997), for example by resisting or changing in order to reach and maintain an acceptable level of functioning and structure (UNISDR, 2005). Manyena (2006) sees resilience as both an outcome and a process. Outcome-oriented approaches adopt top-down reactions which can favour the status quo and take attention away from inequalities resulting from insecurity and disaster (Manyena, 2006:438). Meanwhile, process-oriented approaches involve supporting the capacity of individuals, communities and states to adapt through assets and resources relevant to their context (Manyena, 2006). However, Alinovi *et al.* (2008) view resilience as the ability to maintain a certain level of wellbeing. DFID (2011) defines resilience as a change management ability to maintains or transforms living standards. Resilience is the ability to anticipate risk, limit impact, prepare, adapt to and bounce back rapidly in the face of turbulent change (CARRI, 2013; Combaz, 2014). It calls for preparedness for unknown risks, adaptation, learning by doing and flexibility to respond to shocks, embrace change and to live with rather than completely eliminate uncertainty (Reid, 2012; Evans & Reid, 2014). Chandler (2015) maintains that resilience is the internal capacity of societies to cope with crisis through the development of self-organisation and internal capacities and capabilities, rather than the external provision of aid, resources or policy solutions. Brown (2015) concurs, highlighting that resilience is not a response to change, but a strategy for building the capacity. Thus, resilience is the ability of states and societies, to reform, withstand and recover from internal and external crises (EUGS, 2016:23).

When applied to societies and organisations, resilience acknowledges uncertainty and complexity as a contemporary condition (Juncos, 2016) that can be addressed through capacities and capabilities rather than external intervention. A resilient system can therefore be defined as an entity's ability to withstand and handle shocks and risks and maintain operations without compromising long-term prospects for development. Table 2.1 traces the definitions to illuminate the progression in the understanding of resilience from 1973 to 2019.

Table 2.1 Resilience conceptualisation

Author	Definition	Domain for definition
Holling (1973)	The persistence of relationships in a system; a measure of the ability of systems to absorb changes of state variables, driving variables, and parameters, and still persist	Persistence of relationships in a system
Mileti (1999)	The ability to withstand an extreme event without suffering devastating losses, damage, diminished productivity, or quality of life without a large amount of assistance from outside the community	Ability to withstand extreme events with minimum external support
Kofinas (2003)	Two types of social resilience: (1) a social system's capacity to facilitate human efforts to deduce the trends of change, reduce vulnerabilities, and facilitate adaptation; and (2) the capacity of a [socio-ecological system] to sustain preferred modes of economic activity	Social capacity to deduce and sustain economic activities
Bodin (2004)	The speed with which a system returns to equilibrium after displacement, irrespective of how many oscillations are required	Speed of returning to equilibrium
UNISDR (2005)	The capacity of a system, community or society potentially exposed to hazards to adapt by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase this capacity by learning from past disasters for better future protection and to improve risk reduction measures	Adaptation capacity to resist or change to reach and maintain acceptable level of functioning
Manyena (2009)	The “shield”, “shock absorber” or “buffer”, which moderates the outcome into benign or low negative consequences	Absorbing and buffering shocks
DFID (2011)	The ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as earthquakes,	Managing change by maintain or transforming living standards

	drought or violent conflict – without compromising their long-term prospects	
UNDP (2013)	Transformative process of strengthening the capacity of people, communities and countries to anticipate, manage, recover and transform from shocks	Capacity strengthening
IFRC (2014)	The ability of individuals, communities, organisations or countries exposed to disasters, crises and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with and recover from the effects of shocks and stresses without compromising their long-term prospects.	Anticipation ability to prepare for shocks in a sustainable manner.
Folke, 2016	the capacity to develop and sustain human well-being in diverse contexts in the face of such change, both incremental and abrupt, but also through adapting or transforming in response to change	Capacity to develop and sustain in diverse contexts
Southwick & Charney, 2018.	The ability to 'bounce back 'after encountering difficulty	Bounce back ability
Hosseini *et al.*, 2019	Capability to withstand, adapt, and recover from disruptions to meet customer demand and ensure performance	Adapt, recover and perform

The above concepts define resilience as a system's capacity to adapt, resist, self-reorganise, prepare, limit its impact and bounce forward after exposure to disaster risk. In the context of this study, the system denotes the individual, households and communities of targeted districts. The risk is drought, diseases, floods, fires and accidents that threaten and affect a system's food security. These definitions indicate the desired trajectory that determines a system's resilience and actions to improve its resilience. The resilience framework is key in the guidance and analysis of a system's ability to adapt to shocks and stresses. The following section focuses on disaster resilience framework.

2.4.2 The disaster resilience framework

The disaster resilience framework investigates how disturbances and changes influence the livelihood or food system's structure and its ability to meet human needs (Alinovi *et al.,* 2010). As such, the framework guides the analysis of the system's ability to adapt to disaster risks, shocks and stresses

(McLean & Guha-Sapir, 2013). The SLF, resilience and DRR components and ideas provide the benchmark that guides the analysis of the influence of SLA projects on the resilience of the system. The disaster resilience framework is made up of four components, which are key in building, maintaining and enhancing food security resilience.

The "context" identifies the element of which the resilience is being built (Combaz, 2015). For example, elements refer to the individuals and households of Bulilima, Mangwe, Umzingwane and Gwanda districts of Zimbabwe. Meanwhile, "disturbance" denotes shocks or stresses that disturb the functionality of the element, and the individual or group aims to be resilient (Combaz, 2015). In the context of this study disturbance refers to economic meltdown, floods, drought, food shortages, rise in food and fuel prices. The third component is the capacity to deal with disturbance, shock or stress (Manyena, 2006). Capacity is therefore dependent on the element's exposure (the magnitude of the shock or stress), sensitivity depicting the degree to which a system will be affected by or will respond to a disturbance (DFID, 2011). Capacity to respond is determined by an element's ability to adjust to a disturbance or moderate damage, take advantage of opportunities and cope with the consequences of a transformation (Combaz, 2015). The fourth component is the reaction to deal with the disturbance. Reaction to deal with disturbance refers to a range of possible responses that a system adopts in managing the disturbance (Combaz, 2015). The resilience framework provides key components that have to be evaluated to determine a system resilience level after the implementation of a food security related initiative. Following the exploration of the four elements of a resilience framework, it is prudent to discuss the strength and weakness of the resilience construct.

2.4.3 Strengths and weakness of resilience

The concept of resilience provides a clue to the evolution of social systems and a means to analyse, measure and implement them (Levin *et al.,* 1998). Manyena (2006:436) argues that the lens of resilience can help to enhance responses to disaster risk in that it calls for a holistic consideration of hazards, exposure, risk, vulnerability and capacity. DRR has helped limit the loss of life due to disasters (The Global Facility for Disaster Risk Recovery (GFDRR), 2010:10; Ashdown, 2011:15). For example, in Bangladesh fewer people were killed by the cyclone in 2008 (3 000) compared 1970 (500 000) because of DRR efforts. A study on resilience-building in an indigenous community from 1994 to 2002 led to slower forest destruction in Kenya and Ethiopia (McSweeney *et al.,* 2011). In Somalia, collaborative local approaches to resilience helped preserve pasture and water resources (Stanley, 2012). Increased disaster resilience preserves the natural environment and is a rallying point for international collaboration (Organization for Economic Cooperation and Development (OECD), 2013:1; Combaz, 2014). A review by the GFDRR found that the cost of property damaged by hazards

between 1970 and 2008 totalled US$2 300 billion, but that effective disaster prevention had curtailed an upward trend (GFDRR, 2010:10–11). A review of assistance (funds, medical supplies, water purification units, blankets and bottled water, personnel) given following the 2004 Indian Ocean tsunami found that community-based DRR had a positive effect on social resilience by altering attitudes and behaviours towards risk (IFRC, 2012:12). Social resilience is a multi-level construct, determined by capacities of individuals and groups to foster, engage in, and sustain positive social relationships and to endure and recover from stressors and social isolation (Sakdapolrak, 2015). Consequently, social resilience is product of interactions between the social capital/assets (i.e., interacting with each other, working together, sharing, helping, and collaborating with one another to reduce disaster risks). In essence, resilience draws together DRR, disaster response, climate change adaptation and poverty reduction (DFID, 2011; Turnbull *et al.,* 2013). Multiple definitions of resilience, indicate its breadth poses an opportunity that can be a vehicle for mobilising joint research efforts around disaster mitigation.

While disaster resilience has many advantages, it is not immune to criticism. Resilience has been criticised for advocating for "bouncing back" to the original state, regardless of its conditions (undesirable or a high risk one) (Klein *et al.,* 2003). Meanwhile, Mayunga (2007) contends that the limited theoretical understanding of resilience and multiple definitions ascribed to it confounds how it is used, measured and evaluated. Furthermore, Norris *et al.* (2008) warn that over-emphasising resilience could result in the stigmatisation of individuals and communities with low levels of resilience. Walker and Cooper (2011:144–145) argue that resilience has been de-politicised, and the state actors' responsibility to address the underlying causes of vulnerability to disasters has been shifted to the vulnerable.

For the reasons above, the concept has failed to add anything particularly new to the substance of humanitarian or development assistance (Manyena, 2006; Levine *et al*., 2012:1–20). More so, in the context of resilience today, early definitions were distinctly conservative (Building Resilience Amongst Communities in European (Embrace, 2012). However, Combaz (2014) argues that the evidence of what creates disaster resilience or its effects on humanitarian and development outcomes, remains limited. Furthermore, Combaz (2014) posits that this can be attributed to the implementation of a few rigorous evaluations of the influence of development and humanitarian interventions on resilience. Despite being an all-encompassing, multi-interpretable idiom and a unifying concept, it can become an empty signifier that can easily be filled with any meaning to justify any specific goal (Weichsel, Gartner & Kelman, 2015). As such, the lack of a commonly shared definition indicates a serious weakness in the concept (Lovell *et al.,* 2016). It fails to create coherence, measure

improvement in people's resilience, lack of collaboration in departments (Lovell *et al.,* 2016). Weichselgartner and Kelman (2015) affirm the above by adding that the transition of resilience from a descriptive concept to a normative agenda provides challenges and opportunities. However, resilience sheds light on how to analyse, measure and implement social systems, hazards, exposure, risk, vulnerability and capacity and guidance. The sole purpose is to save lives and protect infrastructure, livelihoods, social systems and the environment. Resilience theories are useful to this study as it aids in evaluating the influence of sustainable livelihood projects on food security resilience in Zimbabwe. Furthermore, these theories were adapted and included in the all-inclusive assessment framework (Chapter 8). Subsequently, resilience is not a panacea for achieving food security, it should incorporate other theories that work towards ensuing food security. One such a theory is DRR. In order to make sense of DRR, we draw on the literature to identify its origins, conceptual development, and strengths and weaknesses in the sections that follow. The section below sheds light on the origins of disaster risk reduction.

2.5 THE ORIGINS OF DISASTER RISK REDUCTION

DRR promotes a culture of safety, prevention and preparedness (UNISDR, 2004). It is closely association with FS to protect communities' FS by increasing their preparedness and resilience levels. Through DRR activities, the adverse impacts of hazards (droughts, floods, pandemics that affect food security) and vulnerabilities are minimised. DRR is key to building and enhancing food security resilience, which is the focus of this study. It traces its origins to inadequacies in the responses to disaster situations (United Nations International Strategy for Disaster Reduction (UNISDR), 2004). Warner (2007) observes that DRR provides a better alternative to response, emergencies, recovery and rehabilitation cost. For example, the inadequacy of initiatives to respond to disaster situations was evident in Iran in 1962 when Buyin-Zara was hit by an earthquake, killing more than 12 000 people (Ambraseys, 1963). Another example that affirms these inadequacies is the 1963 hurricane. This hurricane struck the territories of Cuba, the Dominican Republic, Haiti, Jamaica and Trinidad and Tobago, resulting in the loss of thousands of lives and causing considerable material damage (Mohan, 2017). The focus of DRR is the minimisation of vulnerabilities and disaster risks throughout a society through the prevention or mitigation and preparedness for the adverse effects of hazards in the broad context of sustainable development (UNISDR, 2004). DRR was adopted in 2002 (UNISDR, 2004) to provide alternative response to emergencies, recovery and rehabilitation costs. Meanwhile, the HFA crafted the priorities, guidelines and application of DRR to make the world safer from natural hazards (UNISDR, 2005; 2007). HFA documents emphasise the institutionalisation of DRR (Warner (2007). The DRR paradigm has been strongly influenced by the mass of research on vulnerability since the

mid-1970s (Blaikie *et al*., 2014). The HFA was replaced by the Sendai Framework (UN, 2015), seeking to: understand disaster risk; strengthen disaster risk governance to manage disaster risk; invest in DRR for resilience; enhance disaster preparedness for effective response and to Build Back Better in recovery, rehabilitation and reconstruction. The Sendai Framework for DRR institutionalisation is presented in Figure 2.2.

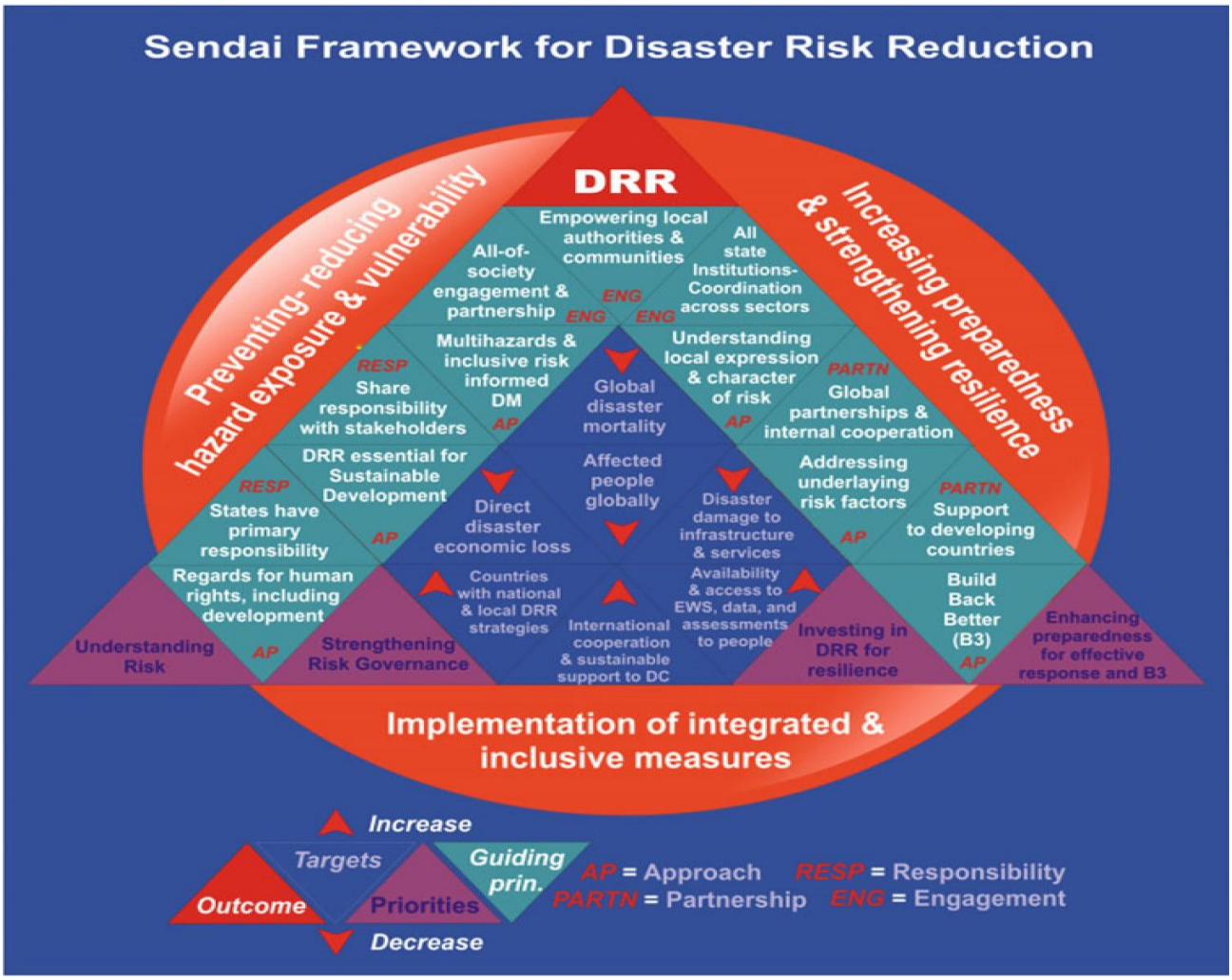

Figure 2. 2: The diagrammatic interpretation of Sendai framework for disaster risk reduction (2015–2030) (UNISDR, 2015).

In Figure 2.2, risk identification and reduction form the foundations of the framework and the core of programming and analysis (UNISDR, 2002). Risk is identified in terms of vulnerabilities and hazards, as specified by the risk equation: R = f (V, H) (UNISDR, 2009; Twigg, 2015). Risk dimensions are both idiosyncratic (household level shocks such as death, injury or unemployment) or covariate shocks (such as natural disasters, droughts or epidemics) that result in high income volatility (Gunther & Harttgen, 2006).

Hazards and vulnerability can be the result of economic, social, cultural, environmental, institutional, political and even psychological factors that shape people's lives (UNISDR, 2002). As a result, community involvement and technical assistance becomes key in the identification of vulnerabilities and hazards (UNISDR, 2004). Twigg (2007) advances the view that the vulnerability factors create the environment people live in (see Section 2.3.1). Therefore, understanding the human dimension of disaster risk allows local and national level implementation of DRR (Warner, 2007). DRR should be mainstreamed in all stages of the project, such as planning and implementation. In the context of this study, vulnerability is a reflection of individual and collective assets, strategies, and PIPs (see Section 2.3). DRR continues to evolve both in theory and in technique internationally, but gaps still remain, creating the need to consider a global solution to improve long-term DRR (Alexander, 2006; Kellet & Peters, 2014). It becomes paramount to fully understand key DRR components such as awareness raising, knowledge development, risk assessment and impact assessment, political commitment and the application of risk reduction measures (UNISDR, 2002).

Any institution that aims to put in place a programme with a DRR focus should raise awareness (to change behaviour) among the relevant groups in order to avoid both unnecessary replication and improve sustainability. For example, in Kenya, several different organisations created their own local peace councils in the same district, creating problems that led to the ineffectiveness of this conflict reducing programme (Odendaal & Olivier, 2008). The political support and commitment of government, the community, CSOs, NGOs, agencies, and the private sector at all levels (international, regional, national and local) is key for the success of DRR programming. They have the power to transform structures that shape livelihoods and outcomes (see Section 2.3). This can be achieved by putting in place institutional frameworks, policy development, legislation and codes, organisational development and community action. The application of risk reduction measures is important, for example environmental, social and economic development practices such as poverty alleviation livelihoods; financial mechanisms; health and agriculture; physical and technical measures such as land use/urban planning; the production of critical facilities; and networking and partnerships (see Section 5.3). The application of these measures feed into recovery. Figure 2.3 indicates that DRR encompasses the assessment of vulnerabilities and hazards; extension; risk and learning (for example, sharing knowledge with other stakeholders and raising awareness); managing risk; and a system for monitoring and evaluation. The DRR framework permits a conceptual and practical understanding of DRR to ensure better risk reduction in the future and highlights possible gaps in the literature and programming. To put DRR into context, it is important to fully understand the conceptual development that is discussed in Section 2.5.1.

2.5.1 Conceptual development of disaster risk reduction

The terms "disaster reduction" (DR) and "disaster risk reduction" (DRR) have elicited some discussion and confusion among scholars (Ritchie, 2003) due to a lack agreement on definitions (Wisner, 2003). However, Van Niekerk (2005) holds that DRR is more widely used than DR. His argument is that DRR emphasises what is being reduced, as opposed to DR, which may create the perception that the main focus of DRR is disasters rather than hazards and conditions of vulnerability. Thus, DRR is a policy objective aimed at preventing new and reducing existing disaster risk and managing residual risk and to strengthen resilience (UNISDR, 2015).

DRR minimises vulnerabilities and disaster risks to avoid or to limit the adverse impacts of hazards (UNISDR, 2004:17) to protect livelihoods and boosts food security (see Chapter 3). Van Niekerk (2005:6) is of the opinion that DRR can only be successful in the context of sustainable development. He advocates that DRR activities should be conducted in a manner that caters for both the present and future generations and future generations. Baumwol (2008) and Mitchell and van Aalst (2008) view DRR as a preventative approach to reduce the impact if disasters to disaster risk taken before the onset of a disaster (for example, land use planning, structural design, construction practices and standards and disaster warning systems public awareness, decision making and advocacy) (World Bank, 2004; Donovan, 2010). Furthermore, Donovan (2010) highlights that DRR is getting much attention in the wake of an increase in anthropogenic and natural disasters. For example, famines, natural disasters or war-induced complex humanitarian emergencies (Fossi, 2014; De Waal, 2015), that still face the whole world, especially Africa. In the Americas, 9 000 fires destroyed 1.2 million acres of California and 10 000 structures, affecting tens of thousands of people (Macdonald, 2018). In the Asian region more than 1 000 died, 41 million were affected and thousands of homes were swept away by monsoon-related floods and landslides (Gettleman, 2017). In 2015/16 season, Africa's SADC region lost an estimated 64 3000 livestock, worth close to $2 billion due to El Niño-induced drought.

DRR practices for communities are mainly stated in international and national policy documents that outline approaches to be followed (Manyena, 2013). The intent is to minimise vulnerabilities and disaster risks in a society to avoid or to limit the adverse effects of hazards within the broad context of sustainable development (Twigg, 2015). For example, the Civil Protection Act (Chapter 10:06) of 1989 guides all DRR activities in Zimbabwe (Civil Protection Act (Chapter 10:06) of 1989). However, Mavhura (2017) points out that no systematic evaluation has been done to ascertain whether the Act is still an effective law for DRR or otherwise. Currently, Zimbabwe does not have a gazetted DRR policy, but only a draft policy that has been existence for the past 20 years. The lack of urgency with respect to a DRR policy indicates a lack of institutional commitment for DRR. Lunga (2015) argues

that DRR implementation requires situational analysis and interpretation for identifying vulnerabilities including disaster risk to implement appropriate activities for vulnerability reduction. Consequently, DRR is fully achieved when improved vulnerability and community wellbeing is evident as a result of strong institutional commitment on the side of the legislature (UNDP, 2004; UNISDR, 2008; Lunga, 2015. Discussion on the SL, resilience and DRR concepts would be incomplete without examining how they interlink. The section below focuses on these linkages.

2.6 RESILIENCE AND DRR IN SUSTAINABLE LIVELIHOOD APPROACH

SLA has links with the concepts of resilience and DRR (World Bank, 2004; Serrat, 2008) since they focus on the plight of the poor to achieve resilience at all levels. Resilience is only achieved by anticipating, preparing for, reducing the impact of, coping with and recovering from the effects of shocks and stresses (IFRC, 2014). The success with which an entity (households) employs initiatives to manage shocks and stresses in their food systems denotes their measure of resilience. Therefore, a resilient food system retains its core functions of ensuring food security even when challenged by shocks (Ansah, Gardebroek & Ihle, 2019).

DRR prevents new and reduce existing disaster risks and manage residual risk, strengthening resilience (UNISDR, 2015). This can only be successful within the context of sustainable development (Van Niekerk, 2005:6), which can be understood from the perspective of the SLF (see Section 2.3). The focus of the SLA and DRR is resilience, which has become the main perspective on sustainability (McLean, & Guha-Sapir, 2013:7). Resilience draws together SLA and DRR (DFID, 2011; Turnbull *et al.,* 2013). In Zimbabwe, disruptive events that affect food security could refer to drought, plant pests and diseases such as locusts and armyworms or animal diseases (see Chapter 3). DRR protects investments and helps vulnerable people become food secure. Resilience inevitably forms part of DRR (Banwell, 2018) by positively influencing social resilience by altering attitudes and behaviours related to risk (IFRC, 2012:12). However, Levine *et al.* (2012) argue that resilience adds nothing new to the substance of humanitarian or development assistance. Resilience is only triggered by a crisis; thus, an after-the-crisis characteristic is ascribed to it (Butler *et al.,* 2007). There are challenges when attempting to assess resilience in the context of household food security systems context (Ansah *et al.,* 2019) due to its complex nature. More so, various studies tend to propose different theories and methods that often generate different results (Ansah *et al.,* 2019). DRR reduces and prevents the severity of the disaster by changing the conditions of vulnerability in any community (DFID, 2006). It minimises vulnerability and disaster risk, safe-guarding livelihoods in the context of sustainability and focusing on capacity development and resilience (Baumwol, 2008:13; UNISDR, 2005). Lunga (2015) posits that countries that have successfully implemented DRR have carried out situational

analysis and interpretation for identifying vulnerabilities, including disaster risk appropriate activities for vulnerability reduction. DRR is fully achieved when improved vulnerability and community wellbeing is evident (UNDP, 2004; UNISDR, 2008; Odusote, 2016).

The SADC region uses vulnerability assessment committees (VACs) to address its DRR and food security issues. SADC's heightened interest in VACs was triggered by an increase in drastic shocks and hazards that compromised livelihoods, resilience and food security, for example persistent drought, floods, soaring food prices, declining agriculture, among other things. The Regional Vulnerability Assessment Committee is mandated to oversee VACs regionally (Marshland, 2004). The mandate of the National Vulnerability Assessment Committees (NVACs) is to oversee the national level (Masechaba, 2014). In Zimbabwe, the Vulnerability Assessment Committee (ZimVAC) comprises the government, UN agencies, NGOs and other international organisations (ZimVAC, 2016). A setup of this nature prevents the communities from actively participating on food security issues that affect them. This observation could provide answers to the continued food insecurity in the midst of implemented initiatives, which is the topic of this study. ZimVAC carries out livelihoods assessment activities to inform the GoZ and development partners on programming to save lives and strengthen rural livelihoods (ZimVAC, 2016). ZimVAC is the central pillar of the Food and Nutrition Council. Its strategy is to fulfil commitment no. 6 of Zimbabwe's food and nutrition policy (discussed in Chapter 5) and to monitor the implementation of ZimASSET (Zim VAC, 2014). A study on SADC's NVACs found that they did not have their own finances, so they depend on short-term external funding (Masechaba, 2014). Dependency on external funding increases the likelihood of shifting assessment methodologies to meet the funders' conditions, which can compromise the quality of assessment results.

SLA, DRR and resilience interlink in terms of their purpose, though their methodologies differ. SLA pries open the complexities of poverty and the targeting of interventions (IFAD, 2011). SLA focuses on how households use assets to undertake a range of livelihood activities to ensure its livelihood security (Carney *et al*, 1999). The relationship between SLF components is central to livelihood analysis. This analysis leads designs and the implementation of poverty alleviation initiatives that build resilience and enhance food security. As such, DRR interventions strengthen the absorptive, adaptive and transformative capacities of individuals and households (Bene *et al*., 2012). However, Miller *et al*. (2010) view capacities as complementary. Weingärtner (2005) posit that livelihood assets are both created and destroyed as a result of the trends, shocks and seasonality of the vulnerability context. They directly influence people's asset status and the options they can pursue for beneficial livelihood outcomes (DFID, 1999). The policies of the transforming structures and processes

determine people's access to assets (Weingärtner, 2005) due their power to create, determine and influence the rate of accumulating assets. Thus, the range of options and ability to switch between multiple strategies to secure livelihoods is determined by the number and type of assets one possesses and has access to. People's ability to escape poverty is critically dependent upon their access to assets to achieve different livelihood outcomes. Livelihood strategies pursued by households are defined by the interaction between access to assets, human capabilities and the existence of economic activities. As such, a system's ability to cope (resilience) with and recover from shocks and stresses or to maintain or enhance its capabilities and assets, defines sustainability. Scoones (2009) asserts that resilience is central to the definition of SL. Such resilience in the face of stresses and shocks is key to both livelihood adaptation and coping (Davies, 1996). This feeds into popular understandings of the term. For example, a resilient person exposed to risk is flexible and able to "bounce back" or possesses so-called "bounce-forward ability" (Manyena *et al.,* 2011). Improving livelihoods per se, improves food security resilience. Because of this, resilience and vulnerability are in fact highly complementary (McLean & Guha-Sapir, 2013:7). The five livelihood capitals/assets are entry points for the measurement of resilience. Frankenberger *et al*. (2014) suggest that resilience programming should have the goal of positive livelihood outcomes rather than resilience per se. Furthermore, the authors advance that resilience outcomes are measured by development indicators such as food security, nutrition and poverty. In other words, the food security resilience of a system can be an indicator of the success of an implemented development initiative.

The concept of resilience as applied to household food security aims to measure the capability of households to absorb the negative effects of unpredictable shocks, rather than to predict the occurrence of a crisis, as in the case of most vulnerability literature. McLean and Guha-Sapir (2013:7) postulate that the concept of resilience now frames thoughts on sustainability. Maxwell (1991) notes that there is a nexus between food security and livelihood in households in that food security can only be achieved when the poor have SL. In order for communities to be food secure, all people, at all times, should have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs (FAO, 2001; Serrat, 2008). The multidimensionality of food security and the complexity of the conduit mechanisms to food insecurity, qualifies the household as a system that faces largely unpredictable exogenous shocks. Food security is an outcome of the livelihood goals that people pursue. Niehof and Price (2001) maintain that depletion of livelihood assets may lead people into vulnerability, while the accumulation of capital assets helps people overcome risk and vulnerability. Food insecurity is a core dimension of vulnerability. Food security and resilience are negatively or positively influenced by SLF components. A household's ability to cope with and withstand economic

shocks depends on the options available in terms of abilities, assets (including both material and social resources) and activities. These frameworks have common goals of providing benefits to people and the environment under normal and extreme operating conditions (Marchese *et al.*, 2018). Therefore, the relationship between the dimensions of SLF, resilience and DRR is interactive and mutually reinforcing (Henly-Shepard, 2019). The interaction among these three attributes defines them. In Figure 2.3 the nexus of the three components is summarised.

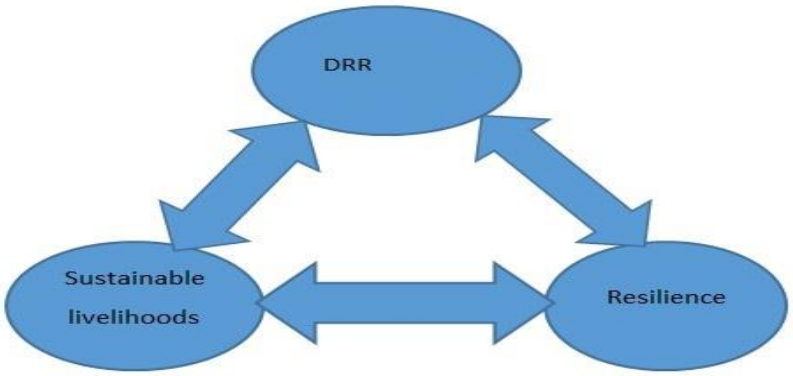

Figure 2. 3: The nexus between SLA, resilience and DRR

Source: (Scoones, 1998; DFID, 1999; Riely *et al*., 1999; Devereux, 2006 & Manyena, 2009).

SL solidifies the links between DRR, food security and resilience to achieve a sustainable system. Thus, a household with higher resilience tends to have less child malnutrition and better food security (Ansah *et al.*, 2019). External influencing factors such as climate change, economic conditions, population growth, and governance can all affect food security. The section below summarises the theories that formed the foundations of this study.

2.7 CONCLUSION

Chapter 2 gave a conceptual overview of intellectual thought on SLA. The international thought on SLA, resilience and DRR, which form the foundation of the study, was discussed in depth, relating to their origin, meaning, value, and short-comings. SLA theory was used for the first time in 1987 (WCED, 1987), years after the evolution of food security (FS) as a concept in the 1940s. SLA mainly emphasises resource ownership, basic needs, and rural livelihood security (Conroy & Litvinoff, 1988). The broadening of FS between 1980s and 1990s to include elements of food entitlement, vulnerability, and sustainability (Chapter 3, Section 3.3) could have been influenced by the advent of SLA. In the context of this study, sustainability refers to an ability to maintain FS at an acceptable level without jeopardising future generations. SLA strategies ensured a reduction of disaster risks in

order to advance and increase the resilience of the poor. The SLA has been criticised for negating strategic gender needs and inequalities; its bias towards agricultural or rural communities and assets; and being too large and complex to implement and time consuming. However, SLA sheds light on the environment within which the systems produce their livelihood outcomes (food) and explains the factors that influence the environment. This theory provides a crucial foundation for assessing the influence of SLA projects on FS resilience levels. Second, resilience is discerned as the entity's internal capacity to cope with crises through the development of self-organised and internal capacities and capabilities without external support. Its main purpose is to save lives, protect, infrastructure, livelihoods, social systems and the environment. Resilience is built and enhanced by the implementation of SL projects that focus on structures and cultures that create vulnerability. The resilience concept traces its foundations across disciplines and this makes it difficult to implement, contextualise and uniformly apply across context and cultures (Theron *et al.,* 2012). This phenomenon provides opportunities for mobilising rigorous joint integrated impact evaluations and research efforts around DRR. This study purposes to fill this gap.

DRR was born out of the inadequacies of the initiatives to respond to disaster situations in the mid-1970s and was influenced by research on vulnerability. In practice, DRR refers to the systematic development and application of policies, strategies and practices to minimise vulnerabilities and disaster risks and strengthen resilience within the context of sustainable development. DRR builds resilience through awareness raising, knowledge development, risk assessment and impact assessment, political commitment and the application of risk reduction measures. The DRR framework permits a conceptual and practical understanding of DRR to ensure better risk reduction in the future and highlights possible gaps within the literature and programming.

Finally, SLA, resilience and DRR interlink in terms of their aim of strengthening the absorptive, adaptive and transformative capacities of communities. Another aim is to provide, enhance and maintain stability in access and availability of food for present and future generations. Resilience helps to provide benchmark characteristics of a resilient system, while SLA endeavours to build the resilience of the entity through implementation of projects. SLA explains the factors that can positive or negatively influence livelihood outcomes. Together these concepts serve as a good tool and a foundation for assessing FS resilience levels. In Chapter 3 the emphasis falls on FS theory to address objective one, which focuses on theories that form the foundations of this study.

CHAPTER THREE

THE THEORY BEHIND FOOD SECURITY

3.1 INTRODUCTION

The previous chapter conceptualised SL as a concept, an approach, and as a framework of study. The selection of particularly the SLA is based on its contributions to DRR learning, development and humanitarian interventions in the FS issues of developing nations. While the amount of produced food in the world is enough to feed everyone, one in nine or approximately 815 million people still go to bed on an empty stomach each night (WFP, 2017:2). The number of undernourished people has increased to nearly 821 million in 2017 from around 804 million in 2016 (FAO *et al.,* 2018:21). The continuous rise in complex and frequent food insecurity signals that we are not on track to eradicate hunger by 2030 (FAO, IFAD, UNICEF, WFP & WHO, 2018:15). This rise comes despite continued international mitigation initiatives in the form of SL projects (De Waal, 2015:22; Fossi, 2014:1). Vulnerable people have the right to be free from hunger and malnutrition for a healthy life. This chapter gives an overview of the conceptualisation of FS in order to grasp the enduring debates with respect to the term, partly addressing research objective 1 of this study (see Section 1.6). In addressing FS as a theoretical construct, this chapter is divided into the following subsections: a conceptual reflection on FS; an exploration of the development of the concept; an understanding of FS; an international perspective on food insecurity (FI); FS and famine causative theory; an analysis of FI indicators; and the chapter conclusion.

3.2 FOOD SECURITY: A CONCEPTUAL REFLECTION

Since the World Food Conference in 1974 the term FS has continued to evolve. This is evident from the variety of definitions of FS from the 1940s to the present (Misselhorn, 2005:33–42; USDA, 2014:6). The advancement of over two hundred definitions over the years attests to the complexity of the term (Ignowski, 2012:4; Pangaribowo *et al.*, 2013:5). It is a dynamic and complex term that can be adapted to suit various spaces and times. FS is a term that should not be generically applied across contexts. It is an important guide to achieve national FS when used correctly. Despite the increased production of food and wide use of the term "FS" since the 1940s, hunger has increased (WFP, 2017:2). Currently, more than 820 million are food insecure (FAO, IFAD, UNICEF, WFP & WHO, 2019:3). Nkomoki, Bavorová and Banout (2019:1) affirm that FS remains a global challenge; a threat mainly to smallholder farmers in

developing countries. Multiple definitions have failed to provide a lasting solution to the food insecurity challenges the world over. FS is not a mere product of a plethora of definitions, but a total commitment to the FS agenda in terms of policies and budgetary support and participation.

Weingärtner (2004:4) explains that FS is an important element of poverty reduction. The quest for FS and the avoidance of hunger and famine is as old as civil society itself (ODI, 1997:1; WFP, 2016:1). The importance of FS is evident from the efforts at a global scale to fight hunger and food insecurity after World War II (Lima, 2008:12). There were numerous declarations and initiatives to promote FS (FAO, IFAD & WFP, 2014:4; IFPRI, 2016). Some of these include the United Nations Universal Declaration on Human Rights that includes the right to food in 1948; the World Summit on Food, the Comprehensive African Agricultural Development Programme, and the SDGs (FAO, 2006:1; FAO, 2014:4; UNDP, 2015:1-24). The purpose of the SDGs is to improve people's lives by 2030. More so, Goal 2 – Zero Hunger – pledges to end hunger, achieve FS, improve nutrition and promote sustainable agriculture (UNDP, 2015:1). The IFPRI (2016:2) affirms that there are currently visible international, regional and national initiatives focused on addressing food insecurity.

In pursuit of the same agenda, the African Union drew up the Maputo Declaration in 2003 (African Union, 2005; Benin & Yu, 2012). Under the Maputo Declaration, leaders in the African Union committed to spending at least 10% of their national budgets to transform agriculture and to achieve at least 6% annual agricultural growth (Ebi & Amraihu, 2018:516). To demonstrate commitment and support to the Maputo Declaration, African leaders ratified the Malabo Declaration of 2013 (Fontan Sers & Mughal, 2018:3). Their vision was to dramatically transform agricultural growth and development in Africa (Hendriks *et al*., 2018:1). Elsewhere in the SADC region, the Food Security Strategy for 2015-2025 was crafted (SADC, 2014). All these commitments are meant to achieve SDG 2, that of zero hunger, through policy reforms, doubling agricultural productivity and reducing stunting. However, declarations on their own does not guarantee FS if they are not put to action and given the necessary support with commitment (see Section 7.2.1.2).

As a way of demonstrating commitment to the international and regional declarations, the GoZ and its partners developed various policies and FS-related initiatives (see Section 5.3.3). Policies include the Food and Nutrition Security Policy of 2013 and the Zimbabwe Agenda for

Sustainable Socio-economic Transformation (Zim ASSET, 2013-2018). The policies and initiatives provide a good platform for addressing FS but are silent on support for the assessment aspect. However, good as they are, these declarations, initiatives and policies do not provide resources for assessment, which is ideal for informing future planning and programming (see Section 4.2). This leaves a need for the development of a multi-sphere framework for assessing FS-related projects (see Section 8.2). Before delving into the development of such a framework, it is paramount to understand the development of FS as a concept. The section that follows, focuses on the conceptual progressions and understanding of the FS concept.

3.3 OTHER CONCEPTUAL PROGRESSIONS FOR "FOOD SECURITY"

Over the years, the FS debate has developed from a food first to a livelihood perspective, and from objective indicators to subjective perceptions (Maxwell, 1996:156). The development was influenced by challenges in reaching an agreement on the political acceptability and commitment to the definition (ODI 1997:2). Hatløy (1999:15) explains that increased food production, income generation, stability and nutrition, and food supply dominated FS thinking. The food first thinking held that that FS could be achieved through access, which can be achieved by massive production of agricultural products. The livelihood perspective's focus is to equip the poor to secure their own livelihoods through active participation (see Section 2.2). Weingärtner (2004:3-4) concurs and affirms this development of the term over time. The indication is that term moved from economic and quantitative considerations in a humanistic and qualitative direction, a rights-based paradigm. The rights-based paradigm promotes the adoption of human rights in the development arena. According to Nussbaum (1997:273), every human being, regardless of race, ethnicity, or socio-economic class, is a rights holder, and someone has to provide for these rights. Therefore, all development initiatives are duty bound to be guided by this paradigm to ensure that community members are treated with dignity. Indeed, the term has undergone significant transformations both in theory and practice since the early 1940s (Carr, 2006:15; Bokeloh *et al.*, 2009:3). Pangaribowo, Gerber and Torero (2013:7-15) highlight the development of several conceptual frameworks that define FS and nutrition and the links between them. The basic concept underlying FS is first and foremost "freedom from hunger" (CFS, 2012:4). The FAO (2019:2) concludes that the current FS thinking centres on ending hunger and ensuring access to food for all, both in quality and quantity.

In the 1970s FS was viewed as a "food problem" that could be solved with massive food production and maximising stability in food flow (ODI, 1997). The consumption and access thinking were put forward in the form of the theory of entitlement (Sen 1981:6). Entitlement refers to the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she has (Sen, 1984:497). In the context of rural Zimbabwe, the entitlements refer to livestock, houses or huts, scotch carts, productive assets, and food commodities and money. An individual's exchange entitlement is determined by the initial endowment (Watts, 1991) and acquired through own production, purchasing, own labour and being given the endowment. Thus, even when there is no production failure, or when sufficient food is available through markets, starvation may still result due to entitlement failure (Misselhorn, 2006:15), a strong determinant of food acquisition in populations. This theory has a place in the study in that it sheds light on the entitlement theory. Understanding entitlement dynamics can help us understand ownership dimensions, their structural relations and other forms of entitlements that influence FS in a society.

Weingärtner (2004:4) advances that FS was broadened during the 1980s and 1990s to include food entitlement, vulnerability, and sustainability. In the context of Zimbabwe, food entitlements are a set of alternative commodity bundles that a household commands in its community using the totality of right and opportunities they have. Thywissen (2006:36) defines vulnerability as an intrinsic characteristic of a community that comes to the fore during an event in correspondence with the magnitude of the harmful event. Shitangsu (2013:1) defines vulnerability as the inability of a system to withstand the perturbations of external stressors. This means that vulnerability is a characteristic that describes a system's susceptibility levels in the face of events that expose it to perturbations of external stressors. Stressors can be physical, economic, social, political and environmental (see Section 3.4 and 4.5). In the context of this study, sustainability refers to an ability to maintain FS at an acceptable level while at the same time avoiding the depletion of resources for the other generations (see Section 2.2.4).

The FAO was created in 1945 to organise and strengthen international food-related efforts to rid the world of hunger (FAO, 2015:17). The World Food Programme was created in 1963 (CFS, 2012:4). Despite all these developments, FS remains a dynamic and complex phenomenon. The complexity of FS is evident in theories put forward by different scholars like Sen *et al*., among others. As such, FS goes beyond bulk food production to include SL and other causative factors (ODI, 1997:1–4; Pangaribowo, 2013:5). It is multifaceted and

multisectoral. The previous perspective that looked at production and stockholding are not the panacea to overcoming climatological, environmental, economic, political crises that breed food insecurity. The acquisition of "sufficient" calories to meet the energy requirements for good health at all levels has become the main emphasis (Misselhorn, 2006:6). The multiple historical interpretations of FS allude to an array of debates around the term since its inception (CFS, 2012:4).

According to FAO (2003:27), FS is the availability of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices. While affirming this definition, Maxwell and Frankenberger (1992:8) define FS as a having secure access to sufficient food for a healthy life at all times. Meanwhile, the FAO (1996:1; FAO, 2003:27; CFS, 2012:6) maintains that FS means being free from the risks of malnutrition and having physical, social and economic access to secure, sufficient, safe and nutritious food that meets people's dietary needs and food preferences at all times. The physical, social and economic access have to promote an active, healthy lifestyle (FAO *et al.*, 2017:107). A food secure household or entity is one whose nutritional needs have been met, that shows no or minimal evidence of food insecurity and that has access to sufficient and affordable food (Pinstrup-Andersen, 2009:137; Mishra, 2016:42). In terms of measurement, this definition reinforces the multidimensionality of FS by accounting for the following important factors: food availability (domestic food production and imports), food accessibility, food stability (food supply throughout the year), and food utilisation (diet quality that meets the needs for macro- and micronutrients (Ogundari & Awokuse, 2016:2). However, in the Zimbabwean contexts especially in rural communities, FS refers to having enough maize meal and relish, especially vegetables, and enough money to sustain a household to the next harvest time. There is little or no emphasis on nutrition. To be food secure, an entity (household, community or nation) must be in a situation of adequacy at all times, both physically, socially and economically. They should be able to access, preferred food safe and nutritious food in a socially acceptable way.

It is not obvious how varying degrees of departure from full FS could be quantified based on either the World Food Summit or World Health Organization definitions. An operational definition of FS must support quantification (United States Department of Agriculture, 2000). FS should be defined quantitatively as this would make it possible to study the causes of changes in the incidence of poverty over time and across environments systematically.

Warr (2014:521) criticises the FS definition for lacking the quantitative flare that limits systematic studies over time and across environments. The inference is that the definition of FS is too qualitative, causing its failure to promote quantitative and systematic study. Hanning *et al.* (2012) explain that FS is susceptible to various factors such as climate change, dependence on fossil fuels, the loss of biodiversity and use of food crops for biofuels. However, Bushara and Ibrahim (2017:2) feel that a measure of resilience to future disruption or the unavailability of critical food supply due to various risk factors is incorporated in FS. The diverging views of scholars are indicative of the range of understandings of FS.

The FAO has identified four pillars of FS to ease practical application (Haug, 2018:3). These pillars are key to this study, as they help clearly define the attributes that make an entity and a system food secure and resilient. They are the availability of food, access to food, food utilisation and stability. As such these pillars informed the parameters of the research instruments and served as a point of reference against which the influence FS-related initiatives can be assessed. When one or more of these pillars fall way, food insecurity occurs. The next subsection reviews the first pillar of FS, the availability of food.

3.3.1 Availability of food

Riely *et al.* (1995:2) assert that availability can be measured at the household, regional or national level. Gregory, Ingram and Brklacich (2005:2141) point out that availability focuses on issues related to production, distribution and exchange. The implication is that for FS to be achieved at all levels, food should be available through production, distribution, and exchange activities. Availability refers to the supply side of FS (FEWS NET, 2014:4) and the physical existence of food (Sassi, 2015:93). It is determined by the level of food production, stock levels and net trade (FAO *et al.*, 2019:117). Therefore, availability is a key factor in meeting basic food needs, however availability itself does not guarantee access to sufficient, safe, and nutritious food. Zimbabwe still faces acute food shortages and is in dire need of food relief despite a plethora of initiatives to ensure FS (Chirimuuta & Mapolisa, 2011:52). Some of the factors that negatively affect availability are adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) (Manyeruke, 2013:285; FAO *et al*., 2019:117). Scores of development agencies have worked with the GoZ to ensure food availability (see Section 5.3.3). In the context of Zimbabwe, availability means having food from own production, and after the harvest from remittances, shops, neighbours, granaries and storerooms so that a household has food to the next harvest time. Food in this instance refers

to the staple food (sorghum, millet and maize meal, dried and fresh vegetables, nuts, beans, cooking oils, dried mushrooms and mopane worms). FS in this context means not going hungry and having at least three meals per day, regardless of the nutrient content. Zimbabwe remains a perennial recipient of humanitarian aid. Development initiatives implemented over the years have built minimal FS resilience, if any. These observations have given impetus to the goal of assessing the contribution of development initiatives on FS-related issues in the agro-ecological region IV and V of Zimbabwe. Having reviewed the availability component of FS, it becomes imperative to review the access component.

3.3.2 Access to food

According to Reilly *et al.*, (1999:8), access refers to an entity's ability to procure foods through the transformation of endowments, such as land, labour, capital and other resources (see Section 2.3.2). "Entity" in this instance denotes an individual, household, community or country. Access addresses elements related to affordability, allocation and preference (Gregory *et al.* 2005:2141). Misselhorn (2006:7) is of the opinion that access refers to sufficient and safe food, while nutritious food pertains to kilocalories, micro- and macro-nutrient content. However, Ignowski (2012:1) views access as referring to what foods the household can acquire and whether or not the household can afford them, putting less emphasis on the nutrient content. Access at whatever level should refer to the entity's ability to source, allocation, preference, quality and quantity, safety and nutrition. As such, these food commodities have to meet social requirements and food safety standards in terms of storage, processing and preparation. For example, in Zimbabwe, the recommended minimum consumption standard is 2100 kilocalories per day (ZimVAC, 2014:84). Meanwhile, at household level, access refers to the household's ability to obtain nutritious foods from own production, purchase, gifts, and transfers (FEWS NET, 2014:4). In the same vein, Sassi (2015:93) emphasises the possession of adequate resources both in economic and physical terms as enhancers of access. Economic access to food denotes having sufficient foreign exchange and income to procure food, while the physical access relates to the state of the infrastructure, market and storage facilities, political stability and income distribution (FEWSNET, 2014:4). Manyeruke *et al*. (2013:270) and de Waal (2015:23) affirm that access and control of productive resources (such as land, seed and water), governance (legal and regulatory frameworks), the macroeconomic environment, gender dynamics; HIV/Aids and other diseases; and emergencies and conflicts influence food access levels. However, land is an important factor with respect to the access component and needs scrutiny. Chimbindi (2018) advances that Zimbabwe's communal land belongs to the

government. Consequently, households cannot use it as collateral to get loans for self-development. Thus, neither national food production nor access can guarantee increased FS for people and groups without effective entitlements to that food. As such an entity's ability to afford preferred, sufficient and safe food is determined by the physical environment, social environment and policy environment, as well as other factors. If not used efficiently, land does not guarantee FS. The section that follows focuses on utilisation, which is the third pillar of the FS framework.

3.3.3 Food utilisation

Utilisation is typically reflected in the nutritional status of an individual (Riely *et al.*, 1999:8), According to Gregory *et al.* (2005:2141), nutrition addresses elements related to nutritional value, social value and food safety. Further, Gregory *et al.* (2005:2141) explains that utilisation includes the proper food use, processing, storage facilities, adequate knowledge and application of nutrition and child care. Sassi (2015:94) concurs and adds that utilisation entails the proper biological use of food that provides sufficient energy, essential nutrients, potable water and adequate sanitation. Ignowski (2012:1) emphasises that utilisation portrays the household's ability to use the best options for food that it has access to, to absorb nutrients for a healthy life. Thus, the utilisation pillar of FS refers to the selection, storage, preparation and distribution of food that a household accesses, putting more emphasis on health, food safety, quality and sufficiency issues. However, availability, access and utilisation cannot assure FS when the stability element is absent. The section below explains the last component of the FS framework.

3.3.4 Stability in availability, access and utilisation of food

Stability or sustainability refers to the temporal dimension of nutrition security, the timeframe over which FS is being considered (Weingärtner, 2004:7). Stability can be affected by increased frequency or severity of extreme events (IPCC, 2007:41-42) (see Section 3.3.2). Stability further underpins availability, access and utilisation, capturing the level of uncertainty or vulnerability to future disruptions of FS (FEWS NET, 2014:4). A status of stability is realised when a reliable supply of food products is always available for all individuals (Sassi, 2015:14). Simply stated, stability refers to a condition in which the whole system is stable (FAO *et al.,* 2019:187). For that reason, the given definitions infer that stability is the product of a constant and reliable supply of nutritious food to all individuals without disruption of any one of the three pillars of FS. Thus, when there is disruption due to an increase in the frequency or the severity of extreme events, instability can be triggered.

FS is ensured when availability, access, utilisation and stability are all ensured. Consequently, the study of FS is incomplete if food insecurity is not given the attention it deserves. Therefore, FS cannot be completely understood without exploring food insecurity and famine causative theories. These theories provide an in-depth understanding of food insecurity from different perspectives. Section 3.4 fully explores food insecurity.

3.4 FOOD INSECURITY (FI) AN INTERNATIONAL PERSPECTIVE

Drawing from Sen (1984), a food insecure system is unable to acquire minimum food requirements using a combination of entitlements (see Section 3.3). According to Sanchez *et al*. (2005), food insecurity exists when a household does not have physical and economic access to sufficient, safe, nutritious and culturally acceptable food for a healthy and active life. However, D'Haese *et al.* (2013:2) view food insecurity from the perspective of self-reported experiences of food insecurity outcomes due to insufficient access to food. For example, feeling hungry, cutting down on the number of meals, eating food that is less liked or having a less diverse diet. Equally, Smith, Rabbitt and Coleman-Jensen (2017) portray food insecurity as the sum of the share of people facing either moderate or severe food insecurity. It refers to a period of limited food or uncertainty about acquiring acceptable foods through socially acceptable means (USDA, 2012; FAO *et al.,* 2018:30). Thus, food insecurity refers to a period of when a number of people have no physical and economic access to food or a period of facing moderate or severe food insecurity for a healthy and active life. As such, this period is determined by various factor, such as household wealth/assets, socio-economic and political and livelihood strategies, and climate change, among others. In the context of Zimbabwe, a food insecure household is one that needs more than three months of food assistance per year (Ignowski, 2012:2). In the United States of America, a food insecure household is one that has experienced limited or uncertain availability of nutritionally adequate foods in the previous year (USDA, 2014). Various entities understand and interpret food insecurity differently, thus the term should not be generically applied across various entities.

Food insecurity is categorised as either transitory, seasonal, or chronic (FAO, 2008:12). Statistics South Africa in *Report: Food Security and Agriculture 2002–2011* (StatsSA, 2012) adds another category, cyclical food insecurity. Ecker and Breisinger (2012:4) posit that transitory food insecurity is characterised by food unavailability during certain periods of time. Transitory food insecurity happens just before the harvest when food supplies are limited and prices are high (FAO, 2008:16). For example, in Zimbabwe in the 2016/17 season, 4.1 million

rural people were food insecure in the peak hunger period, January to March 2017, due to this phenomenon. It is difficult to plan and programme for transitory food insecurity because of its unpredictability (FAO, 2008:1).

Hart (2009) advances that food insecurity falls into two subcategories, the seasonal and the temporary. Temporary food insecurity results from short-term, exogenous shocks such as droughts or floods, or civil conflict (Martin-Shields, & Stojetz, 2019). For example, in the United States in 2012, 49.0 million people lived in food-insecure households; 12.4 million adults lived in households with very low FS; 8.3 million children lived in food-insecure households where they, along with adults, were food insecure; 977 000 children lived in households in which one or more child experienced very low FS (USDA, 2012). Meanwhile, in Yemen large-scale displacement, civil conflict, political instability, high food prices, endemic poverty and influxes of refugee and migrants condemned 32.4% of the population to food insecurity over the last 10 years (Allen, 2014). Climate change is blamed for most food insecurity episodes (IPCC, 2007:48; Sango & Godwell, 2015:1). Steffen *et al*. (2018:1) explain that in Australia, climate change has resulted in severe droughts due to hotter conditions around the continent and drier conditions in many regions. There is a general consensus amongst scholars that food insecurity can be a result of climate change, large-scale displacement, civil conflict, political instability, high food prices, endemic poverty and influxes of refugees and migrants. Furthermore, the FAO (2008:1) adds that poorly managed transitory food insecurity can lead to chronic food insecurity, hunger, wasting and malnutrition. Consequently, exposure to severe food shortages and an abrupt decline in food intake can result in a famine. Chronic food insecurity refers to a long-term shortage of enough nutritious food in communities (FAO, 2008:1), from there its close links with chronic poverty, lack of assets, and structural deficiencies in the local food systems in the economy. Barrett and Lentz (2009:4) concur, adding that it emanates from structural problems of availability, access or utilisation. However, Ecker and Breisinger (2012:4) add that chronic FI is persistent. This infers that chronic food insecurity is the long-term persistent lack quality and nutritious food due to poverty, lack of assets, as well as structural problems of availability, access or utilisation. Zimbabwe's chronic food insecurity is attributed to successive droughts from 2001–2004 and 2007–2009, coupled with a conglomeration of socio-economic challenges and political factors (Bongo *et al.,* 2013:5; Mkodzongi & Lawrence, 2019:2). Devereux (2006:34) asserts that if chronic food insecurity is not well managed, it can lead to stunting. Chronic food insecurity can be overcome with long-term development measures, such as education and access to productive resources such as credit

and CA (PRP, 2012:10; Mtonga, 2014:79) and more direct access to food to enable people to raise their productive capacity (WFP, 2016:1). Food insecurity in Bangladesh is influenced by the ever-increasing population density, climate change, scarce natural resources, vulnerability to price shocks and persistent poverty (FAO *et al.,* 2013) (see Section 3.5). In Somalia, the protracted conflict since 1992 has resulted a major famine and localised FS crises in various parts of the country (FAO, 2010:14), while in Nepal food insecurity is attributed to challenges to economic access, food prices, and a lack of diversity in diets (FAO, IFAD & WFP, 2013:27). Thus, food insecurity is a product of various country-specific factors, though there are some common causes that are generally applicable to all countries as discussed in Section 3.5. In the context of this study, food insecurity relates not only to the quantity of food at one's disposal for consumption, low food production and the ability to purchase or reproduce food, it can also be affected by economic, political and social circumstances that influence people's ability to access nutritious food to live healthy. Thus, food insecurity exists when a system is exposed to and not sufficiently protected against chronic, temporal, and cyclic food insecurity to offer the availability, access, and utilisation pillars. Therefore, food insecurity should be contextualised with dynamic global drivers and new trends if it is to be efficiently and succinctly addressed. This makes it important to fully understand and appreciate its main indicators. Section 3.5 reviews food insecurity and famine causative theory.

3.5 FOOD INSECURITY AND THE FAMINE CAUSATIVE THEORY

FS worldwide builds on the food insecurity and famine causative theory, which explains the causes of food insecurity and famine (Sen, 1981:39-44) as developed by Thomas Malthus and Amartya K. Sen. According to Engler, Köster and Sieber (2014:2), attempts to explain the causes of food insecurity and famine rely on four broad disciplinary perspectives. The perspectives are demographic (Sassi *et al.,* 2010:2), climatological and environmental, the economic paradigm (Engler *et al*., 2014:4) and the political/ governance paradigms (Leftwich & Harvie 1986:29; Devereux, 1993:35). Misselhorn (2005) and Pangaribowo *et al*. (2013) affirm that the severest food crises after the second half of the 20th century are attributed to these perspectives. Therefore, food insecurity and famine causative theory offers various perspectives to understand food insecurity drivers that can be used across various settings. The four broad disciplinary perspectives are unpacked in Sections 3.5.1 to 3.5.4.

3.5.1 Demographic theories

The demographic theories that address the supply aspect of food are deeply engrained in the Malthusian and neo-Malthusian theories. According to this perspective, food insecurity is the product of constraints on the cultivated land vis-à-vis the population (Fischer *et al.*, 2002:1). Population growth outstrips the limits of global and regional food production (Wisner *et al*., 2004:133). Famine is a result of production failure (Misselhorn, 2005:38) due to population pressure on the means of production, which results in the ecosystem's failure to provide cultivated food (Misselhorn, 2006:11-12). The population pressure results in environmental and social crisis production (Sassi, 2010:5). This implies that population control could be used as a food insecurity control measure, as it can lower pressure on the means of production. Conversely, overpopulation compromises a system's carrying capacity to provide food, resulting in food insecurity. The demographic theory is narrow in that it does not bring other factors (socio-economic and political) into view. Mensah (2012:11) posit that this view fails to account for the varied dimensions of good livelihoods, both in terms of the diversity of life, life needs and intergenerational dynamics. CFS (2013:8) highlights that food insecurity is associated with demographic changes, marginalisation, and low levels of education, among other things. D'Haese *et al.* (2013:3) concur, adding that food insecurity is determined by household wealth/assets and livelihood strategies. The demographic theory contradicts the SLA theory, which puts the poor at the centre of development, when it blames the poor and the vulnerable for causing food insecurity without exploring other dynamics (see Section 2.3). This creates a need for another perspective to address other dimensions. The section below reviews the climatological and environmental perspective on food insecurity.

3.5.2 Climatological and environmental paradigm

The climatological and environmental paradigm holds that food insecurity is the result of climate conditions (Cox, 1981:8). The primary concern of this paradigm is the biophysical components of ecosystems and their capacity to support the production of cultivated food (Misselhorn, 2006:13). Misselhorn (2006) explains that famine and food insecurity derive from people stressing their environment or environmental stressors acting on people. Therefore, food insecurity is the product of the interaction between two stressors (people and environment) stressing each other, resulting in production, livelihood failure and loss of lives. The most prevalent climate triggered hazards in Zimbabwe are droughts and floods.

Climate triggered droughts and floods are linked with the food insecurity experienced in Africa over the past 30 years (Sango & Godwell, 2015:1). In Zimbabwe, drought has caused natural disasters between 1991 and 2013, especially in the semi-arid agro-ecological regions IV and V (Ministry of Environment, Water and Climate, 2010:2; Nangombe, 2015:1; WFP, 2014:3). For example, the successive droughts of 1991–1992, 2001–2004, and 2007–2009 and 2012 have led to crop failures and livestock deaths and severe food shortage. As a result, localised acute food insecurity occurred particularly in the southern provinces of Midlands, Masvingo, Matabeleland North and Matabeleland South (Nciizah, 2014:4). In 1999-2001, drought caused massive crop failures, drying up of water resources, severe environmental degradation and loss of goods and services in Kenya (Huho & Kosonei, 2014:14). As a result, approximately 60-70% of the livestock was killed and the maize yield dropped from 2.5 to 0.5 tons/Ha in Narok County. Flooding is another climatic phenomenon with the propensity to destroy crops, livestock, houses and infrastructure, stagnant agro-based livelihoods and lives (Muhonda 2011:xi). In the US more than1million acres (405000 hectares) of cropland was ravaged by floods (Huffstutter & Pamuk, 2019). Meanwhile, in Zimbabwe, Cyclone Eline in 2000 and Cyclone Dineo induced floods that contributed to food shortages. It caused the death of 136 people, 20 000 heads of livestock, 59 184 houses, 538 schools, 54 clinics and 230 dams (Tsiko, 2015). EM-DAT recorded an average of 335 weather-related disasters per year between 2005 and 2014. This indicates an increase of 14% from 1995–2004 and almost twice the level recorded from 1985–1994 (UNISDR, 2015:8). Engler, Köster and Sieber (2014:4) bring to our attention that climatological and environmental theory's focus on climate only makes it incomplete and deterministic. Because of this, it should be noted that the climate paradigm only pays attention to one of several factors affecting food systems; thus, it cannot be generically applied across regions. Gregory *et al.* (2005:2139) concur, highlighting that not all food systems or parts of food systems are equally vulnerable to environmental changes due to different resilience levels. They, (Gregory *et al.*, 2005:2147) concede that adaptations of food systems via interventions in availability, access and utilisation can make it possible to cope with climate change at different scales, although feedback to the earth system has yet to be fully assessed. The climatological paradigm offers another dimension that sheds light on the causes of food insecurity, though it is deterministic in that is too assuming, giving no room to explore. It does not consider other factors or resilience levels of entities. However, it will add value in the assessment process, so it is importance for triangulation purposes. The next section focuses on the economic paradigm.

3.5.3 An economic paradigm

The economic perspective holds that famine is an economic disaster (Sen, 1981:162). Famine and food insecurity are caused by food entitlement decline (FED), availability decline (FAD) (Sen, 1984:497) and market failure (Pottier, 1997:335). Devereux (2001:18) posits that market failure at all levels (macro- and micro-) results in food insecurity. For example, there could be a lack of entitlements, which denotes a shift in focus from supply to demand-side failures (Devereux, 2001:19). In this instance, "economic" refers to the production and consumption of goods and services (Misselhorn, 2006:14). The paradigm infers that famine and FS are born out of the collapse of production and consumption of goods and services. This implies that protecting production from subsequent collapse is the panacea for enhancing FS. Market failures can present as informational inefficiencies, speculative hoarding, unaffordable levels fragmented markets, or too little or excessive food storage (CFS, 2013). The economic paradigm is the causal element of food insecurity the SADC region (SARPN, 2005). Engler *et al*. (2014:5) add the emphasis that the economic paradigm addresses the role of market developments and price situations. In the same vein, Engler *et al.* (2014:5) further highlights that food availability decline (FAD) is supply/production-oriented, a situation where available food is less than the food necessity for the population. There are strong linkages with the demographic and climatological and environmental paradigms (see Sections 3.5.1 and 3.5.2). FED theory focuses on the food entitlements of the population (Engler *et al*., 2014:6). Therefore, the distribution of food is far more important than its alleged availability. The sub-section below discusses the political/ governance paradigm.

3.5.4 A political/governance paradigm

Devereux (2001:21) views the political/governance paradigm as the most powerful underlying determinant of FS. These paradigms view famines more as a function of a short-term political illness infecting the myriad of institutional arrangements at all level. This shapes formal and informal rules, including government policies (Misselhorn, 2006:17). Therefore, the political has greater influence on the FS of an entity and it can also be contagious like a disease that forces itself in the bodies of people. The food system is vulnerable to abuse for the benefit of a few. Conversely, food insecurity remains embedded in institutional arrangements that have evolved over time in accordance with numerous forces, including cultural influences and relationships of power.

The interaction between people and environment is an ever-changing product of historical, technological, political, social and ecological processes (Misselhorn, 2006:16). Political/governance theories look at the factors such as war, political discrimination against specific ethnic groups, tax policy in the food sector, and corruption (Engler *et al.*, 2014:6). The political interpretation of famine causation best explains the complex food crises in the latter part of the 20th century, triggered by society and its various institutions (Sango & Godwell, 2015:1). Von Grebmer *et al.* (2019:21) and De Waal (2015:22-29) affirm that the famines or acute food insecurity that occurs today are politically designed. For example, in Zimbabwe food insecurity is has been politically triggered (see Section 5.3.3.2) by the Economic Structural Adjustment Programme of 1990 (Chattopadhyay, 2000:307), the Land Reforms Policy of 2000, and Operation Murambatsvina in 2005 (Chari 2008:105), all of which had ripple effects from availability and access to food. Nhundu *et al.* (2015) argue that land reform drastically reduced the production of food by ushering in new, unskilled cadres into the irrigation sector. Benyera and Nyere (2015:6524) affirm that "the ferocity of Operation Murambatsvina left the most vulnerable groups of the Zimbabwean societies, particularly women and children, even more vulnerable". Therefore, all the factors brought into the spotlight by the above theories will be used to understand FS resilience levels as they emerge from the projects that have been implemented since 2000 (see Section 3.3). These theories were used as the basis to evaluate the communities' FS positions from different perspectives rather than sticking on one theory. In the context of this study, these theories indicate that there is no single way to explain the causes of food insecurity. Thus, food insecurity is not a natural phenomenon, but a product of an interplay of factors. It is paramount to adopt and adapt the four perspectives in conjunction with SLA, resilience and DRR theories to assess the influence of implemented programmes on FS and resilience levels. Section 3.6 reviews and analyses food insecurity indicators.

3.6 AN ANALYSIS OF FOOD INSECURITY INDICATORS

Food insecurity indicators come in three social and administrative levels (Gross *et al.*, 2000:13), the micro-, meso- and macro-levels. In the context of this study, the micro-level denotes the household/family or individual, while the meso-level refers to the province, district, community and village, and the macro-level is the national level. According to Weingärtner (2004:14), micro-level food insecurity manifests as a lack of stored food, survival on wild fruits, low frequency of meals, low weight among children under 5 years of age, medical conditions like goitre and anaemia, and migration. Meso-level food insecurity relates to harvest

time staple food production, market and retail food prices, latrine coverage, diarrhoeal disease rate, meal frequency, food frequency and employment, pre-/post-harvest food and women's body mass index (Weingärtner, 2004:14). Macro-level indicators are fertility rates, food production, population flows, food price, wages, per capita food consumption, stunting rate and wasting rate (FAO *et al.*, 2017:8), low birth weight rate, and stability (food price fluctuation, regional gaps). Bokeloh *et al.* (2005:13) categorise indicators according to what is measured at the levels propounded Weingärtner (2004), namely availability, accessibility, use and utilisation, and stability. However, Coates, Swindale and Bilinsky (2007:1) sustain that most micro-/household-level measures of food access, such as income and caloric adequacy, are technically difficult, data-intensive, and costly to collect. These indicators and measures derive from country level household income and expenditure surveys to estimate per capita caloric availability (Perez-Escamilla & Segall-Correa, 2008:18). Meanwhile, the FS status of a household is determined by measuring the household's potential access to enough food. Enough food refers to a minimum of 2100 kilocalories per individual per day (ZimVAC, 2014:84). However, Haug (2018:30) criticises the indicators for viewing communities with the same lenses, not taking into cognisance differences in communities. It is much more credible to appreciate each community as they are, a key component in the formulation of new policies and programme interventions. Table 3.1 summarises the discussion on indicators.

Table 3.1 Summary of indicators at different social and administrative levels

Social Level	Availability	Accessibility	Use & Utilisation	Stability
Micro	Food storage Consumption of wild foods	Meal frequency Food frequency Employment	Weight-for-age Goitre Aanaemia	Pre-harvest food practices Migration
Meso	Harvest-time staple food production	Market and retail food prices	Latrine coverage Diarrheal diseases rate	Pre-/post-harvest food Women's Body Mass Index
Macro	Food production Fertility rate Population flows	Food price wages Per capita food consumption	Stunting rate Wasting rate LBW rate	Food price fluctuation Regional gaps

Sources: (Gross *et al.*, 2000:13; Bokeloh *et al.*, 2005:13; Perez-Escamilla & Segall-Correa, 2008:18; FAO *et al.*, 2017:8)

Since food insecurity can affect almost every facet of society, it is imperative to appreciate and understand its indicators. First, indicators give a good picture of food insecurity at different social levels and serve as a good starting point for assessing it. Indicators can be used as the basis for formulating new policies and for informing relevant programme initiatives to address food and nutrition insecurity at all levels. More so, the indicators can serve as yardsticks for assessing and analysing the influence of programme initiatives at different levels towards achieving FS resilience. This study adopts the micro- and macro-level indicators as a standard to assess the attribution of livelihood projects for FS resilience. Attribution here refers to linking improvements in the FS situation to particular policies, programmes and actions, in other words attributing improvements to certain things (Haug, 2018:1). The attribution aspect enjoys much attention in Chapter 5 and 7 of this thesis.

3.7 CONCLUSION

This chapter offered a conceptual overview of FS by considering past research. The enduring debate on FS forms the point of departure for the remainder of this study. As outlined in Chapter 2, FS was coined and defined in 1974 by the UN during the World Food Conference. At that time, the general thinking was that FS could be attained by an increase in food production, income generation, stability, nutrition, and food supply. There was a belief that paying attention to these factors will ensure that people worldwide will and should have enough food to eat at all times to sustain a steady expansion of food consumption and to offset fluctuations in production and prices. A system's FS is measured by the availability, accessibility, use/utilisation and supply stability of nutritious food, enabling a healthy life at all levels. Consequently, the absence of one of these paradigms renders a system food insecure and susceptible to disaster risks. FS builds on the food insecurity and famine causative theory, which helps shed light on generic causes of food insecurity at the social and administrative level. The ability of livelihoods to guarantee access to sufficient food at the household level determines the entity's FS levels. The impetus to invest in FS is influenced by a desire to fulfil a humanitarian and ethical obligation, to ensure rights, and to make economic gains (Bokeloh, 2005). Such an investment can eliminate hunger, which violates human dignity. It is a way of protecting human rights and the right to food. Investments in nutrition is an investment in human capital to free millions of people from hunger. Conversely, it can result in the amassment of monetary benefits, leading to longer, healthier and more productive lives. Despite visible international development efforts, communities' resilience to shocks, stresses and food insecurity levels remains unacceptable. For example**,** sub-Saharan Africa is the region

with the highest prevalence (percentage of population) of hunger (WFP, 2017:2). Evaluating the influence of livelihood projects on FS resilience levels in Zimbabwe is key to this study.

Chapter 4 unpacks and analyses three assessment models that have been developed and implemented worldwide and that could be used to assess FS related projects. These models served as a framework for the development of the Zimbabwean model in Chapter 8 of the thesis. The models discussed in Chapter 4 will be used to assess the influence of livelihoods projects on FS and the resilience of households in Bulilima, Gwanda, Mangwe and Umzingwane districts of Zimbabwe.

CHAPTER FOUR

INTERNATIONAL ASSESSMENT MODELS FOR FOOD SECURITY RELATED INITIATIVES: A COMPARATIVE ANALYSIS

4.1 INTRODUCTION

The previous chapter conceptualised FS as an approach and a framework of study. The chapter continued with an overview of FS to grasp the enduring debates around the term. This chapter continues this conversation by analysing three assessment models that have been developed and implemented worldwide. These models could be used to assess FS projects in an effort to address research objective number 2 as stated in Section 1.6. The chapter aims to uncover how the principles on which the three models are built could assist in assessing livelihood projects implemented in Zimbabwe. Selected principles were adopted to inform the development of the multi-sphere assessment framework that appears later in the study.

This chapter is made up of the four sections. The first section reflects on the guiding criteria for effective assessment of issues related to FS. The second section unpacks the project assessment models for FS, outlining their underpinning principles, salient characteristics, strengths and critical challenges. As a means of accentuating the real value of the models discussed in the chapter, a comparative analysis is done to trace and explain differences. A comparative analysis table highlights the influential points of note. These are endorsed or disproven by the outcomes of the research findings in Chapter 7. Some components and principles of the models were adapted and applied in the design of research questionnaire (Annexure E, D & C) and an all-inclusive impact assessment model for Zimbabwe (Section 8.2). Guiding criteria for effective assessment of issues related to Zimbabwe, requires attention.

4.2 A GUIDING CRITERIA FOR EFFECTIVE ASSESSMENT

The discussion uses the terms assessment and evaluation interchangeable (Melvin & Garry, 2012) as they are used to convey the same meaning in different disciplines such as development, education, engineering, medicine, among others. Assessment refers to a systematic collection of information and a review to understand the significance a project has for stakeholders and to use programme information to improve learning and development (Palomba & Banta, 1999:4; Ashley & Hussein, 2000:19). Stakeholders are individuals or groups of people affected by a project or programme (Slootweg & Mollinga, 2012:98). In the

context of this study, the stakeholders are GoZ departments, beneficiaries, non-beneficiaries, donors, NGOs and traditional leaders as listed in Section 1.6.2. From the education perspective, assessment is the process of gathering evidence to make inferences on progress towards specific goals and shortcomings (Farell *et al*., 2002; Mingchu & Leon, 2005). Thus, assessment is a systematic and empirical investigation of the effects of an intervention (Bamberger *et al.*, 2012:2). Generally, there seems to be a similarity in the way the term assessment is understood and applied across disciplines. The implication is that assessment is a systematically organised way of assessing the impact and value of past and present projects. However, various scholars present diverse reasons for undertaking assessments. The purpose could be to investigate or judge the merit, worth or significance of an ongoing activity (Simonson, 1997:88; Stufflebeam, 2001; Scriven, 2007; Kahan, 2008). According to the Austrian Development Agency (2008:4), evaluations are done to learn from experience, ensure transparency, deepen understanding and to improve communication. However, LeClair (2015:1) posits that assessments are done to demonstrate accountability. Thus, assessments provide learning to improve development outcomes (USAID, 2016:4). The credibility of an assessment is determined by the assessor's commitment and responsibility to ensure high standards of performance. Therefore, the effectiveness, relevance, efficacy and disclosure of assessment findings to stakeholders is the epicentre of the assessment practice. It has to match accountability matrices to meaningful outputs and outcomes that are under the control or sphere of influence of the project implementing organisation. Assessment should thus provide stakeholders with effective and innovative platforms to view, develop, regulate, formulate, predict and differentiate various outcomes. The credibility of the assessment practice is determined by its adherence levels to the principles and standards that govern it.

4.2.1 International assessment principles and standards

Credible assessments practices are guided by international evaluation principles and standards. Some of these principles and standards are objectivity, the independence of evaluators, the participation of all parties concerned, transparency, reliability**,** completeness and clarity of reports, utility, feasibility, propriety and accuracy (Joint Committee on Standards for Educational Evaluations (JCSEE), 1994:63; Educational Resources Information Centre (ERIC), 1995:2; Austrian Development Agency, 2008:5). Familiarity with these standards ensures that evaluations meet the international standards and requirements (OECD DAC, 2007*).* Utility ensures that an evaluation serves the information needs of intended users. In the context of Zimbabwe, the users are the stakeholders (JCSEE, 1994:23) as seen in Section

7.2.5.4.1. Feasibility refers to a state of being feasible or possible and ensures that an evaluation is realistic, prudent, diplomatic and frugal (ERIC, 1995:3; Your Dictionary, 2018). Likewise, propriety ensures that an evaluation is conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results (JCSEE, 1994). Accuracy ensures that an evaluation reveals and conveys technically adequate information about the features that determine the merit of the programme being evaluated (ERIC, 1995:4). Clarity refers to a quality or condition of being clear (Webster's New World College Dictionary, 2014), whereas credibility denotes being believed or relied upon or that is worthy of confidence (Webster's New World Law Dictionary, 2010), of having the power to elicit belief (The American Heritage, 2016). (Brown & Abeywickrama, (2010) define practicality as the time and cost constraints during the construction and administration of an assessment instrument, while reliability refers consistency of a research study or measuring test (McLeod, 2013:1). Validity refers to the tests that measure what it claims to measure (Brown & Abeywickrama, 2010; Fawssest (2013). Independence is the state or quality of being free from the influence or control of another or others (Webster's New World College Dictionary, 2014). Thus, assessment standards describe how the process of an evaluation should be structured to achieve high-quality assessments (Derbinski & Reinhardt, 2017:12). The standards act as an orientation for the realisation, selection process and appraisal of evaluation. Therefore, the principles and standards give assessment a systematic flair for addressing evaluation questions, justifying conclusions, and avoiding or minimising distortion and bias for evaluating a programme. As a result, non-compliance with evaluation standards discredits the assessment practice. Ahmed and Lipton (1999) and Baker (2000) advance that comprehensive and effective evaluation programmes should embrace the monitoring process, cost benefit, and impact evaluation assessment at all stages of the project continuum. The effectiveness of an evaluation is enhanced by extracting information and establishing links from past, present and future interventions (UNDP, 2002). Evaluation is critical in linking the past and present to generate future programmes. It is therefore important as an instrument for improving project quality. However, the principles upon which the assessment practice is built cannot guarantee the success of all-stakeholder assessment. There is a need for strong political commitment, stakeholder engagement and resilience. As such, the combination the standards, political commitment, stakeholder engagement and resilience are expected to provide a generic framework for the multistakeholder assessment framework for Zimbabwe (see Chapter 8).

4.2.2 Guiding questions for evaluations

A credible evaluation should address four generic questions to measure different aspects of the cause and effect (Stern *et al*, 2012:37). These questions are: To what extent can a specific (net) impact be attributed to the intervention? Did the intervention make a difference? How has the intervention made a difference? and, Will the intervention work elsewhere? Impact here refers to any tangible and intangible effect of the service, event or initiative on an individual or group, or on an entity's actions (Fitz-Gibbon & Moris, 1996; Streatfield & Markless, 2010). Impact can refer to short-term or long-term effects of an initiative (OECD, 2010). In the context of this study, it could be the observable results of a project such as increased access to clean water, an increase in the number of nutritious meals, or a decline in malnutrition cases (see Chapter 5.3.3.1) in a given community. Therefore, impact is an identifiable positive or negative intended or unintended results of an initiative. For purpose of this study, influence is used instead of impact. An initiative refers to a project, programme or policy supporting FS in Zimbabwe (see Sections 5.3–5.4). For example, Operation Maguta, CA, PRP, among others. Since study seeks to develop a comprehensive assessment framework that could be used investigate the influence of FS initiatives on the livelihoods of Bulilima, Gwanda, Mangwe and Umzingwane districts of Zimbabwe and beyond, it is important to understand the context within which communities live as expounded using the SLF (see Section 2.3) and the food security framework (see Section 3.3).

Despite its mass recognition in the development arena and academia, the term assessment remains clouded by confusion (Baker, 2000; Sayce & Norrish, 2006). Baker (2000) argues that very little is known about the actual influence of projects on the poor. Subsequently, evaluation still presents a myth or at best an illusion to most development practitioners (Sayce & Norrish, 2006). The assumption is that the confusion that clouds evaluation, contributes to the limited assessments on the actual influence of projects on the poor. Evaluation has two faces, the "positive news" and the "not so good news" (ODI, 2006). The positive news is its deep entrenchment in the humanitarian sector, while the bad news is that its quality is compromised. Furthermore, the ODI (2006) emphasises that the development of better evaluations is not just an end in itself. There is a need to develop high-quality evaluations that positively improve learning, accountability and performance. These evaluations have the potential to enhance the ability to judge project direction, progress and success and how future efforts might be improved. Sayce and Norrish (2006) advance that assessment has become a basic accountability requirement, an intricate social and technical fabric. It converts inputs into

activities, activities to into outputs, outputs into outcomes, and outcomes into impacts. Assessment models are essential for the continuous and systematic evaluation of programmes and projects. The richness of the evaluation field is reflected in the diversity of its methods (McDavid & Hawthorn, 2006). Evaluation is a key accountability requirement for good judgement about project direction, progress and performance. The sections that follow critically unpack, analyse and compare three assessment models. The three models are the combined goal-based and goals-free assessment, the theory-based assessment, and the mixed-methods assessment. These models guided and informed the design of a multi-sphere assessment framework (see Chapter 7) for assessing FS.

4.3 ASSESSMENT MODELS FOR FOOD SECURITY RELATED INITIATIVES

Various models have been applied to assess various programmes since 1932. In this study, programme/project are FS initiatives as described in Sections 5.3.1 to 5.3.3. The study focuses on the three models mentioned above, the combined goals-based and goals-free assessment model (CGBGFA) developed by Travers (1977), the mixed-methods assessment (MMA) model (Tyler, 1932), and the theory-based assessment (TBA) model (Glaser & Strauss, 1967). Each model is analysed with reference to its underpinning principles, salient characteristics, strengths and critical challenges. Section 4.3.1 below discusses the CGBGFA model.

4.3.1 Combined goals-based and goals-free assessment model (CGBGF)

The CGBGFA model is a combination of two models, the goals-based (GB) and goals-free (GF) models (Stufflebeam, 2001). The GB model traces its origins to Ralf Tyler in the late 1940s (Travers, 1977). Scriven (1991:178) posit that GB model evaluates based on knowledge of the goals of the programme, person, or product. According to Stufflebeam (2001) and Hansen (2005), the GB model focuses on the intended outcomes or predetermined goals and the degree to which they have been achieved. Youker and Ingraham (2014:1) state that the GB model evaluators focus on the actual outcomes without being cued to the programme's intentions. In the context of this study, intention refer to the goals and objectives. Conversely, the GF model traces its origins to Scriven in the 1970s. It was further developed by Bridgman and Thorndike (Stufflebeam, 2000; 2001). The GF model focuses on the unintended outcomes of a policy, programme or project, without necessarily knowing what the intended goals were (Vedung, 1997; Walden & Baxter, 2001). Combining the two models minimises their weaknesses, synthesises their validity and enhances final evaluation **(**Youker, 2005:9). A

combination of models provides stakeholders with distinct and independent standards for judging the programme's outcomes and impacts. Supplementing GB with GF serves as a form of triangulating evaluation approaches, evaluators, data collection methods, and data sources (Youker & Ingraham, 2014:58). The CGBGFA model belongs to results-focused evaluation models or behavioural objectives models (Kahan, 2008). Understanding the term "goals" is key to understanding this model. Goals denote broad statements of a programme's expected outcomes, usually not specific enough to be measured and often long-term expectations (Weiss & Jacobs, 1988:533). Forsey (2019) views goals to be typically a broad and long-term result that one desires to achieve. A goal refers to the end towards which the effort is directed (Merriam-Webster, 2019). A goal is a broad long-term expectation, objective, or programme performance target that one desires to achieve and an end towards which the effort is directed. For example, the drought relief programme (see Chapter 5.3.3.1) sought to address food and water shortages, general hunger and livestock deaths and to ensure national FS. Goals are central to the GBGF model in that they draw the parameters (performance targets, outcomes) within which initiatives are evaluated. The success of the GBGF model is determined by the clarity of goals, consensus about them and their measurability determines (Hansen, 2005). Therefore, the degree of alignment between goals and results is important to know for accountability and the improvement of current and future initiatives.

The GBGF model is guided by the question, "Is the programme, product, or process achieving its objectives?" (Stufflebeam, 2001). For example, the land reform and resettlement programme (LRRP) discussed in Section 5.3.3.2, the question will be, "Is LRRP achieving its intended purpose of addressing land distribution disparities and continuous food shortages in communal areas?" and what else did it achieve? Stufflebeam (2001) asserts that GBGF objectives are mandated and formulated by the client, evaluator or a specified service provider to identify and study the processes and outcomes. Mandating and formulating objectives dovetails with the participation aspect of SLA (see Section 2.2.1). The participation of all stakeholders in the formulation objectives is ideal to create a sense of programme ownership among stakeholders. Using GBGF promotes accountability and helps identify changes and determine the alignment of results with programme objectives (Kahan, 2008). Changes could include observable resilience and FS indicators as mentioned (see Section 2.4 and Section 3.4) as a result of a development initiative undertaken in the area. The section below scrutinises the strengths and weaknesses of the GBGF model.

4.3.1.1 Strengths and weaknesses of the Combined goals-based and goals-free assessment model

The CGBGF model has its own strengths and weaknesses. The model draws its strength from combining the benefits of the GB and GF models (Stufflebeam, 2001). Some of the models' strengths range from its common-sense appeal; administration by experienced personnel; utilisation of technologies and behavioural objectives; permitting both norm and criterion-referenced testing; and performance assessment. CGBGF is a simple model that uses technologies and behavioural objectives to assess and test programme performance. Molund and Schill (2007) advance that the CGBGF model enhances the understanding of the project's value and its significance to beneficiaries and non-beneficiaries. Accountability and change identification allow for simultaneous examination of both expected and unexpected outcomes (Kahan, 2008). This creates a need for objectives to be clearly articulated and measurable to achieve positive results. Therefore, the strengths of GBGF can be merged with those of other models to inform the proposed multi-sphere assessment framework for assessing food-related initiatives. However, the GBGF model is criticised for a lack of guidelines on how to conduct it (Shadish, Cook & Leviton, 1991:61). Carney *et al.* (1999) argue that the model is too large and complex to implement and requires a lot of discretionary expertise and time. Stufflebeam (2001) argues that the model credits unworthy objectives and produces untimely, pertinent terminal information, whose merit and worth is too narrow to judge. Furthermore, the model is criticised for its failure to question the validity of chosen targets and process issues, lacking an explicit evaluative standards or criteria (Mickwitz, 2 003; Hansen, 2005; Kahan, 2008). The GBGF model is time consuming, too large and complex to implement and lacking explicit evaluative criteria. Despite its weaknesses this model was a guidance tool in the design of the research instruments and the envisaged multi-sphere assessment framework for FS initiatives for Zimbabwe. The model adopted the goals and outcomes components of GBGF assessment model. The goals component will guide the identification of objectives and performance targets of the programme to be evaluated. The outcomes (actual and unintended) are used to assess whether the programme's intended goals or something else has been achieved. This model provides the stakeholder with two distinct and independent sources to distinguish and judge the programme's outcomes and impacts. The model is used to examine whether programmes meet their goals and to test and assess the programme performance against goals. After this, new behaviours, outcomes and impacts are identified and action is recommended. The questions adopted from this model test the project's value and its significance. The new outcomes and impacts of the model are used to fine tune, reorient and replan FS programmes.

These will reveal Zimbabwe's position with regard to its international and national obligations as enshrined in the Sendai Framework, the SDGs (UN, 2015) and ZimASSET. Section 4.3 focuses on the TBA.

4.3.2 The theory-based assessment model

The TBA has its origins with Glaser and Strauss (1967) and Weiss (1995) (Rogers, 2007:63). Rogers further explains that the TBA model has developed significantly in terms of activity and terminology since Weiss's publication in 1997. According to White (2009:3), the model focuses on the assumptions underlying the evaluated intervention's causal chain from inputs to outcomes and impact. Corny *et al*. (2011) posit that the model's programme theory is guided by five core principles. These principles implore the use of evaluators to formulate plausible programme theory from the existing theory and research; formulate and prioritise evaluation questions around programme theory; guide planning, design and execution of the evaluation; consider relevant contingencies; identify side effects/determine efficacy and explain cause and effect. TBA compares what happens with pre-existing theories or causal pathways identified during an evaluation (Stern, 2015). Consequently, the model is ideal for assessing the changes brought about by a development intervention (see Chapter 5) and examines the processes that led to those changes, guided by the programme logic/theory (Funnel & Rodgers, 2011; INTRACT, 2017). In the context of this study, the theory refers to a process made up of components or stages of the programme or project that seeks to enhance FS and resilience in communities.

The TBA is used to understand programme development and impact based on a theory on how a programme works to produce the desired effects (Smith, 1994:83; Fitz-Gibbon & Morris, 1996:177). Weiss (1997:68) concurs with this assertion, adding that it examines the conditions of programme implementation and mechanisms that link processes and outcomes to understand when and how programmes work. Rodgers (2000) contends that TBA determines the theoretical soundness of a programme and provides direction for its improvement. Therefore, TBA helps determine the conditions of programme implementation, its theoretical soundness, giving insight on how programmes work and providing direction for its improvement. Some of the operation conditions bear reference to the vulnerability context, livelihood assets, policy, institutions and processes, livelihood strategies, and livelihood outcomes (see Section 2.3 and 3.5).

The TBA is most frequently used to identify the programme elements and the way they interlink (Cojocaru, 2009:76). Its attraction to specialists for its approach perspectives and solid conceptual construction. Conversely, the model places stakeholders at the centre of analysis, as it discusses various networks that makes the programme work (Stufflebeam, 2001; Stufflebeam & Coryn, 2014). A stakeholder is a person/entity that is entrusted with a stake in an enterprise, or one who is involved in or affected by a course of action (Merriam-Webster.com, 2018). In the context of this study, they are persons or groups with an interest in a project, who could be negatively or positively affected by the execution or outcome of a project as described in Sections 4.2 and 7.2.1.2. In the same vein, Weiss (2016) explains that the TBA model brings greater explanatory power to the how and why of programme success or failure. It provides stakeholders with detailed explanations for the causal relationship between a whole programme process (components or stages) deemed necessary by theory to produce an outcome. The evaluator can use programme theories, resources, activities, processes and outcomes and assumptions to explain how a programme or its implementation will work (Bickman, 1987:5–18; & McClintock, 1987:43). McClintock explains that TBA plays an important role in decision making as it expands conceptions of problems and solutions and narrows attention to a manageable set of action alternatives. Therefore, the theory provides information that could lead to additional explanations for problems, solutions and alternative actions to achieve the intended outcomes (Cojocaru, 2009:77). In South Africa, TBA has been used to plan and evaluate interventions such as small projects, multisite projects, multiyear strategies and government processes (Public Service Commission, 2017). In Zimbabwe the model has been used to develop and evaluate a complex mental health intervention, the friendship bench project (Chibanda *et al*., 2016:1–9). This model improved stakeholder engagement through an iterative process. The aim is to achieve a shared vision that can improve the outcomes of complex mental health interventions, particularly were scaling up is desired.

The TBA model's theory of enquiry is guided by eight questions (Stufflebeam & Corny, 2014). These questions examine whether the programme is grounded in an appropriate, well-articulated, and validated theory; the employed theory is reflective of recent research; the programme is consistent with guiding theory; the needs of targeted beneficiaries are addressed; the programme inputs and operations are producing outcomes in the ways the theory predicts; there are changes in the programme's design or implementation that might produce better outcomes; and there is a replication of elements essential for successful. The success of these questions depends on the validity and soundness of the theory based on which it is developed (Stufflebeam & Corny, 2014). The view that the success of guiding questions is determined by

the validity and soundness of the theory on which they are developed is too narrow in that does not take into cognisance other factors. There are various factors that come into play (see Figure 2.1). The evaluation questions provide an evaluation template to gauge project consistency, outcomes, soundness, the theory's linkage to recent research and programme direction. Stern (2015) states that the effectiveness of the evaluation programme is determined by the clarity of stakeholder assumptions and expectations about how and why a programme will solve a particular problem. Drawing from deliberations above it can be assumed that the TBA model bungles too much ideas together, which may confuse stakeholders.

4.3.2.1 Strengths and weaknesses of the TBA model

The theory-based evaluation model has its own strengths and weaknesses. The model is more effective than methods-driven evaluation (Chen & Rossi, 1983:283–302). As a result, it offers hope for greater knowledge in that it can identify the programme potential as inflicted in the intended results at the level of the user (Weiss, 1997). Birckmayer and Weiss (2000) emphasise that the TBA model produces information that traditional processes and outcomes do not provide. This gives it viability in choosing questions, indicators and linkages to evaluate a programme covered by the theory (Stufflebeam, 2001). Furthermore, Stufflebeam (2001) explains that this model provides a clear and credible structure that guides the interpretation of findings, presentation, analysis procedures and programme milestones that enhances its effectiveness. Therefore, the TBA model creates a common understanding of programme goals and methodology and relate activities to projected outcomes (W.K. Kellogg Foundation, 2004). In the same manner, Corny *et al.* (2011) say that this model increases dialogue among stakeholders and safeguards against misplacement of well-intentioned policies and unanticipated outcomes. The idea of increased dialogue among stakeholders resonates well with the principles (inclusivity and participation) that guide SL (see Section 2.2 and Section 7.2.1.1). The TBAs have enough benefits to warrant continued effort to overcome the obstacles and advance its feasibility (Corny *et al*., 2011; Weiss, 2016). Furthermore, Stufflebeam and Corny (2014) advance that TBA reveals the extent to which programme plans and operations are grounded and networked in an appropriate theory. Equally, Stern (2015) and Weiss (2016) postulate that the TBE model reveals what works, when, where, why and for whom, thereby decreasing the chance of negative results. For example, in Bangladesh the TBA model was used to assess interventions to improve child nutrition (White & Masset, 2007). The Bangladesh case affirms the advantages TBA brings to programme assessment.

Weiss (1997:88) argues that TBA brings serious implementation problems with regard to theorising, measurement, testing and interpretation. Stufflebeam (2001) criticises the model for giving too much liberty to evaluators to fast-track theory development, resulting in few programme areas being supported by well-articulated and tested theories. TBAs are inadequate because they are not supported by well-articulated and tested theories, hence their susceptibility to manipulation by evaluators. As a result, using this model may cause diversion and sometimes antagonism (Scriven, 2007) among stakeholders. Too much liberality in theory development may impede programme staff's sense of programme ownership and commitment. As such, programme ownership and commitment are critical elements of the successful implementation of any the programme/project. Furthermore, imbalanced representation in theory development could result in the development and validation of skewed and unsound counterproductive theories and a conflict of interest. Conflict of interest occurs when evaluators evaluate the theory they developed. An outdated theory may receive all the attention (Stufflebeam & Coryn, 2014). The use of resources on irrelevant theories may cause the subsequent failure of programmes to achieve their intended outcomes, for example enhanced FS and resilience.

Regardless of the criticism, TBAs add value to the study by providing benchmarks that can guide and assist the assessment practice. This study adopted the model's "theory of enquiry" to inform the envisaged multi-sphere assessment model for sustainable livelihood related to FS projects. This theory is useful to determine how a programme's elements are planned and connected, theoretical soundness, actual operation, outcomes, causal linkages, worthiness and required modifications. Furthermore, the theory of enquiry is used to scrutinise the programme implementation conditions and mechanisms that mediate processes and outcomes. The ability to explain the how and why of programme success or failure helps provide additional explanations on problems and how the programme works. Using this TBA theory provides for triangulation when used in conjunction with other models reviewed in Sections 4.3.1 and 4.3.3. More so, using this theory helps to check the validity of one model against another. The mixed-methods assessment model is reviewed in the next section.

4.3.3 Mixed-methods assessment model

The MMA model traces its origin to Ralph Tyler (Tyler, 1932). Guba and Lincoln (1981), Kidder and Fine (1987), Lincoln and Guba (1985), Miron (1998), Patton (1990), and Schatzman and Strauss (1973) have written cogently on the model. The MMA model is a product of varied methods, data and values of various studies to generate insightful and meaningful evaluative claims (Caracelli & Greene, 1997). The MMA provides direction for

improving programmes as they evolve, using multiple methods to comprehensively assess a programme's merit and worth (Stufflebeam, 2001). Therefore, the MMA model is a fusion of various assessment methods for the purpose of generating insightful and meaningful evaluative claims. It provides direction for improving programme direction. Long & Pang (2005:1) explains that this model explores the feasibility of undertaking systematic reviews of research literature on the effectiveness and outcomes. Chen (2006:75) adds that this model systematically combines qualitative and quantitative methods in research or evaluation. Using this model widens and deepens understanding and corroboration (Johnson, Onwuegbuzie & Turner, 2007:123) on the implemented programmes. Tashakkori and Teddlie (2008:22) concur with this assertion but add that MMA are products of the paradigm shifts in assessments. The products of various assessment models are practical and idealist in that they widen and deepen understanding and corroboration. Conversely, the growing interest in the MMA evaluation model has made it a widely used mode of inquiry (Onwuegbuzie *et al.,* 2010). MMA collects, analyses and mixes a variety of methods to understand an evaluation problem (Brown, 2012:5). Thus, combining qualitative and quantitative methods assures depth, scope and dependability of findings (Adato, 2011) through TBA. This model assesses the effectiveness of implemented programmes to ensure dependable feedback and in-depth understanding (Bamberger *et al.,* 2012). Terrell (2012:258) argues that many social scientists believe there is no major problem area that should be studied exclusively with one research method. Using multi-designs offers flexibility that eliminates bias, thereby offering dependable feedback and in-depth understanding of the project. Brown (2012:4) adds that this model helps give direction for improving projects and determine their effectiveness.

Long & Pang (2005) asserts that the model provides a template that assists with the critical appraisal of studies, the quasi-evaluation approach. The quasi-evaluation stems from formative and summative evaluations, qualitative and quantitative methods, and intra-case or cross-case analysis (Terrell, 2012). Formative evaluations examine a programme's development and implementation, while the summative evaluations focus on the achievement of objectives and a broader array of outcomes (Bamberger *et al.,* 2012). The MMA offers a stronger, more complete evaluation that conventional evaluation approaches fail to offer (USAID, 2013:1). Creswell (2013:1) share similar views offered by other scholars, but add that MMA advances the integration of methods in a systematic way. MMA is a systematic, dependable intra-case or cross-case analysis that provides a broader array of stronger and complete evaluation outcomes. However, this model could make it difficult for evaluators to reach a consensus, and could be costly and time consuming to implement. The MMA model is valuable for assessing

carefully selected single programmes and comparing alternatives drawn from different designs. However, the mixed-methods evaluation model has its own strengths and weaknesses as will be observed in discussion 4.3.2.3.

4.3.3.1 Strengths and weaknesses of the mixed-methods evaluation (MM) model

MMA triangulates to gain convergence and increase validity (Denzin, 1970; Greene & Caracelli, 1997). It provides important crosschecks for findings from different viewpoints (Stufflebeam, 2001). It narrows the divide between quantitative and qualitative evaluators, enhancing the quality of a study (Johnson & Onwuegbuzie, 2004). Bamberger *et al*. (2010) advance that MMA promotes the strengths of each method to overcome the weaknesses of the other, to enrich the study and to obtain a fuller picture of a phenomenon. Furthermore, Bamberger *et al*. (2010) say that MMA strengthen the validity and operational utility of evaluation designs and strategies using double difference and matching strategies. These strategies incorporate process analysis through the use of qualitative techniques. Therefore, MMA contributes a range of qualitative indicators, provides detailed contextual analysis of projects, appropriate collection methods to address sensitive topics and issues, and triangulates data sources for validity (Bamberger *et al.*, 2010). MMA allows for a shorter data collection time when compared to sequential methods (Terrell, 2012), providing the investigator with many design choices that involve a range of sequential and concurrent strategies. MMA evaluation often results in stronger, more complete evaluation than conventional evaluation approaches relying on one method (USAID, 2013:1). A study on patient-centred medical home models in Lincoln, Nebraska, USA, found that MMA has much potential to strengthen the rigour and enrich the analysis and findings of any PCMH evaluation (USAID, 2013). Furthermore, the study found that MMA has the tendency to reveal unanticipated results; provides a deeper understanding on planned and unplanned change; and captures a wider range of perspectives than might be captured by a single method (USAID, 2013:2). Wisdom and Creswell (2013:2) advance that MMA is ideal for assessing complex interventions. The flexibility and rapid feedback on complex interventions that MM provides, gives it an advantage over single-method evaluations (Odendaal, Atkins & Lewin, 2016:1). Using the MMA model affords design choices and flexibility, important crosschecks for findings from different viewpoints. It reveals unanticipated results, provides a deeper understanding of change, and captures a wider range of perspectives that cannot be captured by a single method.

Despite being widely accepted; various criticisms have been levelled against MMA model. Guba (1990) asserts that using the MMA model is neither meaningful nor valuable to pursue. Therefore, these assessments require advanced planning and careful management at each stage of the evaluation process (USAID, 2003:1). Bamberger *et al.* (2010) explain that although it is a widely accepted model, MMA still faces application challenges. A great deal of expertise and effort is required when using this model, causing difficulty with compare and resolve discrepancies of two types of data if they arise (Terrell, 2012). The enthusiasm for multiple methods can easily turn into an overly ambitious and complex evaluation that over-stretches its resources (Bamberger *et al.*, 2012; Odendaal, Atkins & Lewin, 2016:9). These resources bear reference to, "the logistic, analytic, security and time" (Odendaal *et al*. 2016:173). The MMA model adds value to the study by bringing in a flair that most assessment models do not provide, for example multiple designs. Flexibility with respect to using multiple designs can be adopted to crosscheck the project findings from different viewpoints, thereby giving validity to the evaluation exercise. The triangulation factor enshrined the MMA is key in checking the validity of one instrument against another. As such, the model presents the investigator with many design choices from which to draw lessons and conclusions. Therefore, the inclusion of MMA model components in the all-inclusive assessment for FS frameworks gave it balance. The MMA approach concludes this monograph's discussion of the three project assessment models. An array of these approaches indicates a considerable advancement of evaluation theories over the years, especially from a comparative perspective. The following section is devoted to analysing the impact of assessment theories.

4.4 A COMPARATIVE ANALYSIS OF THREE ASSESSMENT MODELS

This analysis identifies common threads that run through the models discussed above to clarify their differences and the resultant effects on the assessment process. The three models are analysed in terms of five attributes: similarities, the organiser, purpose, strengths, and weaknesses. Similarities indicate a point, feature or instance at which things are similar (New Collins Dictionary, 2020). The organiser refers to the main considerations or cues that practitioners use to organise a study, while purpose refers to an objective, effect, or result of an initiative (Merriam-Webster, 2019). In this study, purpose refers to the desired outcome of a FS initiative. Strengths and weaknesses represent positive or negative aspects of an initiative (Online Business Dictionary, 2020) or other attributes that should be considered when choosing the assessment model for a particular study or programme. The lessons drawn from this process

serves as the foundation for the development of the multi-sphere project impact assessment framework. The approach in Table 4.2 is to summarise the models according to the attributes.

Table 4. 1: A comparative summary of assessment models by six attributes

Category of comparison	Models		
	Combined objective and non-objective	**Theory-based**	**Mixed-methods**
Similarities	- Share the objective of programme improvement and social betterment - Investigate how a particular cause influences intended or observed outcomes - Seeks to generate knowledge about programmes, which can be used for decision making and learning purposes among others		
Organiser	CGBGFA model is organised based on objectives	TBA is programme theory-based	MMA is multimethod-based
Purpose	- Identify outcomes (intended or unintended) of a policy or programme - Measure the degree to which the objectives of a programme, product or process have been achieved - Examine and judge the impact, worth, merits and shortcomings of various programmes for learning, programmatic fine tuning, reorientation and planning	- Explore the how and why of programme success or failure - Understand how the programme works and the assumptions that underscore its development and implementation - Determine the extent to which the programme of interest is theoretically sound and provide direction for programme improvement - Draw conclusions on the pros and cons of the programme's theoretical soundness; operation in unity with theory; expected outcomes; assumed causal linkages; execution plan; changes in aims or procedures; and its merit for extension or dissemination - Understand success or failures to provide direction for programme improvement	- Address complex and intractable problems that are on the rise - Overcome the weaknesses of a single (qualitative or quantitative) method - Ensure dependable feedback on a wide range of questions - Get an in-depth understanding of the programmes - Display a holistic perspective - Enhance the validity, reliability and usefulness of the full set of findings
Key strengths	- Common-sense appeal - Widely used - Uses behavioural objectives and testing technologies - Administered by experienced personnel - Valuable for accountability purposes and change identification - Allows simultaneous examination of both expected and unexpected outcomes - Examine whether policies or programmes meet their goals	- Plausible and cogent theory that promises to bring greater explanatory power to evaluation - Networks the programme, seeking out key variables and linkages, promoting the understanding of the fundamental mechanisms of the programme or policy - Reveals what works, when, where, why and for whom, thereby decreasing the chance of negative results - Promotes dialogue among stakeholders - Safeguards misplacement of well-intentioned policies and unexpected outcomes - Examines the extent to which the programme plan and operations are grounded	- Provides the flexibility that most models lack, offering a number of rapid feedback techniques to adapt to changing circumstances - Provides researchers with shorter data collection time when compared to sequential methods - Narrows the divide between quantitative and qualitative evaluators, enhancing the quality of a study - Provides important crosschecks from different viewpoints - Provides an investigator with many design choices, which involves

		in an appropriate theory or model - Analyse the logical or theoretical consequences of a policy and increase the chances of achieving desired outcome - Ability to analyse the logical or theoretical consequences of a policy and to increase the chances of achieving desired outcomes - creates a common understanding of programme goals and methodology that relate to activities and projected outcomes - viable in choosing questions, indicators and linkages to evaluate a programme covered by the theory - provides a clear, useful direction, credible structure for developing schemes for representing and analysing programme procedures and milestones that enhance its effectiveness structure and guide an evaluation and interpret the findings	a range of sequential and concurrent strategies - Strengthens the validity and operational utility of these other evaluation designs and evaluation strategies using double difference and matching strategies - Incorporates process analysis through the use of qualitative techniques - Contributes a range of qualitative indicators and generates case studies and in-depth interviews to help understand the meaning of the statistical indicators - Provide a detailed contextual analysis of projects in different locations that strong designs ignore - Provides appropriate collection methods to address sensitive topics and issues that quantitative data collection methods lack - Strengthens sample coverage through a number of techniques such as on-the-ground surveys in selected small areas to help identify people or units that have been excluded - Uses the available time and resources to maximise the range and validity of information - Triangulate data sources to check the validity of one instrument against another - Affords design choices and flexibility that most designs lack, providing crosschecks on findings from different viewpoints, which gives validity to the evaluation exercise
Key weaknesses	- Results can be affected by unclear and unmeasurable objectives - Ignores side effects and unanticipated effects, and does not question the relevance of the goals - Does not question the validity of chosen targets or appropriate measures of effectiveness - Does not examine the validity of the	- Terminal evidence often too narrow to provide basis for judging the value of a programme - The model may often cause diversion and sometimes antagonism - Its time consuming to identify underlying theories and links between processes, activities and outcomes	- Suffers application challenges - Using two different methods requires a great deal of expertise and effort to study the phenomenon under consideration - MMA is viewed as neither meaningful nor valuable to pursue - Difficult to compare two types of data and resolve

	programme/policy and process issues - Can credit unworthy objectives and produce untimely, pertinent terminal information of which the merit and worth is too narrow to judge - Lacks an explicit evaluative standards or criteria - Lacks a defining attribute of evaluation that distinguishes it from other approaches to strategic management - Fails to provide enough criteria to assess the worth of a programme/policy - Leaves the cost criticism unanswered	- A few programme areas are supported by well-articulated and tested theories - It is not feasible to develop a theory and its validation steps and still get the evaluation done effectively and on time - In the absence of a relevant, defensible theory of the programme, evaluators have to develop one - Too much effort can be spent on theory development - Programme staff's responsibility for programme can be usurped by evaluators - Evaluators might develop an unsound theory, pass it off as a validated model, which can be highly counterproductive - Evaluators incur conflict of interest when they have to evaluate the theory, they developed - Might focus attention on a theory developed early in a programme only to later discover that the programme has evolved to be a quite different enterprise than what was theorised at the outset - Its usages can result in confusion between implementation and programmatic action theories, construction of usable theories, measurement error and complexities in analysis	discrepancies if they arise - MMA evaluations are complex and expensive in terms of costs time, logistics, and security - Building a multi-disciplinary team can be more time consuming and challenging and a costly effort - Used for its popularity rather than the methods that best respond to the evaluation questions - Using MMA can produce confusing findings if an investigator uncritically mixes positivistic and postmodern paradigms - Many evaluators lack the requisite foundational knowledge to effectively combine quantitative and qualitative methods

Sources**:** (Stufflebeam, 2001; Scriven, 2007; Kahan, 2008; Bamberger *et al*., 2010; Onwuegbuzie *et al.,* 2010; Corny *et al.,* 2011; Terrell, 2012; Stufflebeam & Coryn, 2014; Weiss, 2016).

The above analysis gives context to the interpretation and deliberations on the comparison of the three models presented in Sections 4.3.1–4.3.3. The elements identified above are shown in the development of the multi-sphere assessment framework in Chapter 7. Although the three models are different, one approach is not superior to the other, each has recognised strengths and weaknesses and should be used in combination. Therefore, there is no one best model. Exclusively valuing one model rests on its ability to progress beyond its inherent boundaries. Recognising possible tension between researchers about models and attempting to understand them, may serve to create relevant and distinctive modes of enquiry.

4.5 CONCLUSION

This chapter gave a conceptual overview of assessment models for FS initiatives. Assessment models have been applied since 1932. Three assessment models were analysed and unpacked in this chapter to address research objective 2, namely to analyse past impact assessment project frameworks and principles related to food security and livelihood worldwide for insights that may be useful for the assessment of sustainable livelihoods projects in Zimbabwe. The GB and GF assessment model was designed to help stakeholders understand the project's value and significance by focusing on its actual and unintended outcomes. Stakeholders are provided with two distinct and independent sources to judge the programme's outcomes and impacts. The GBGF model examines, tests, and assesses programme performance against goals and identifies new behaviours, outcomes, impacts and recommends action. The theory-based assessment model assesses the initiative induced changes, guided by the programme logic/theory. The model focuses on the assumptions underlying the evaluated intervention's causal chain from inputs to outcomes and impact. This model compares what happens with pre-existing theories or causal pathways identified during an evaluation. In this study, this model is used to identify the essential programme elements, the theoretical soundness of the programme and modifications required. The model is key in examining the programme implementation conditions and mechanisms that mediate between processes and outcomes. The TBA model will bring greater explanatory power to the new framework, explaining how the programme works and the why of programme success or failure. However, the mixed-method assessment model emanates from various assessment methods, data and values of various studies. MMA is used to generate insightful and meaningful evaluative claims and to assess a programme's worth and merit. This model provides direction for improving programmes as they evolve. Combining methods (qualitative and quantitative) assures depth, scope and dependability of findings. Flexibility in the use of multiple designs helps crosscheck different subsets of findings, thereby giving validity to the evaluation exercise. This instils greater stakeholder confidence in the overall findings.

Assessment models are merely tools that enable the project assessment process. They are a means to an end and not an end in itself. Their success hinges on the model's adherence to evaluation standards as discussed in Section 4.2. Although assessment strategies are universal, their applicability should take into account the particular characteristics of the evaluated entity. The purpose of assessment is to enhance social betterment and generate knowledge about programmes for decision making and learning purposes. Assessments enhance the

effectiveness of a project by extracting information and establishing links with the results of past, present and future interventions. The models provide insight, guiding parameters and depth with respect to deliberations in Chapters 7 and 9 of this thesis. Cognisance should be taken of the fact that aspects of project assessment protocols must find application in the government and the NGOs. In Chapter 5 the emphasis is on the historical background of FS efforts and insecurity challenges and the current statutory and regulatory framework in Zimbabwe to address research objective 3.

CHAPTER FIVE

FOOD SECURITY EFFORTS, RESILIENCE CHALLENGES AND REGULATORY FRAMEWORKS IN ZIMBABWE: A HISTORY, 1430 TO 2020

5.1 INTRODUCTION

Chapter 4 gave an overview of three assessment models that could be used to assess FS initiatives (see Sections 4.3.1, 4.3.2 and 4.3.3). The chapter sought to explain how the founding principles of the assessment models could assist in assessing FS livelihood projects. Government and NGO interventions to forestall food crises are frequent and have become an expected source of support (Rukuni & Bernsten, 1988; Hendriks, 2013; Haug, 2018). The support has allowed vulnerable communities to achieve basic levels of FS (Giuffrida, 2017; FAO, 2019). Development organisations and the government's efforts to reduce food insecurity have not yielded much success (Lunga & Musarurwa, 2016). The trends in hunger and food insecurity in developing countries like Zimbabwe indicate an increase in the number of people who suffer from hunger (Giuffrida, 2017). This undermines the immense challenge of achieving the Zero Hunger target by 2030. This scenario raises many questions about what went wrong with the heavily GoZ and NGO financed FS projects. Therefore, the chapter evaluates past and current FS projects/initiatives, the challenges, and current statutory and regulatory frameworks of Zimbabwe. The chapter focuses on the historical background of FS efforts in Zimbabwe; the pre-colonial; colonial and the post-colonial era initiatives and their challenges; and a review and analysis of the Zimbabwean food and Nutrition Security Policy (GoZ) in 2012.

5.2 FOOD SECURITY INITIATIVES IN THE ZIMBABWEAN PERSPECTIVE

Food security (FS) efforts date back to folklore, legends and religious stories (van Niekerk, 2005). In the Mutapa state, the legend is that Mutota escaped hunger in the kingdom of Zimbabwe, which resulted in him finding of land where he established his kingdom (Oliver & Atmore, 1975). There is also the biblical story about Joseph's prediction of seven years of plenty and seven years of famine in Genesis 37:25–36 (Bible, 1995), which also reveals issues related to food insecurity. Thus, FS efforts are as old as humankind. The effort and investment of vast amounts of resources into food security, point to the value and benefits that come with it. Food insecurity compromises communities' wellbeing, leading to hunger and malnutrition, posing

serious challenges to non/governmental institutions, policy and decision makers at all levels. As way of preventing, minimising and mitigating these food insecurity challenges, the Zimbabwean government has adopted various trajectories to ensure and secure FS as discussed 5.3 in Chapter 5. Muimba-Kankolongo (2018:1) proposes that, "the goal of the SADC member states is to ensure FS for the 280 million people in the region at all times". In a quest to fulfil international and regional FS obligations, the GoZ has implemented various national policies and programmes. The following section traces and unpacks the initiatives as it lays down the historical background of FS efforts in Zimbabwe.

5.3 FOOD SHORTAGE REDUCTION INITIATIVES AND CHALLENGES

The actions to reduce food shortage challenges in the Zimbabwe dates back to the pre-colonial period. For example, in 1902 to 1903, the Rhodesian government received grain from other countries and distributed it to the starving population for free (Vincent *et al.,* 1960). When Zimbabwe came into being as a state, various initiatives to deal with food shortages were introduced (Lunga & Musarurwa, 2016). Development agencies such as the UN, the FAO, the WFP and IFAD, World Vision International, Plan International, Organisation of Rural Associations for Progress, among others, have been actively assisting to avert food shortages. Actions to reduce food shortage challenges everyone and will exist as long as human race lives. The following section traces some of the past and current FS efforts. The "past," refers to the pre-colonial or colonial era or period (Section 5.3.1 and 5.3.2), while the "current" refers the post-colonial (Section 5.3.4). The section below reviews the pre-colonial era for security efforts.

5.3.1 PRE-COLONIAL ERA FOOD SECURITY EFFORT ENDING IN 1893

The pre-colonial era refers to the period before Zimbabwe was colonised in 1893 (Vincent *et al.,* 1960; Anderson *et al.,* 1993). This definition dovetails with that of the American Heritage Dictionary (2016), the period before the colonisation of a region or territory. Mlambo (2014:10) explains that throughout history of Zimbabwe, many different peoples, kingdoms and polities inhabited the land. Zimbabwe does not have one single history, nor was it a single geographical entity before its colonisation by the British Empire (South African History Online (SAHO), 2019). In view of this, the study focuses on two pre-colonial eras, the Munhumutapa and the Ndebele dynasties.

The Munhumutapa dynasty stretched over vast areas of approximately 700 000km^2 (Oliver & Atmore, 1975), and lasted from 1430AD to 1760AD (Bairoch, 1991:59). The dynasties' FS system centred on small grain and vegetable farming, animal husbandry and trade (Matutu,

2017). Crops grown included finger millet, bulrush millet, rapoko and sorghum among others. It not only contributed to FS, but also nurtured social relations (Matutu, 2017). Family cohesion was achieved and maintained by working together in the fields. Various strategies were used to ensure and enhance the kingdom's FS system (Magama, 2014; Matutu, 2017). The strategies adopted are shown in the table below:

Table 5.1: Food security strategies

Type of strategy	**Source**
Crop diversification	Chirimuuta & Mapolisa (2011); FAO, IWGIA and AIPP (2015)
Shifting cultivation	Grogan *et al.* (2013)
Food storage and preservation	Ndlovu-Gatsheni (2009); Magama (2014); Maruve & Chitongo (2017)
Raiding (livestock and food)	Magama (2014); Matutu (2017)
Ranching	Elwell (1993); Magama (2014); Monda (2017)
Tribute collection	Magama (2014), Matutu (2017)
Trading	Magama (2014); Matutu (2017)
Hunting	Matutu (2017)

Chirimuuta and Mapolisa (2011) explain that the use of the strategies shown in Table 5.1 also have the effect of improving the soil fertility. As such, good soil fertility presented a good medium for a good produce that addressed the availability pillar of the FS framework discussed Section 3.3.1. Crop diversification entailed using the same land to plant various crops like maize, beans, pumpkins, sweet reeds and even tubers at the same time. Shifting cultivation/slash-and-burn agriculture was predominantly practised in agro-ecological zones I to III as discussed in Section 1.2. Grogan *et al.* (2013) indicate that shifting cultivation was a major livelihood for people along the Zambezi valley stretching into what is today Zambia and Southern Tanzania. Like the crop diversification strategy, shifting cultivation increased soil fertility and minimised erosion. The purpose of this method was to clear the land, reduce weeding labour, pests and crop diseases. Burning the cut shrubs and preservation of top soil added valuable nutrients to the soil, thereby raising its hydrogen (pH) level (Kramer, 1997:159; FAO, IWGIA & AIPP, 2015). Because of their practices of shifting fields and letting land return to bush helped prevent soil

erosion and declining fertility of the soil. Environmental management is an old practice that the pre-colonial farmers achieved through crop diversification and shifting cultivation.

The storage and preservation strategies augmented other strategies (Chirimuuta & Mapolisa, 2011) to safeguard food and extend the shelf life of food. As such, storage facilities were strategically designed to achieve the goal of preserving seasonal and perishable foods like meat, vegetables and fresh maize. Food was preserved through the process of drying and storing it where it would not be exposed to moist weather conditions (Mpofu, 2015). For example, they boiled and dried green mealies, meat, wild fruits, sweet reeds, green vegetables and many other seasonal food products using smooth ash and tree leaves (Chirimuuta, & Mapolisa, 2011, Matutu, 2017). Ranching was the major activity in Zones IV and V during the Munhumutapa era (Elwell, 1993). Cattle were raised by the Karanga people of Great Zimbabwe (Magama, 2014). Monda (2017) affirms that the dynasty had one of Africa's largest cattle economies during the 11th to 15th centuries. Thus, cattle ranching ensured FS as it played a fundamental role in sustaining lives (Ndlovu-Gatsheni, 2009). Cattle provided draught power, meat, milk, manure, transport and was used in marriage issues (lobola) and as food during ritual ceremonies (Magama, 2014). Though livestock and food storages ensured FS for the Mutapa state, it was not a guarantee for long-term FS. Thus, these could expose the state to raiders and exacerbate their vulnerability to food insecurity.

Alternatively, trade ensured the kingdom's FS system (Magama, 2014; Matutu 2017). Other economic activities that helped was the mining of gold to trade with the Persians, while iron was forged into iron tools, which enhanced agricultural productivity. Gathering and hunting were other key economic activities in Great Zimbabwe (Magama, 2014). Matutu (2017) explains that elephants were hunted in order to get ivory to enhance external trade. Grain and cattle were exchanged for basic goods like hoes that they used for agricultural productivity. Raiding cattle and food from other tribes and collecting tributes helped sustain FS in the Munhumutapa kingdom (Magama, 2014). The Munhumutapa kingdom therefore used diverse FS strategies to ensure FS at all the times. Trade and raids proved to be a survival ploy that enabled the people in Great Zimbabwe to obtain grain, tools and cattle, thus ensuring their FS. Tribute collection was another economic activity in Great Zimbabwe (Magama, 2014). Tribute was paid to the Mambo in grains, tools, gold, cattle, skins, ivory as well as tobacco, as a sign of allegiance and to avoid being raided (Matutu, 2017). The payment and collection of tribute was a FS strategy for both the tribute payer and the collector as it ensured the survival of both parties. Monda (2018) asserts that the Munhumutapa dynasties ensured FS for the entire populace, regardless

of social standing. FS was defined at a macro-level as a national issue. The use of various FS indicates advanced knowledge of spreading the risk as a ploy to ensure FS all the time. However, despite the use of various FS strategies, challenges emerged during the Munhumutapa era (Magama, 2014; Matutu, 2017). Civil strife, external attacks (Sotho-Tswana people), overgrazing, a decline in external trade, successive droughts, exhaustion of soil, and pests compromised the kingdom's FS (Magama, 2014; Green, 2013). The Monomotapa kingdom preceded the Ndebele kingdom.

The Ndebele dynasty was a Nguni fragment of the Zulu kingdom (Omer-Cooper, 1966) that spanned under two kings, Mzilikazi and Lobengula. They settled and established a kingdom in the South-Western parts of Zimbabwe around 1840 (Ndlovu-Gatsheni, 2009). The Ndebele kingdom spread from Limpopo and Zambezi rivers to the north and south, and between the Makgadikgadi salt pans to the west and the realm of Shoshangana to the east, the Save River (Ndlovu-Gatsheni, 2009). The Ndebele adopted various practices to ensure their FS (Magama, 2014). The strategies adopted are shown in Table 5.2.

Table 5.2: Ndebele food security strategies

Type of strategy	**Source**
Cattle breeding	Magama (2014); Andreucci (2018)
Cropping	Andreucci (2018)
Isiphala or *Zunde* concept	Mushongah (2009); Risiro *et al.* (2012); Lunga & Musarurwa (2016)
Trading (barter and trade)	Matutu (2017); Andreucci (2018)
Tribute collection	Andreucci (2018).
Cattle ranching	Matutu (2017).
Raiding	Ndlovu-Gatsheni (2009)

The Ndebele people engaged in cropping, trading, raiding, and tribute collection (Ndlovu-Gatsheni, 2009; Matutu, 2017; Andreucci, 2018). Cattle breeding was the backbone of the Ndebele economy (Andreucci, 2018). The main FS challenges were droughts, wars, livestock diseases (rinder pest), lung disease in the year 1859, succession disputes, resistance from, threats from missionaries and concession seekers, and a lack of grazing land (Magama, 2014; Andreucci, 2018). To mitigate the impact of drought, the concept of *Isiphala* or *Zunde* was adopted (Mushongah, 2009). *Zunde* has withstood the test of time, remaining relevant throughout changes that Zimbabwe have undergone since 1400 AD (Risiro *et al*., 2012). The

king allocated land through the *indunankulu* and chiefs, with people providing labour (Magama, 2014). The *Isiphala/Zunde* concept of food production contributes significantly to FS (Mushongah, 2009). The community contributes labour and the harvest is stored as a food bank for use during the lean seasons (Lunga & Musarurwa, 2016). The *Zunde* practice fostered unity and the ethic of hard work among all members of society, *Ubuntu*. However, it was too limited to guarantee the production of enough commodities to meet macro food shortages, it lacked active community decision making, it was void of nutrition targets, and its impact lacked validation. Therefore, it lacked an assessment mechanism to assess all the initiatives.

Like their predecessors, the Ndebele kingdom used food storage and preservation strategies (Ndlovu-Gatsheni, 2009). Grain was stored in granaries (Illife, 1999). To protect and preserve their food from enemies, a big pit was dug in the cowshed or cattle kraal and grain (umncatsha) was stored inside and covered such that no suspicion would be raised (Mpofu, 2015). *Umncatsha*, refers to grain stored in the kraal. To manage and control moisture levels, they built granaries on huge rocks with other crops being stored underneath, such as pumpkins and melons. Informed local wisdom on the life cycles of pests and pest control systems was critical for sealing granaries (Chirimuuta & Mapolisa, 2011). Therefore, initiatives ensured households could keep their stored products fee from insect damage, and ultimately protecting themselves from food insecurity. To minimise the impact of drought on their livestock, the Ndebele moved from one grazing land to another in search of better grazing (Magama, 2014). The practice of the king lending subjects' cattle assured the availability of food-milk and meat (Matutu, 2017). Matutu (2017) further explains that ordinary people practised barter and trade by exchanging grain and cattle for other commodities to supplement their economy. The Ndebele resorted to raiding other groups for cattle and grains as a survival tactic, an economic and a political ploy (Ndlovu-Gatsheni, 2009), as well as a means to produce and acquire food. The Ndebele dynasty's demise was their defeat by the white settlers. In the new dispensation they lost land ownership and large herds of cattle. The Land Apportionment Act of 1930 formalised the legal division of land among blacks and whites (Marks 2014).

There are correspondences in the FS strategies employed by the Munhumutapa and the Ndebele dynasties (Figures 5.1 and 5.2). Both dynasties viewed massive production as the panacea for FS (Manyanga, 2007). They were inclined to the Malthusian orientation (see Section 3.5.1). Grain production and grain storage was the only way of preventing and mitigating effects of famine. Food storage was an indispensable practice for most agricultural communities (Beach, 1994). Grains could be stored for five years (Iliffe, 1999). Manyanga (2007:126) explains that

their agricultural cycle demanded that grain be stored as insurance for lean years. However, the presence of storage facilities did not guarantee adequate food supplies during that era, although their ability to produce adequate grain, store it and even have surplus for trade indicates a well-developed FS strategy and advanced resilience levels (Illife, 1990). Such communities were able to bail out each other in the event of a drought or famine prevalence. Despite having good strategies, the pre-colonial definition of food tended towards "availability," negating the pillars of access, utilisation and stability (Section 3.3). As such their view of FS does not dovetail with the view in Chapter 3.

The food insecurity challenges that Zimbabwe experienced in the 18th and 19th century emanated from widespread aridity, drought, violence and outbreaks of diseases (Illife, 1990; Chigodora, 1997). Furthermore, Chigodora (1997) explains that the colonial powers destroyed most of the grain the people had stored to create dependency and ensure the acceptance of their rule. The rise of the new colonial power in Zimbabwe in the 1890s therefore marked the demise of the pre-colonial era and the dawn of a new colonial order (Section 5.3.2). The colonial era received more attention in the sections that follow.

5.3.2 Colonial era food security initiatives 1893-1980

The term colonial era refers to a 90-year period of European occupation of Zimbabwe (formerly Rhodesia) from September 1890 to independence in April 1980. With it came the dispossession of millions of black farmers of their land (Mutasa, 2020). This era saw the promulgation of a series of land policies that deprived the black majority of their land rights and subjected them to state managed repression, segregation and violence (Mutasa, 2020). More so, these policies granted land rights to a few privileged white elites. Some of these policies are the Land Apportionment Act of 1930, the Native Land Husbandry Act of 1951 and the Tribal Trust Lands Act of 1965 (Marks, 2014; Maruve & Chitongo, 2017). The Land Apportionment Act consolidated colonial rule and alienated two-thirds of the indigenous people from agro-ecological regions I–III to drought prone regions IV and V (Hill & Katerere, 2002:251; Marks 2014). The relegation of the black majority to regions IV and V resulted in livelihood insecurity and resource-based conflicts (Hill & Katarere, 2002:251). This made the regions susceptible to poverty, hunger and malnutrition (Tawodzera *et al.*, 2012). Colonial land policies were purposely promulgated to consolidate colonial supremacy and condemn the black majority to poverty, hunger and malnutrition. More so, the policy created entitlement patterns, congested grazing land, and compromised national FS, prompting the need for proper land use and planning. Mugandani *et al.* (2012:362) posit that the colonials adopted production-oriented

approaches to achieve FS. Agricultural extension was the mainstay approach during the colonial era. The subsection that follows traces the agricultural extension works as an approach to achieve FS.

5.3.2.1 Extension services in Zimbabwe 1927-1980

In Zimbabwe extension services developed from the work of Emory Alvord in 1927 (Kramer, 1997). Since then, numerous definitions have emerged. Extension services have often been used to denote the delivery of relevant agricultural information and technologies to farmers (Anandajayasekeram *et al.*, 2008). More so, it played a catalytic role in agricultural and rural development, bringing information and new technologies to improve production, incomes and standards of living (Mika & Mudzimuri *et al.*, 2012:849). Extension services is agricultural technology transfer, meant to change the farmer's knowledge, attitude, practices and skills through education and the provision of other support services (Azuma *et al.*, 2018:2). The assumption is that extension services are agricultural education endeavours to improve knowledge, attitude, and practices for sustainable FS. However, Moyo *et al.* (1987) view services as a ploy to socially engineer communities under traditional chiefs, to maintain law and order, and to develop subservient skills that promoted colonial rule. Kramer (1997) in contrast advances that services were aimed at increasing the carrying capacity of the allotted land, instead of allocating more land for food production. Hanyani-Mlambo (2002) and Qamar (2013) contend that extension services addressed the food demands of a growing population on the allocated land reserves. Extension services resulted in both good news and not so good news. The not so good news was that people were sceptical as the services sought to consolidate the colonial grab of land and enhanced their political dominion. Meanwhile, the good news aspect is that new technologies helped increase the food production capacity of the black farmers, which addressed the access and availability aspect as discussed in Section 3.3.1 and 3.3.2. It would be unfair to regard all extension services as a political gimmick. For example, it led to the establishment of the Domboshawa and Tjolotjo agricultural training centres for capacity development purposes.

In the colonial era, a dual system extension service prevailed (Hanyani-Mlambo, 2002). The Department of Conservation and Extension served white commercial farmers (Schwartz & Eicher, 1991; Ndlela & Robinson, 2007). Saravanan (2008) and Mukembo (2015) explain that the Department of Agricultural Development (DEVAG) served black small-scale farmers. Extension services have included several methods (Azumah *et al.*, 2018). For

example, technology transfer, the advisory approach, the facilitation for empowerment, and the master farmer training. Therefore, not one of these methods can be singled out as the best one as they all have some advantages and disadvantages.

Technology transfer extension is the predominant form of extension used during the colonial times (National Agriculture and Forestry Extension Service (NAFES), 2005). This type of extension found its way to the sub-Saharan African countries in the 1970s and 1980s (Dube, 2017). Azuma *et al* (2018:2) explains technology transfer extension as a technique used by an extension system. It may include for example demonstration or a visit by an extension agent to a farmer. It is a method used to extend or move agricultural knowledge point A to point B, point A being the expert (extension workers) and B being communities as who passive recipients. Technology transfer embraces a top-down approach, prescribing seed varieties and practices for farmers (NAFES, 2005; Swanson, 2008; Kumar & Sharma 2018) to increase food production at reduced food costs. Technology transfer orientation resonates well with the Malthusian theory discussed in Section 3.5.1. The top-down approach discourages innovation and disconnects communities from prescribed projects, thereby compromising FS. The technology transfer extension bears a resemblance to the command agriculture initiative discussed in Section 5.3.3.5. The production orientation it embraces only addresses the availability pillar of FS. Addressing one pillar of FS does not guarantee FS as the pillars have to be addressed in one go for an entity to be FS (Section 3.3). Therefore, an entity in this context has a weakened FS. The paragraph below reviews the advisory approach of extension services.

The advisory approach is both persuasive and participatory (Kumar & Sharma 2018:3). This creates a need to balance these two factors to achieve and enhance FS in a sustainable way. The advisory approach advances technology transfer, support to learning, problem solving, deepened farmers' agricultural knowledge and information system (Christoplos & Kidd 2000; Davis *et al.*, 2010; Hasan, 2011). Therefore, technology, problem solving, deepened agriculture knowledge and information systems are key in building resilience and enhancing FS. During advisory extension, the government and private consulting companies responded to farmers' inquiries by providing technical prescriptions (Kumar & Sharma, 2018:3). The advisory approach was implemented as group development areas since the 1960s to 1970s (Hanyani-Mlambo, 2002), for example Murehwa and Motoko in Mashonaland East Province. Community participation in groups offers the flexibility to even penetrate any part of the country where such services are needed. The major drawback of the advisory extension services is its failure to direct its services to the needy, focusing on individual or group (such

as established farmers); precluding support and services for other deserving clientele; heavy reliance on government and donors; treating homogenous group (Hanyani-Mlambo, 2002). The advisory approach suffers limited capacities in terms of human resources, effectiveness of organisations, funding and, most importantly, leadership and direction (Berthe, 2015). It can be inferred that this approach divides communities and promotes a culture of overdependence, which destroys resilience. The following paragraph focuses on the facilitation of an empowerment approach.

Facilitation of an empowerment approach was also used by Rappaport (1981) as an extension approach. The approach involved farmer-to-farmer exchanges *(*F2F) through the creation of a structure of farmer promoters and farmer trainers (Scarborough *et al*., 1997). Farmers were selected based on their agricultural expertise (Selener *et al.,* 1997), networking or training skills (Rivera & Alex, 2004) to become lead farmers in F2F extension efforts. F2F is an approach where farmers use their expertise, training skills and networking in agriculture to help each other with agricultural production. In F2F, farmers' mental maps of their role in the process of technology generation and diffusion are radically changed (Braun & Hocde, 2000). Farmers' technology generation or innovations and dissemination among peers is encouraged (Friis-Hansen, 2004:57). Valuing farmers as partners in agricultural innovations and technology generation is key in building their mental maps, trust, expertise and skills. This approach, enables farmers to make better decisions, provide feedback to researchers and policy makers (Kiptot *et al.,* 2006), more efficiently than external extension agents (Kiptot & Franzel, 2014). Bentley *et al.* (2013) and Hird-Younger and Simpson (2013) note that farmers are more receptive to making changes/testing innovations proposed by familiar and trusted sources. This approach does not view the farmer as the "end recipient but as a valued partner" at all levels of the project continuum (Veerabhadraiah, 2012:27), for example, needs assessment, programme development, participatory technology development, implementation and evaluation. Consequently, trust and interactive participation are key to the success of development initiatives. A study in the Manicaland and Masvingo provinces of Zimbabwe found that only 43% of the sampled farmers used the F2F extension approach (Dube, 2017). Dube also explains that the adoption pattern was similar across gender, districts and agro-ecological zones. This could be the case with other implemented FS initiatives. The following paragraph discussed master farmer training as another form of extension.

The master farmer training (MFT) approach originated in the 1930s (Chipika, 1985; Pazvakavambwa, 1994), to improve smallholder agriculture to spread modern scientific

farming techniques in communal areas. Farmers who adopted and practised the scheme received master farmer certificates and badges (Hanyani-Mlambo, 2002) from the colonials. Mika and Mudzimiri (2012) argue that MFT sought to develop cadre who would qualify to be settled in the former small-scale purchase areas. Therefore, MFT was used as a ploy to divide and rule the black majority by creating classes among them to perpetuate the colonial legacy. This extension approach adopted the "trickle-down" extension (Hemmes & Vissers, 1988). Trickle-down extension is where progressive farmers pass on extension and information to other farmers through farmer-to-farmer dissemination and demonstration (Hemmes & Vissers, 1988) to improve smallholder agriculture and to spread modern scientific farming techniques in communal areas. This implies that trickle-down extension provides a platform for agricultural information sharing, to help build farming knowhow, resilience for better FS. One of the successes of these schemes was the high adoption rate of very visible innovations such as hybrid maize (Hemmes & Vissers, 1988). Hanyani-Mlambo (2002) explains the scheme failed to produce notable yield increases in many African crops because the marketing of surplus crops was difficult. However, despite all its shortcomings, this form of extension remains at the core of Agritex's work in the post-independence era.

The greatest challenge with respect to extension was not a question of approach, strategy, or goals, but a plethora of factors. For example, administration antagonism, funding, bureaucracy, and human resource handicaps. There were many problems inherent to the programme that were unforeseen at the inception of the schemes (Kramer, 1997). For example, there was continued conflict and antagonism between the Native Affairs Department and missions in the control of African education. Consequently, the implementation and later expansion of extension schemes were hindered (Kramer, 1997). Lawrence (2011:925) explains that extension approaches are not simple blueprints for success but have to be tailor-made to meet local conditions. In Zimbabwe, the adoption extension services were hampered by inappropriate, outdated technologies, shortage or lack of working capital, extension personnel and relevant technologies (Mettrick, 1993; Farooq *et al*., 2010:426). The extension should thus be participatory, involve researchers and communities to address the challenges the society is faced with (Strong *et al.,* 2015:3). Extension services have enabled farmers to become more actively embedded in the agricultural knowledge and information system (Hasan, 2011; Davis *et al.,* 2010). The implication is that there is no success in extension without the participation of all key stakeholders (extension agencies, farmers, scientists, business and media organisations). Despite the esteem that extension services have been given there are few studies that evaluate

the effectiveness of the various extension approaches in Zimbabwe. This study seeks to evaluate their influence on FS. The colonials used extension services in conjunction with the establishment of the GMB to ensure national FS (Zhou, 2012). The section below discusses the GMB initiative.

5.3.2.2 The Grain Marketing Board 1930 to 1980

The GMB coordinated government actions from the early 1930s (Rukuni & Bernsten, 1988:198). Moyo (2002) explains that the Maize Control Board was renamed the GMB in 1951 when other crops, like rice and wheat, were added to its mandate. The GMB was established under the Maize Control Act of 1931 in response to the 1930 world recession (Matsive, 2012:8). Recession refers to a period of economic decline in gross domestic product and an unemployment rate (Chappelow, 2019). The GMB was a recession induced government response to ensure FS in the then Rhodesia. The establishment of GMB saw large amounts of grain moved to deficit areas for resale by government agents, traders or it was distributed freely or in food-for-work (Rukuni & Bernsten, 1988). GMB was created to address food insecurity challenges through marketing agricultural products, maize and wheat (Rukuni & Bernsten, 1988; Moyo, 2002). Zhou (2012) explains that the 1946–1947 crop failure or depletion of national food stocks prompted the GMB to import maize and other grains for distribution and resale. As a response to the 1946–1947 crop failure, a total of 178 900 metric tons were imported, while 143 500mt were imported after the 1950 drought (Zhou, 2012). Kuwuya (2012) sustains that GMB also bought a variety of crops from farmers that were sold into the domestic agro-processing industry. Thus, GMB's mandate since 1931 was to provide producers with guaranteed prices and address food insecurity challenges (Zhou, 2012). Matsive (2012) concurs but adds the how part, namely "through the provision of grain-related agricultural products in a sustainable manner (see Section 2.2.4). Matsive (2012) emphasises that the GMB imports products from both regional and international markets when in short supply to promote food national security. Matandare (2017) notes that the GMB began establishing buying depots in the small farm areas in 1975. Accordingly, the purpose of GMB was set up to ensure adequacy of food supply or availability; stability of supply without fluctuations or shortages from season to season or from year to year; accessibility to food or affordability; and the quality and safety of food. FS was ensured through the orderly marketing of agricultural products sustainably.

Like the other initiatives discussed Section 5.3.2.1, a lack of funding and operational problems thwarted GMB efforts (Kuwuya, 2012). The GMB continues to function in the

post-independence era. The attainment of independence by the black majority Zimbabweans ushered in the post-independence era. this necessarily requires an in-depth discussion and analysis of the post-independence FS initiatives.

5.3.3 Post-independence food security initiatives, 1980 to 2020

The post-independence era in Zimbabwe refers to the period after the 1980 (Chakunda, 2018), a time of a plethora of development initiatives. The ultimate goal of these FS initiatives was to reduce poverty reduction and improve rural people's living standards (Mabhena, 2013:2). This era has seen GoZ and NGOs use various initiatives to ensure national food security (Mudimu, 2003:36). National FS depicts a nation's capacity to procure a stable and sustainable basket of adequate food (International Fund for Agricultural Development (IFAD), 2006). The GoZ and NGOs used domestic and trade policies (Mudzonga & Chigwada, 2009) to address poverty and FS (Chivandi *et al.,* 2010). As a result, various economic policies have been promulgated and implemented in the post-independence Zimbabwe (Ruwo, 2014). The purpose is to give relief, build a starting point and the ability to bounce back or forward in the face of hazards that trigger food insecurity (see Section 2.3). This study assesses the influence of implemented initiatives on the FS and the resilience of inhabitants of regions IV and V in Zimbabwe. The sections below trace four post-independence FS efforts/initiatives by the GoZ and its partners.

5.3.3.1 Drought Relief Programmes (DRFs) 1982 to 2020

The WFP (1994) and World Bank (1995) viewed Zimbabwe's DRPs as an effective response to an acute food crisis that could easily have become a famine. DRPs were initiated in 1982 to address drought-induced food and water shortages, general hunger and livestock deaths (Mudimu, 2003:36). They were a rational, organised and controlled response to a food shortage situation *(*Borsotti, 1993:11). Munro (2006) views the initiative as, "an effective response to a food crisis". Proper planning, organisation, control and rationality are key in the success of DRPs or any FS programmes. Kinsey *et al.* (1998) are of the opinion that drought relief schemes provided substantial support to help maintain consumption levels. Drought relief programmes have been more prevalent in Masvingo, parts of Midlands and Manicaland, and the two Matabeleland provinces (Mudimu, 2003; WFP, 2016). All the droughts ever recorded in the history Zimbabwe from 1983/84, 1987/88, 1991/1992 and 1994/95 to the present were managed through drought relief schemes (Mudimu, 2003). Therefore, DRPs are key in the maintenance of consumption levels and enhancement of FS, though they do not build resilience in any way. DRPs have come in many shapes and forms between 2004 and 2012. Some of these bear

reference to Supplementary Feeding Programme (SFP) (Mudimu, 2003), food-for-work projects (FFW) (Wiggins, 2003) and the PRP of 2004 to 2012. The SFP addressed the plight of the vulnerable members of the society (Community Supplementary Feeding Programme (CSFP), 1997). Mudimu (2003) explains that SFP addresses the nutrition aspect of the FS of children, pregnant and nursing mothers, the aged and the disabled. The SFP package included maize, groundnuts, and vegetable oil, as well as support for supplementary food production in community gardens (Ismail *et al.*, 2003; FAO, 2010). Nutrition garden programmes focused on community participation and household FS micronutrient deficiencies alleviation (FAO, 2010). SFP is a programme that addresses the nutrition aspect of vulnerable members of the community through food handouts and active participation in nutrition gardens. While there is no real evidence of community-initiated actions, the programme has made use of a cultural tradition, the *Zunde* concept (see Section 5.3.2.2), which promotes collaboration. Multisectoral collaboration occurred largely at the district level, but more recently, this was extended up to the central level with the formation of the National Food and Nutrition Council (see Section 5.5). The following paragraphs focuses on the FFW initiative.

FFW projects involve investment in social infrastructure (Mudimu, 2003). Zimbabwe has a long history of FFW initiatives (Editorial comment, 2016). It is also known as Productive Community Assets Programmes (Towindo, 2016). The FFW was initiated in October 1989 to supplant the large-scale distribution of free food from 1981 to 1988 and to cut down spending on unproductive people between 1982 to 1984 (Editorial comment, 2016).

World Vision (2004) explains that FFW was initiated to improve the welfare, FS and resilience of the food insecure households. FFW programmes pay workers in food to directly address undernutrition by raising calorie intake (Mission, 2014). Maponga (2016) asserts that FFW cushions communities from the effects of droughts and grain shortages. FFW is an economic way of linking the poor and food insecure in productive work in return for gain. FFW programmes allow self-targeting, the needy households enlist for work to gain access to the food (Mudimu, 2003). Self-targeting refers to a self-selecting mechanism, designed so that only given categories of people apply for benefits (Cirillo *et al*., 2017). FFW benefits those willing to participate in developing infrastructure in return for grain. Therefore, unwillingness to work means automatic self-exclusion regardless of one's vulnerability. FFW beneficiaries are selected based on vulnerability and willingness to work. Those who qualify for FFW participate in infrastructural development in their localities (Towindo, 2016), for example, roads, bridges construction or repairs, environmental rehabilitation (gully reclamation) and small dam

construction for water conservation, school and clinic rehabilitation and construction, rehabilitation of irrigation schemes and reforestation, and road construction and maintenance (Mudimu, 2003; Maponga, 2016). After working they get cash to buy food or maize (Maponga, 2016), or food aid or its equivalent in monetary terms (Chadenga, 2016). This implies that the efficacy of the FFW is key in achieving FS and the ability to bounce forward of communities and providing a social safety net.

Despite all the successes of the FFW, productivity enhancement based on structural output of the programme is minimal, from there the difficult to expand the scale of the programme to meet emergency needs (Editorial comment, 2016). Chadenga (2016) indicates that corrupt officials diverted and stole FFW grain for personal use and that people were denied food aid on partisan lines. This infers that there is a mismatch between the output and what had been invested, so FFW returns are minimal in terms of infrastructure and is susceptible to abuse by corrupt officials. The following paragraph discusses the PRP.

PRP was implemented by NGOs from 2004–2012 (Vorbohle, 2013) to reach out 2 million vulnerable people. The PRP sought to protect and to a certain extent promote livelihoods of poor and vulnerable households in the context of a prolonged crisis (Vorbohle, 2013). The programme shields and supports the livelihoods of the poor and vulnerable members of the community to withstand persistent emergencies. In Zimbabwe PRP sought to reduce extreme poverty, reduce suffering, and build sustainability, resilience and the capacity of beneficiaries through various interventions (WFP, 2016). Some of these were CA, CFA, VSLs, nutrition gardens, small livestock pass-on schemes, among others (Nkala, 2011; Jennings *et al.*, 2013; Mtonga, 2014; WFP, 2016). Jennings *et al.* (2013) further posit that ISALs increased the asset base of participants from the baseline of $103 in 2009/2010 to $205 in 2010/2011. Studies conducted between 2003 and 2015 in Zimbabwe show that livelihood interventions improved livelihoods, built resilience and stimulated rural development (Manyatsi & Mwendera, 2007; Sazali, 2015). However, Jennings *et al.* (2013) contend that the extent to which PRP II had contributed to this change was unclear, as the indicator may have picked upon the benefits of economic recovery, and/or the effects of inflation.

Drought relief schemes suffered many challenges due to poor planning, supervision and poor service delivery (Mushore *et al.*, 2013). More so, Mushore *et al.* (2013) identify ineffective monitoring systems, poverty, corruption, unclear beneficiary selection criteria, non-participation of beneficiaries and a lack of resources as major contributor to the demise of drought relief

initiatives. Adequate financial resources, planning, supervision and the establishment of a clear monitoring system are key for the successful implementation of any project. Therefore, unethical practices such as corruption, unclear beneficiary selection criteria and the exclusion of beneficiaries from participation, limit their buy in. This caused the demise of drought relief related initiatives. Hence another FS effort, coded as the LRRP, is discussed next.

5.3.3.2 The Land Reform and Resettlement Programme 2000 to 2020

Moyo (2004) posits that the land question was the reason for Zimbabwe's liberation war. The quest to address land distribution disparities and continuous food shortages in communal areas motivated the fast-tracked resettlement in Zimbabwe (Hill & Katarere, 2002; Alexander, 2006). The colonial land and agricultural policies discussed section 5.3.2 had relegated indigenous Zimbabweans to communal areas with low potential for development (Bird & Shepherd, 2003:593; Moyo *et al.,* 2009). According to Tshuma (2012), land reform is a purposive change in holding or owning agricultural land, the methods of cultivation used, and the nexus between agriculture and the rest of economy. Manjengwa *et al.* (2012) clarify that the legal framework guiding LRRP was revised several times, leading to the 17th Constitutional Amendment in August 2005. Therefore, land reform is one of the major FS policies that was adopted by the GoZ since 2000 (Mutukura, 2015:8). Maruve and Chitongo (2017) explain that land reform involves the changing of laws, regulations or customs regarding land ownership. Consequently, the LRRP of 2000 broadened the potential agricultural production (Maruve & Chitongo, 2017). In the context of this study, LRRP II refers to the appropriation of land from white farmers without a resort to courts for compensation (Mutasa, 2020). The deduction is that LRRP changed the land holding or ownership laws without a resort to courts for compensation to broaden the potential agricultural production base. Therefore, the political justification for implementing the LRRP outweighs that of FS. Manyeruke *et al*. (2013) explain that 20 years after LRRP, Zimbabwe's food resources have plummeted badly. Justifying LRRP as an FS agenda is not convincing, as food insecurity remains a big challenge, years after the land had been taken back. Zimbabwe's land reform programme (LRRP) is classified into two phases (Mapiye, 2016). They are classified as LRRP I from 1980-1998 and LRRP II, the Fast Track Land Reform Program (FTLRP), since 2000 (GoZ and World Bank, 2019). LRRP I was based on willing buyer/willing seller approach whereby government bought white commercial farms for redistribution (Moyo, 2005). Contrary, the FTLRP was a state-led approach which accelerated the acquisition and redistribution of large white owned commercial land using both A1 and A2 models (Mapiye, 2016:2). Therefore, the 2000 land reform had mixed results (Echanove, 2017:10). On the

positive side, the GoZ resettled 350 000 indigenous families under the A1 and A2 models on 14.4 million hectares since independence (Hentze & Menz, 2015; Maruve & Chitongo, 2017). The A1 settlement model decongested the marginal communal areas (Bird & Shepherd, 2003:593). FLRRP altered existing social relations of ownership, access, and the utilisation of land by reallocating land to people from diverse areas and backgrounds (Mutasa, 2020). Land reform was pivotal in decongesting communal lands, thereby altering land ownership dynamics.

Chiremba and Masters (2003) bring to our attention that productivity is a product of various factors, for example age, education, family labour force, marital status, farming experience and skills, and capital assets of farmers. Moyo (2004) and Zimonline (2006) posit that LRRP precipitated the decline in the agriculture-based economy by 60 per cent. The highest inflation ever was a rise from ZW$19 to US$1 in 1997, to ZW$2 100 trillion to US$1in 2008 (Hanlon *et al.* 2012). As a result, in 2000, farms produced 3.7 million tonnes. In 2012 production was 1.7 million tonnes and a further 20 per cent decline in plantings for the season, which translates into lower output in 2013 (Mutasa, 2020). The conclusion is that ownership of land alone is not the panacea to productivity as there are many factors that come into play. This created the need for a balance to produce and sustain FS at all levels. Manyeruke *et al.* (2013) state that in 2002, Zimbabwe experienced the largest deficit in its food production since 1980. As a consequence, LRRP solved one problem and created multiple problems (Musodza, 2015). New unskilled cadres were ushered into the irrigation sector (Nhundu *et al*., 2015). They had no capital to maintain the previous levels of production white commercial farmers used to reach (Mutasa, 2020). Contrary, Zimonline (2006) feels that drought and Western sanctions crippled the economy, making it difficult for farmers to access inputs. Bird and Busse (2007) concur, adding that a travel ban, limitation and freezing of Zimbabwean owned assets caused the government initiatives on FS to implode. Chimhowu *et al.* (2010). MAMID (2016) attribute the decline to drought seasons that drastically reduced the irrigated area from approximately 200 000 ha to around 120 000ha. For example, 1982/83, 1986/87, 1992/93, 1995/96, 2002/03, 2004/05, 2007/08, 2012/13, and 2015/16, droughts. Mutasa (2020) affirms that the institution of sanctions in 1998, the suspension of IMF, World Bank and donor assistance in 1999, and the enactment of the Zimbabwean democracy and Economic Recovery Act in 2001, which led to economic decline. Land is a key factor in the FS matrix. However, factors like climate change, economics and politics contribute immensely to FS and nutrition issues. However, the government's failure to provide adequate inputs and back-up support, training and a viable support system to resettled farmers was fatal to the whole FS system and the economy. Partisanship and corruption in

beneficiary selection also derailed the LRRP programme. Because of this, the country is now a food importer since it can no longer feed itself (Matandare, 2017). The sudden decline in the yield and output at farm level led to a shortfall in agricultural production to meet annual food requirements for the general populace (Nyahunda & Tirivangasi, 2019). Thus, the equalisation of plot sizes across households is not the panacea for agricultural productivity. Therefore, agricultural productivity is a product of knowledge development, technical information and extension, and financial resources. To augment the LRRP, the GoZ launched command agriculture schemes 2005–2020. The section below discusses this scheme in detail.

5.3.3.3 Command Agriculture 2005-2009

Command agriculture was started in November 2005 by the president of Zimbabwe, Robert Mugabe (Nkala, 2016) and named Operation Maguta/Inala. It sought to overcome food shortages through production and strengthening of the national strategic grain reserves through command (Manyeruke & Hamauswa, 2012; Pazvakavambwa, 2009). Command agriculture refers to the practice of contracting selected farmers to produce a set amount of the staple maize crop to ensure food self-sufficiency (Mutonhori, 2017). Maguta was guided by the thinking that improved logistics would result in timely delivery of inputs, resulting in decent yields (Moyo &Nyoni, 2013). The Maguta idea is that food self-sufficiency can be attained through food production as a result of command and providing farmers with all inputs. This view leans towards production orientation, which should be combined with other factors to address FS in its fullness. The Zimbabwe Defence Forces, in collaboration with the Ministry of Finance, spearheaded the operation (Solidarity Peace Trust, 2006; Mutonori, 2017). As such, input prices were heavily subsidised and set way below the market clearing prices (Bird and Busse., 2007). Each programme beneficiary got 300 kilograms of compound D, 200 kilograms of ammonium nitrate fertiliser and 25 kilograms of maize seed (Mudzonga & Chigwada, 2009:6). Furthermore, Mudzonga and Chigwada (2009) note that farmers had to repay 50%, with an option of paying in the form of produce (through the GMB) or cash. Mutonori (2017) acknowledges the benefits of Maguta, but he argues that calling the programme “command agriculture” was a bit clumsy because it depicts military and command economies. Command agriculture has been criticised for creating vulnerability by destroying self-sufficiency in rural populations and through over-dependence on handouts (see Section 5.4) and the government as the only source of food. For example, in 2005/6 season, the programme failed to improve maize production at rural irrigation schemes in Matabeleland (Solidarity Peace Trust, 2006).

The Maguta initiative failed to achieve its objectives due to the abuse of the scheme (inputs), resulting in the squeezing out of genuine farmers, the secularisation of input distribution, and the diversion of inputs to the black market (Pazvakavambwa, 2009). Consequently, scheme beneficiaries did not repay loans and a lack of funds forced the government to abandon the initiative in 2009 (Nkala, 2016). The state agricultural project failed due to an acute shortage of hard currency required to import fertiliser (Kairiza & Chingono, 2019), coupled with massive corruption and looting spree. This could be for reasons substantiated in Section 5.3.3.2. In further pursuit of the objective to boost the supply side of FS (see Section 3.3.1), the GoZ initiated and implemented the Zimbabwe Agenda for Sustainable Socio-economic Transformation. The section that follows unpacks this intervention.

5.3.3.4 Zimbabwe Agenda for Sustainable Socio-Economic Transformation (Zim ASSET) 2013-2018

Zim ASSET was a cluster-based plan, which reflects the need to fully exploit the internal relationships and linkages between the various facets of the economy (ZimVAC, 2013). These facets bear reference to: FS and nutrition, social services and poverty eradication, infrastructure, utilities, value addition and beneficiation (The Patriot, 2014). As such, the cluster programmes are aligned to and informed by the Comprehensive African Agricultural Development Programme (CAADP), Draft Comprehensive Agriculture Policy Framework (2012–2032), the Food and Nutrition Security Policy, the Zimbabwe Agriculture Investment Plan (2013–2017), SADC and COMESA Food and Nutrition Frameworks (Zim ASSET, 2013:51–52). Zimbabwe's food and nutrition security aligns with SDG 2, to end hunger, achieving FS and improved nutrition, and promoting sustainable agriculture with the, Zimbabwe United Nations Development Assistance Framework (ZUNDAF, 2014). Meanwhile, the WFP and other NGOs augmented the GoZ FS initiatives.

Zim ASSET sought to revive the economic fortunes, growth and the wealth creation agenda of Zimbabwe (Zimbabwe, 2014; Ruwo, 2014). It pursued sustainable development and social equity anchored in indigenisation, empowerment and employment creation, largely propelled by the judicious exploitation of the country's abundant human and natural resources (Zim ASSET, 2013:51-52; Mangwana, 2014). Mangwana (2014) posit that Zim ASSET has been met with scepticism and downright negativity, causing its demise. Samukange (2015) concurs with Magana's assertion, further explaining that Zimbabwe is a shadow of its vibrant self of the 1980s due to climate change and poor financing. Furthermore, Samukange (2015) highlights that the poor performance of the agricultural sector has negative downstream implications for the rest of

the value chain. Nyoni (2017) argues that a lack of funding, weak discipline with respect to the implementation of the policy, a lack of buy-in from various critical stakeholders, and overambitious policies led to the failure of the programme. The implication is that this policy was not done in consultation with critical stakeholders, resulting in a lack of buy in. Therefore, the success of a policy or a programme hinges on consultation and buy-in.

5.4 ZIMBABWE'S FOOD SECURITY AND NUTRITION POLICY 2012-2015

Zimbabwe's statutory and regulatory framework for managing food and nutrition is the GoZ (2013:1). The FNSP is a legal statement for a sustainable response to food and nutrition insecurity that ensures food and nutrition security for all people (Nyatsanza, 2013) at all times, even during disasters. Zimbabwe has endorsed all the main international commitments to tackle hunger and reduce malnutrition (Echanove, 2017). This policy statement aligns with the international FS obligations enshrined in various charters and declarations (see Section 5.2). The Constitution of Zimbabwe Amendment Act, 20 of 2013, emphasises the right to safe, clean and portable water and sufficient food in accordance with the FNSP. The FNSP outlines the GoZ's responsibility to ensure food and nutrition security nationally (GoZ, 2013:1). Therefore, the FNSP is a coherent vision for food and nutrition security that all stakeholders work to drive, support and accomplish. In the context of this study, a stakeholder refers to relevant ministries and NGOs mandated to guide and facilitate implementation of the policy in explicit strategic objectives, actions, outputs and outcomes (see Section 5.3.3). Therefore, the FSNP is not an assessment instrument, but a policy framework that promotes and ensures adequate food and nutrition security for all people at all times. The evolution of the FSNP of Zimbabwe also provides substantial insight as will be observed in the next section.

5.4.1 The evolution of the Food Security and Nutrition Policy 1995-2012

Zimbabwe did not have a clearly articulated agricultural policy or one on FS until 2002 (Hanyani-Mlambo, 2002; Mudimu, 2003) when he government (especially from Ministry of Lands, Agriculture and Rural Resettlement) developed FS agricultural strategies (FFSS, 2003:6). Civil servants did this work as they adhered to the principle of secrecy to prevent information leakage (Mutukura, 2015). Thus, policy making and development of FS strategies was preserved for civil servants. Zimbabwe's past FS strategies were rather political reactions; they did not follow or develop into a consistent framework to address food insecurities (Mudimu, 2003). This trend continued up to 1995 when the Zimbabwe Agricultural Policy Framework 1995–2000 came into existence to recommend sustainable solutions for hunger and

malnutrition (Hanyani-Mlambo, 2002; Mudimu, 2003). Out of this, a policy framework was developed in 1998 under the auspices of Food and Nutrition Council, informed by in-depth situational multi-sector analysis (FNC, 2014). The food and nutrition security policy became an official law on 12 November 2012. It was launched on 16 May 2013 as a framework for a cohesive multisectoral action that fosters shared vision and strategy for improved food and nutrition security (Zimbabwe, 2014). The following section unpacks the aims and objectives of the Food and Nutrition Security Policy.

5.4.2 Aims and objectives of the Food and Nutrition Security Policy

The FNSP promotes and ensures adequate food and nutrition security for all people "at all times" (FAO, 2001), particularly for the most vulnerable and in line with cultural norms and values and the concept of rebuilding and maintaining family dignity (GoZ, 2013). The FNSP provides a practical way towards fulfilling international, regional and national commitments. For example, the UN Declaration of 1948 which includes the right to food (see Section 3.2), the International Covenant on Economic, Social and Cultural Rights and the new Constitution of Zimbabwe, 20 of 2013. Therefore, between 2010 and the present Zimbabwe implemented the Medium-Term Plan in line with MDGs and the current SDGs. For this reason, the MDGs and SDGs guide Zimbabwe FS and nutrition approaches. To demonstrate the importance of agriculture the SADC Heads of State, including Zimbabwe, endorsed the CAADP and its associated commitments (GoZ, 2013; FNC, 2014). The FNSP framework seeks to harmonise sectoral plans and programmes, which affect food and nutrition security for cohesive and cost-effective action to occur. It provides a mechanism to facilitate progress and fosters a shared vision and strategy for improved household food and nutrition security. The FNSP seeks to provide a framework for a sustainable concerted and coordinated multisectoral action and define sectoral roles and responsibilities of the various stakeholders involved in food and nutrition (GoZ, 2013; Food and Nutrition council of Zimbabwe, 2014). The section that follows highlights the principles that underpin the FNSP.

5.4.3 Policy principles, roles and responsibilities of lead and supporting sectors

The FNSP informs the establishment and strengthening of national structures, mechanisms and capacities that move beyond narrow technical interventions (FNC, 2014). FNSP is supported by eight non-negotiable principles that reaffirm the right to food; ensure contextual socio-economic relevance; evidence-based best practices; strengthening and reinforcement of sectoral collaboration; partnerships; roles and responsibilities; reaffirms relief; recovery and

development occur simultaneously and foster multisectoral approach in assessment, analysis and action (GoZ, 2013). Principle 7 relates to DRM and reaffirms non-sequential relief, recovery and development, noting that in the event of its simultaneous occurrence, risk reduction and the mitigation of shocks becomes central (CADRI, 2017). So, these principles are key in guiding the lead and supporting sectors in executing their roles and responsibilities to ensure FS for all at the right time, with the best quality, quantity and place.

Zimbabwe commits to seven priority areas to ensure food and nutrition security for all its citizens (FNC, 2012). These are policy advice and analysis, agriculture and FS, social assistance and social protection, food safety and standards, nutrition security, food and nutrition security information (FNC, 2014). The FNSP mandates lead agency/ministries to guide and facilitate the implementation of the policy in explicit strategic objectives, actions, outputs and outcomes (FNC, 2014; Musarurwa, 2015). A total of 17 ministries and agencies were given responsibilities for nutrition interventions in Zimbabwe. These are the MoHCC; the Ministry of Agriculture; Mechanization and Irrigation; the Ministry of Public Service, Labour and Social Welfare; the Ministry of Primary and Secondary Education; the Ministry of Local Government, the Public Works and National Housing; the Ministry of Environment, Water and Climate; the Ministry of Energy and Power Development; the Ministry of Finance and Economic Development; the Ministry of Lands and Rural Resettlement; the Ministry of Small and Medium Enterprises and Cooperative Development; the Ministry of Higher and Tertiary Education, Science and Technology Development; the Ministry of Tourism & Hospitality Industry; the Ministry of Industry and Commerce; the Ministry of Transport and Infrastructural Development; the Ministry of Information, Communication Technology, Postal and Courier Services; the Ministry of Women Affairs, Gender and Community Development; the Ministry of Home Affairs and the Nutrition Council (Musarurwa, 2015). The section that follows focuses on policy commitments.

5.4.4 Policy Commitments

The Food and Nutrition Security Policy is a multisectoral policy framework with an implementation matrix which commits GoZ to seven priority areas to ensure food and nutrition security (Nyatsanza, 2013).

The first policy commitment of the FNSP is policy advice and analysis (Nyatsanza, 2013). The President and Cabinet (OPC) ensure policy formulation instruments to protect and enhance food and nutrition security, to inform government, NGO decision making, and action (FNS,

2013). The strategic objectives for the first policy commitment are to promote expenditure of the national budget on social sectors to promote local, regional markets; and to play a critical role in securing food and nutrition security; mitigate against global food prices; support smallholder production; promote private sector role in food industry. Examples of the social sector are health and education, agriculture (GoZ, 2013). Musarurwa (2015) explains that the annual budget allocation for nutrition specific and sensitive ministries from the national budget is nominal. For example, the Ministry of Agriculture Mechanization Department was allocated 3.83% in 2013, 3.77% in 2014 and 3.80% in 2015. Therefore, the nominal annual FS budget of GoZ is inadequate, hence resulting in weakened FS structure and system. Therefore, the nominal budget for nutrition specific and sensitive ministries indicates the level of political commitment towards food and nutrition security. Therefore, it defeats the noble commitment to policy advice and analysis.

The second policy commitment of the FNSP is to FS (GoZ, 2013). The Ministry of Agriculture and Mechanisation leads the GoZ's commitment, including access to adequate, diverse and nutritious food for all people at all times (FNC, 2014). The Ministry's strategic objectives ensure availability, access, utilisation, and the stability of food supply (see Section 3.3) through diversification of agricultural products, post-harvest management and storage functioning markets and private sector to drive growth of agricultural sector (GoZ, 2013).

Third, the Ministry of Labour and Social Welfare leads the GoZ's commitment to ensure social assistance (GoZ, 2013). The ministry ensures that the implemented social protection, including social assistance programmes, contributes and enhances food and nutrition security of the most vulnerable in the short and medium term. The strategic objective is to ensure minimum standards for all types of safety nets, including food assistance, cash/food for assets, school feeding to enhance food and nutrition security and strengthening resilience in the long run; recognising mitigation of negative coping strategies and nutrition education communication as complementary strategy. (GoZ, 2013).

The GoZ through the Ministry of Health and Child Welfare (MOHC) and the Food and Nutrition Council (FNC) is committed to food safety and standards. This is by way of providing safe and wholesome food to all, guided by the Food and Food Standards Act, Chapter 1504 (see Table 5.2). Thus, the Ministry ensures that all food, whether imported or locally produced, meet national public health legislation and international standards for quality and safety. The strategic objective for food safety and standards is to reinforce multisectoral nature of food safety, the farm-to-fork approach; and to protect the most vulnerable (GoZ, 2013). In the

context of this study the most vulnerable refers to infants, young children, disabled, lactating mothers, elderly and the chronically ill, the poor households.

Fifth, there is commitment to nutrition security (including WASH health services) (GoZ, 2013). The MOHC welfare ensures nutrition security for all through the implementation of evidence-based nutrition interventions, integrated into a broad public health framework, including health services, water and sanitation. The strategic objectives for nutrition security (including WASH Health services) are to develop strategies to address stunted priorities; the role of nutrition in health, but also in other sectors; all types of malnutrition, including obesity; diverse and quality diets; making local and indigenous foods a priority (GoZ, 2013). Though nutrition is a development priority in Zimbabwe, programmes that focus on this are very limited and their priorities are not well integrated with the agriculture, WASH and social protection sectors (Echanove, 2017:12).

Sixth, the GoZ, through the Zimbabwe Statistics Organization (ZIMSTATS) and FNC, is committed to ensuring a national integrated food and nutrition security information system (GoZ, 2013). As such, timely reliable information on the food and nutrition security situation and the effectiveness of programmes can inform decision making. The strategic objectives are the creation of an integrated food and nutrition security system (not a single assessment but set of complementary tools); recognition of the role of multiple sectors and stakeholders; the decentralisation of the system; and a platform for acting on information (GoZ, 2013). The assessment only focuses on FS issues and not on the initiatives that seek to ensure FS.

The GoZ is committed to National Capacity Research and development through the FNC. The objective is to enhance and strengthen national FNS by supporting and reinforcing local community capacity and responsibility for food and nutrition security; context-specific research and learning and multisectoral professional training in food and nutrition security (GoZ, 2013). Through this commitment, communities are encouraged to take responsibility to ensure food and nutrition security; use national research to promote context-specific best practice and local approaches; and ensure competency-based professional training across sectors (GoZ, 2013). However, inadequate budgets fragmented the FNSP efforts, causing a weak FS structure (Musarurwa, 2015). Declarations of intention offer a decorative way of ensuring food and nutrition security that lacks financial commitment. More so, Mubi (2015:8) posits that assigning roles and responsibilities to various agencies pose serious challenges that could arise when implementing the policy, due to limited overlaps in methods, tools, networks and meetings. Consequently, the multisectoral approach that the FNSP uses could pose a great

challenge at the local level where there are power overlaps and unclear boundaries of operations.

The GoZ's seven commitments to FS for all resonate well with the dictates of the FS framework described in Chapter 3. However, there are extremely limited resources, support, institutional capacities or consolidated monitoring mechanisms, which thwarts the national food and nutrition efforts (Echanove, 2017:41-46). These factors relegate these commitments to merely declarations of intension. Nominal national budget allocations resonate well with the influence of policies and institutions and processes discussed (see Section 2.3). Mubi (2015:8) indicates that limited overlaps could arise due to methods, tools, networks and meetings used by various groups. Musarurwa (2015) concurs, adding that powers overlap and unclear boundaries present operation challenges. The inference is that although assigning roles and responsibilities to various agencies is a noble thing, it could pose a serious operational challenge if monitoring policy frameworks are not well managed.

5.4.5 Food and Nutrition Security policy –Monitoring framework

The GoZ (2013) is evaluated by means of a monitoring framework. The monitoring framework has three phases. The first phase focuses on activity and output, which is monitored quarterly. It mainly focuses on the levels of plans for province and district capacity and the performance of FNSCs (Mukudoka, 2013). The second level annually monitors the outcome on the level of commitments of the lead ministry as discussed in Section 5.3.5. Mubi (2015) explains that the M&E policy document was developed after multistakeholder consultations under the Office of the President and Cabinet. The establishment of a M&E framework attests to Zimbabwe's commitment to FS. However, limited capacity has affected the execution of large surveys (Kararach, 2003). Kararach affirms that the brain-drain, the HIV/Aids pandemic, and a weak economy have significantly undermined M&E activities. Conversely, the FNSP's M&E framework defines measurement components, but lacks clarity on whether they have been fully implemented. Examples include the prevalence of stunting (<-2 scores height for age), the prevalence of underweight (<-2 Z –scores weight-for-age), the prevalence of thinness among women 15-49 years, (BM<18.5), the prevalence of micronutrient deficiencies, the percentage of households living below the poverty line, and the number of food insecure households (Mukudoka, 2013). M&E for FNSP is partly implemented by various ministries as they fulfil their policy commitments. This limits their ability cover the broad spectrum of FS. Irigoyen (2017) argues that Zimbabwe's approach to monitoring the progress and impact of food programmes is rather weak as it lacks evidence of measurement and evaluation apart from

official health statistics. Irigoyen also explains that M&E translates into the routine submission of annual plans, an annual report and log frame matrices. Drawing from this assertion, what lacks is a comprehensive analysis tool that would allow the monitoring of processes and feedback to implementing units and communities. Table 5.3 summarises FNSP monitoring framework.

Table 5.3: Food and Nutrition Security Policy: Monitoring framework

Activity	**Output**	**Outcome**	**Impact**
Quarterly	Quarterly	Annually	Every 3 to 4 years
The plans of provinces, district capacity and FNSC performance		Level of commitment (lead ministry)	Level of policy goal
- Intersectoral coordination and capacity for food and nutrition security in place through food and Nutrition Security Committees - Food and nutrition security interventions in place and scope/quality of services in health/nutrition, agriculture and social services, WASH, food safety - Assessment and surveillance capacity in place - Resources mobilised - Capacity present - Trainings held - Partners working together around common food and nutrition work plan - Learning and scale-up		- Commitment 1: Policies in place - Commitment 2: - Agriculture/FS, capacity of farmers, grain reserve and access, and utilisation - Commitment 3: Safety nets in place, poverty reduction measures in place - Commitment 4: Food safety legislation in place and capacity to monitor/track it - Commitment 5: Improved breastfeeding, improved diet, reduced risk factors for nutrition security - Commitment 6: National food and nutrition security information system in place informing policy, programme - Commitment 7: National capacity: FNS committees in place, tertiary education adequate	- Prevalence of stunting (<-2 scores height for age) - Prevalence of underweight (<-2 Z–scores weight-for-age) - Prevalence of wasting (<-2 Z–scores weight for height) - Prevalence of thinness among women 15–49 years (BMI<18.5) - Prevalence of obesity among women aged 15–49 (BMI <25) - Prevalence of micronutrient deficiencies - % of households living below poverty - % food insecure households - Food diversity consumption score - Child mortality, access to clean water, adequate sanitation

(Source: Mukudoka, 2013)

To be further discussed will be considerations for legislations that might complement the FNSP in Zimbabwe.

5.4.6 Sections of laws complementing the FNSP in Zimbabwe

A tenet of the national policy on food nutrition and security is that all stakeholders are accountable for their role in achieving the desired outcomes (GoZ, 2013:15). Sections of other laws complement FNSP to provide a legal framework for promoting and ensuring adequate food and nutrition security for all people at all times. For example, the Civil Protection Act (Chapter 10:06) of 1989, the Environmental Management Act (Chapter 20:27 of 2002), the Public Health Act (Chapter 15:09), the Rural District Councils Act (Chapter 29:13), the Urban Councils Act (Chapter 29:15), the Defence Act (Chapter 11:02), the Regional Town and Country Planning Act (Chapter 29:12), and the Food and Food Standards Act (Chapter 15:04). Highlighted in Table 5.4 are some sections and their relevance.

Table 5.4: Section laws that complement the Food and Nutrition Security Policy

Policies/blue prints	Relevance
Civil Protection Act (Chapter 10:06) of 1989	Regulates DRM
Environmental Management Act (Chapter 20:27)	Part IX on environmental quality standards; Projects subject to environmental impact assessments
Food and Food Standards Act (Chapter 15:04)	Ensures food safety and quality. Focuses on the sale, importation and manufacture for sale of food in a pure state.
Public Health Act (Chapter 15: 09)	Provides for notification of infectious diseases, regulation of water and food supplies, sanitary regulations, regulation of infant nutrition, regulation of slaughterhouses and licensing by local authorities
Rural District Councils Act (Chapter 29:13)	RDCs empowered to control bush fires, regulate farming and pollution through by-laws
The Defence Act (Chapter 11:02)	Provides guidelines on how defence forces can be mobilised in peace times to deal with disasters
The Police Act (Chapter 11:10)	Guides the Zimbabwean police on how to deal with disasters to reduce loss of life
The Regional, Town and Country Planning Act (Chapter 29:12)	Control of development in environmentally sensitive areas through by-laws

The FS policy wraps up the discussion on food efforts in Zimbabwe.

5.5 CONCLUSION

This chapter examined the FS efforts, challenges and regulatory frameworks in Zimbabwe during the pre-independence (pre-colonial and colonial eras) and the post-independence eras. Cropping was the mainstay of the pre-colonial era. This helped to develop strategies like crop diversification, preservation, storage and pest control. These strategies helped households secure and preserve their food stuff for long periods. The *Isiphala/Zunde* concept was also adopted as a FS strategy. It promoted collective production and storage of crops

and enhanced social relationships, unity of purpose and an ethic of hard work in communities. Similarly, livestock ranching, tribute collection, and trading activities ensured a constant supply, access, availability and stability of food commodities. Aridity, droughts, violence, livestock diseases, succession disputes, civil strife, overgrazing, trade decline, influx of missionaries and concession seekers impeded FS initiatives during this time.

The colonial governments employed extension and GMB services to ensure national FS. Extension services developed the black farmers' agricultural knowledge, practices, skills, use of modern technologies, set up of an information sharing platform and led to the invention of hybrid maize. However, extension services are criticised for overlooking the needy, excluding deserving clientele, limited capacities, failing to secure a market for black farmers' surplus and a heavy reliance on the government and donors. GMB further promoted national FS by sourcing maize and other grains for distribution and resale. However, the efforts were thwarted by a lack of funding and operational problems.

Post-independence FS efforts, drought relief, and protracted relief programmes provided in the nutrition needs-built resilience and stimulated rural development by increasing the asset base of beneficiaries. The LRRP expropriated, distributed and decongested land, increasing black farmers' resilience. Despite its success, the LRRP was greatly affected by drought, sanctions, the HIV/Aids pandemic, partisanship, corruption, inadequate inputs and back-up support, a lack of training and a viable support system. Command agriculture gave inputs and equipment to small-scale farmers. This scheme was thwarted by crop failure, disastrous economic and political policies, exclusion of communities, scheme abuse, squeezing out of genuine farmers, secularisation of input distribution, non-repayment of loans, service provider's incapacity, violence and corruption. The ZimASSET initiative failed due to poor performance of the agriculture sector, lack of funding, indiscipline in policy implementation, lack of buy-in by critical stakeholders, and over-ambitious policies. The promulgation of FNSP as a legal framework for managing food and nutrition was a key achievement for FS in Zimbabwe. Like all the efforts before, the FNSP received nominal annual budget allocations that affected its implementation of dictates. This is discussed in more detail in Chapters 7 to 9. The challenges outlined in this chapter indicate the need for an assessment mechanism for early diagnosis and to determine the coverage and influence of the interventions. This study aims to clearly show that the involvement of all FS stakeholders is key in diagnosing the challenges of the implementation of FS efforts. The next chapter offers a synopsis of the methodology followed to reach the conclusions. It also gives a report on the findings of focus group interviews and semi-structured interviews.

CHAPTER SIX

RESEARCH DESIGN AND METHODOLOGY

6.1 INTRODUCTION

The preceding chapter reviewed past and current FS projects/initiatives, their challenges, and current statutory and regulatory frameworks of Zimbabwe. This research is directed towards the development of a multi-sphere assessment framework, focusing on FS initiatives in Zimbabwe. This chapter lays the methodological foundation of the study, which is based on an interpretivist qualitative research paradigm. The study used data collected through interviews, focus group discussions, observation and secondary data analysis for triangulation purposes and to inform the research findings. The discussion in this chapter is structured around the research design, population sampling, data collection, data analysis, ethical considerations, validity and reliability issues, limitations and delimitations of the study. The synopsis of the research design and methodology is presented in the next sections.

6.2 RESEARCH PARADIGM, DESIGN AND METHODOLGY

The methodological assumption underpinning this research is a qualitative paradigm.
The design for this is study is phenomenology. This design traces its origin to Max Weber (1864–1920) and Wilhelm Dilthey (1833–1911) (De Vos *et al.,* 2011:8; Neuman, 2011:101). Phenomenology helps the researcher explore the social phenomena by concentrating on words, and observations to express reality and attempts to describe people in their natural situations (Van Schalkwyk, 2000:39; Babbie & Mouton, 2008:28; Reeves *et al.,* 2008:337). This design was adopted for its systematic and subjective approach that describes life and give meaning to human experiences (Morse & Field 1996:1999; Burns & Grove 2003:356). The interpretivist approach used by this design pivots on three principles: the social world is constructed and given meaning subjectively by people; the researcher is part of what is observed; and research is driven by interests of which the complexity cannot be explained by simple fundamental laws (Wisker, 2008:69; Blumberg *et al.,* 2011:17). This design taps into human tendencies, attitudes and perceptions that develop as they interact with other people. O'Reilly (2009:119) adds that knowledge of the world is gained by interpreting or understanding the meanings that humans attach to their actions. In view of this, humans interpret their world and then act based on their interpretation, while the world does not (Hammersley, 2013:26). According to Lunga (2014:115), the purpose of this design is to define priorities, perceptions, attitudes,

opportunities, problems and alternatives, but not about quantifying. The assumption harnesses multiple views on the same phenomenon, enabling the researcher to make meaning from an insider's perspective. A three-tiered research process for this study is presented in the section that follows. The section discusses the conceptual stages, research design and planning, and the empirical part.

The conceptual stage focuses on the formulation of the research problem, research question, the objectives and the purpose of the study. The research problem determines the methods and procedures, the types of measurement, the sampling, the data collection and the data analysis to be employed for the proposed research (Zikmund *et al.,* 2010:66). The second stage of the study focuses on research design and planning. The researcher served as the main data collection instrument, using experience, skills and ability to communicate, and asking the right questions (Darling-Hammond & Adamson, 2010; Bahrami *et al.,* 2016). The sample was the participants who met the eligibility criteria (see Section 6.2.3) using a non-probability sampling design with purposive sampling to select the research participants. The research participants were drawn purposively from NGO staff, government staff and traditional leaders to address the study objectives (see Section 1.6). The eligibility criteria refer to custodianship of communities, experience and expertise in SL, resilience, FS and assessment. Through these participants, the researcher was able to harness new insights, perceptions and experiences on sustainable livelihood projects, by exploring different social and cultural phenomenon (Creswell, 2014:4). Therefore, the new insights, perceptions and experiences portray a holistic, largely narrative description of the participants' involvement in sustainable livelihood projects. The information gathered relate to how communities in Bulilima, Gwanda, Mangwe and Umzingwane have used livelihoods projects to deal with disaster risk, to secure their FS in from 2000 to 2020.

The empirical part involves the actual data collection, analysis and interpretation of data. Document review, focus group discussion, participatory observation and the questionnaire were used (see Section 6.2.1) to gather data. Field notes and audio recordings were made during the interview. Ethics was taken into consideration (see Section 6.2.6). Therefore, the engagement of various data collection techniques addressed the validity and reliability of the study. To ensure coherent, consistent, holistic, quality and constructive research findings and deductions, data were analysed according to Tesch's (1990:142–145) steps of data analysis (see Section 6.2.4).

The section that follows unpacks the key components of the methodology followed for the study, including data collection, data analysis, ethical considerations and validity and reliability, limitations and delimitations of the study. These contribute to the realisation of the study objectives, the development of a multi-sphere assessment framework, focusing on FS initiatives in Zimbabwe.

6.2.1 Methods of data collection

The study adopted multiple qualitative methods to collect data. The main tools used included literature review for (Chapters 2, 3, 4 and 5) and non participatory observation, questionnaires and focus group discussions for empirical data. Various documents were used as secondary data sources, while empirical data were collected through fieldwork.

6.2.1.1 Literature review

Literature review was used to determine and ascertain the most current developments in sustainable livelihood, FS resilience and assessment. The documents were chosen on the basis that they could lay the best theoratical background for the study. Table 6.1 lists documents that were reviewed and analysed to create a theoretical understanding of SL, FS and assessment.

Table 6.1: Reviewed documents

Reviewed documents	Academic books (Chambers, 1987; Scriven, 1991; Twigg, 2001; Bamberger *et al.*, 2012; Carswell, 2013; Mutasa, 2020)
	Government assessment reports (ZimVAC, 2014, 2016;2018/19; Zimbabwe Human Development Report, 2017; ZimSTAT, 2012,1015)
	Journals(*Iliffe*, 1999; Manyena, 2006; Bongo *et al.*, 2013 Lunga, W. & Musarurwa, C. 2016; Mutasa, 2020);
	Newspapers (The Patriot; TheSunday Mail;The Independent)
	NGOs reports (Dengu and Moyo, 2012; CARRI Report. 2013)
	Policies (ZimASSET, 2012; GoZ, 2013
	UN reports and briefs UNDP, 2002; FAO *et al.*, 2019; WFP, 2016.

Literature review also provided insight into past and current FS efforts, challenges, statutory and regulatory frameworks and principles related to FS on which the construction of the framework could rely. This review helps put the study into context and to acquaint and sensitise the researcher with the sustainable livelihood assessment phenomenon. Furthermore, the areview served as a benchmark for comparing the results of a study with other findings from interviews and observations. Therefore, the review helps determine the concepts and theories

that provide the foundation of the study. The section that follows reviews observation, the second data collection technique for this study.

6.2.1.2 Observation

The researcher used non participatory observations to obtain insight into local dynamics and other processes during fieldwork. During observation, the resaecher jotted notes that include temporary reminders such as abbreviated words or phrases of what was happening as the study unfolds. These notes were used later to construct full fieldnotes. Some direct observation notes included a great deal of concrete detail about the physical setting, the people in the setting, interactions, and activities taking place in the setting. Analytic memos were also written while still in the field to aid the process of analysis. Observation gave the researcher an opportunity to understand aspects that could not be captured by the focus group discussions and questionnaire. Thus, the researcher was able to see and uncover various activities and practices in action, which participants do not express verbally. In this manner, the researcher was able to address the problem of the participants intentional and unintentional. The subsection that follows focuses on the questionnaire.

6.2.1.3 Questionnaire

Data were collected by way of questionnaire with key informants in a safe environment (see Section, 6.2.6). the questinnaires allowed the researcher to see the research topic from the perspective of the interviewees and to understand why they have a particular perspective (King *et al.,* 1994:14). The researcher conducted 45 key informant interviews at the participants' homes, schools, field offices and during workshops arranged by the DDCs and local authorities. The researcher assured the participants (see Section 6.2.6) that confidentiality will be respected and guaranteed. The study participants signed consent forms to ensure that ethical guidelines were observed.. These participants were pivotal to this research for the depth they brought into the study, for example by leading decision-making institutions, institutional gatekeepers and custodians of communities, knowledge and technical expertise and experience in the implementation of development projects. The questionnaire was was preferred for its flexibility to and ability to reach a wide geographic area. **(**De Vos 2002; Burns & Grove 2003 and Cresswell, 2014). To overcome the weakness of the questionnaire, the researcher administered the physical ditributed and colleted the questionnaires. This minimised the risk of unattended or unanswered questionnaire. the questionnaire focus on SL projects and FS resilience, assessment and issues that address research questions. The questionnaire for NGOs and key

informants contained questions that could easily be adapted to interviews. The researcher made notes and audio-recordings during the interview, or later, depending on the situation at hand. The purpose of questionnaire for key participants was to get their perspectives on:

- Sustainable livelihood assessment and its purpose;
- The vulnerability context of communities and livelihoods;
- FS situation and coping strategies;
- Livelihood projects implemented by the organisation and aims;
- Influence of livelihood projects on communities, environment, FS and memories induced;
- Structures established by the organisation and experience with livelihood projects;
- Assessment practices, participation, challenges, frequency, DRR linkages and stakeholders;
- Institutional assessment models/approaches and capacity to do assessments;
- Outsourcing consultants, merits and demerits;
- Indicators/parameters for a multi-sphere assessment framework for Zimbabwe;
- Merits and challenges for adopting a multi-sphere impact assessment framework, assessment-related annotations.

To ensure validity and reliability of the study, focus group discussions were used in conjunction with other data collection tools such as document analysis, observation and semi-structured interviews.

6.2.1.4 Focus group discussion

A focus group is a carefully planned discussions designed to get the perceptions of participants on a defined area of interest in an open, non-threatening environment (Krueger, 1988:18). According to Powell, Single and Lloyd (1996:499), FG denotes a group of individuals selected and assembled by researchers to discuss and comment on the topic that is the subject of the research from a personal perspective. In the focus group discussion the researcher initiated and carefully planned the discussion with selected experienced individuals in the area of interest in a free and safe environment. The researcher used the focus group research to draw on respondents' attitudes, feelings, beliefs, experiences and reactions in a way that would not be feasible using other methods. Focus groups elicit a multiplicity of views and emotional processes in a group context in comparison to individual interviews. Furthermore, FGDs enable

the researcher to gather a larger amount of information in a shorter period of time (Bless & Higson-Smith, 1995:113). Therefore, the advantage of FDG over other data collection methods is its ability to draw various attitudes, feelings, beliefs, experiences and reactions from a wide geographical area in a short period of time. They are ideal for exploring the degree of consensus on a given topic (Morgan & Kreuger, 1993).

The researcher visited the respective district offices through the DDC's office to meet the participants to explain the background of the study and to request their participation. An information letter was given to participants who indicated a willingness to participate in the study. This letter contained information on the study in question, what a focus group interview was, the aim and outcome of the focus group interviews and what was required of each participant. The respondents from government departments and NGOs were mixed deliberately to ensure that various dynamics at all levels were identified and discussed simultaneously.

All the focus group discussions was audio-recorded with the consent of all participants for transcribing purposes. The researcher served as moderator and a facilitator for each interview. As a moderator the research gave each participant an opportunity to freely express their views, curtailing dominance of discussions by opinion leaders or gender groups. Each district under study had one focus group discussion, which ranged from 6 to 13 participants. A total of 40 persons participated in the four focus group discussions. FGDs members comprised of government participants, district development coordinators, district agricultural extension officers, EMA, MoHCC representatives, Ministry of Youth and Women Affairs, NGOs, social welfare officers, RDC representatives and the Public Service Commission and police. The researcher asked participants to choose the day and place for conducting focus groups discussions. The researcher gave the participants issues to be discussed by the focus group (see Annexure D). Each focus group interview commenced with a brief introduction of all the respondents and their function within SL, FS, resilience and project assessment practices. The researcher highlighted the purpose and procedures of the focus group interview. The level of participation by the members improved due to the usage of local languages, for example IsiNdebele. The focus of focus group discussions was on the following:

- Livelihood construction and livelihood use to achieve FS;
- Influencing DRR policy, community livelihood projects;
- Community perception on livelihood projects and their impact on communities;
- DRR structures and systems, approaches used by districts;
- Coverage of the livelihood's projects, livelihood assessment practice in the district;

- Livelihood assessment, DRR links, and assessment-related challenges;
- Practices to be included in the proposed multi-sphere assessment model;
- Merit and demerits of adopting a multi-sphere assessment model.

The focus group discussions concludes the discussion on the selected methods of data collection. In Section 6.2.2 the selection of the study area is explained.

6.2.2 Selection of the study area

The selected districts are Bulilima, Gwanda, Mangwe and Umzingwane. These districts are in the Matabeleland South province in Zimbabwe. The districts are similar with respect to social and cultural aspects and rich in opportunities to observe the positive and negative aspects related to FS and sustainable livelihood initiatives closely. The study area is prone to various hazards like drought, insect infestation and animal diseases throughout the year (Risiro *et al.*, 2012). In the table below, the percentage indicated denotes the level of susceptibility to a given hazard. The bigger the percentage, the higher susceptibility levels. Table 6.1 is an extract from national level rankings of hazards on the Mean Hazard Index.

Table 6.2: Study districts mean hazard index

Rank	District	Drought and dry spells	Floods	HIV/ Aids	Cereal prices	Crop pests and diseases	Animal diseases	Diarrhoeal diseases	Mean Hazard Index
6	Mangwe	34.09	0.37	7.20	16.19	12.74	23.78	5.63	**0.6670**
7	Gwanda	31.99	0.26	8.75	16.23	15.07	23.02	4.68	**0.6522**
9	Umzingwane	38.32	0.10	11.54	17.80	13.09	16.50	2.65	**0.6432**
12	Bulilima	38.96	0	8.56	16.02	9.09	19.25	8.12	**0.6328**

(Source: UNDP, 2016:63)

Communities in Bulilima, Gwanda, Mangwe and Umzingwane indicate varying vulnerability levels due to the varying severity of hazards. Districts are ranked from the highest mean in terms of their susceptibility to hazards. At a national level, Mangwe is ranked 6th with a mean index of 0.667, Gwanda is 7th mean index of 0.652, while Umzingwane 9th with a mean index of 0.643, and Bulilima 12th with a mean index of 0.633 (UNDP, 2016:60). Ranking is out of 61 districts of Zimbabwe. In the context of this study, Mangwe has the highest mean hazard, while Bulilima has the lowest. Various factors presented in this table were considered in the selection of the study areas. The first consideration was their geographic location and their susceptibility to various hazards. According to the UNDP (2016:58), the western and southern

parts of the country suffer the effects of multiple hazards. The main hazards are drought, floods, HIV/Aids, cereal prices, crop pests and diseases, animal diseases, diarrhoeal, and diseases. Droughts and floods come as a direct result of climate change and are the most prevalent in the districts under study (Nangombe, 2015:1, Bhaiseni, 2017:26 and WFP, 2017:5). The second consideration was being perennial recipients of humanitarian assistance and beneficiaries of the implemented sustainable livelihood projects over the years. The issue of hazards that affect communities enjoy much attention in Section 3, while sustainable livelihood initiatives are covered in Section 5.2.4. The next section reviews the population of the study.

6.2.3 Sampling

The population in a study refers to all elements or a set of objects that the research study focuses on. These elements possess certain characteristics that meet the criteria for inclusion in a study, which the researcher identifies and determines (Bless & Higson-Smith, 2000:84; Burns & Grove 2003:43). Purposive sampling was adopted for the study. Purposive sampling was chosen to develop a rich or dense description of experiences regarding SL, resilience, FS and assessment. A purposive sample size of 85 was informed by technical recommendations on sampling in research put forward by De Vos, (2002). There were 45 semi-structure interviews, and four focus group discussions (FDGs) with five to 12 participants each. Considering the amount of time needed to carry out interviews, code data, transcribe it and come up with emerging issues, it was determined that 85 participants are an appropriate sample. The area of study comprises of four districts (see Section 6.2.2) with a combined total of 83 wards (ZimStat, 2012:116-121). Each district has one DDC, a minimum of two chiefs or more depending on its size, and each ward has a councillor. The target population of this study comprised of male and female participants who have been involved in the government or NGOs that implemented SL, FS programming and assessment (NGOs and government departments), for example district coordinators' rural district chief executive officers, district Agritex officers, EMA, heads of schools, NGOs and chiefs in four districts under study. Since the study's aim is to develop a multi-sphere livelihood assessment framework, the respondents who had knowledge and had taken part in implementing livelihood projects were included. The inclusion and exclusion criteria in this study is explained in Section 6.2.3.1.

6.2.3.1 Inclusion and exclusion

Sampling involves choosing a subset of the population or target population to participate in a study (Burns & Grove 2003:233; Polit & Hungler 2004:290). Sampling takes into consideration decisions about settings, people, events, social processes and behaviours that are observable (De Vos *et al.,* 2002; Rubin & Babbie, 2012). The researcher used purposive and snowball sampling procedures to select research sites and participants from an entire population (see 6.2.3). The study participants were selected from multiple sectors and various disciplines. The researcher ensured adherence to ethical standard by obtaining their informed consent and ensuring anonymity and/or confidentiality (see Section 6.2.6). The sample selection depended on their involvement at various levels of the government and expertise in SL, resilience, FS and assessment (Polit & Hungler 2004:294), including a range of perspectives. The participants that were included met the eligibility criteria set for the study. Eligibility criteria are the conditions for inclusion in the sample of the study (Polit & Hungler, 2004:290). A total of 45 questionnaires were administered to key informants from various fields for their years of experience and expertise in implementing and assessing livelihood projects, FS and an ability to contribute to the development of an all-inclusive live livelihood assessment framework.

The eligibility criteria of this study were as follows: District development coordinators were included for their positions and experience in coordinating all development and DRR initiatives in the districts. District agricultural extension officers were included on the basis of their expertise and experience with coordinating and assessing all Agricultural livelihood projects and FS. The District Environmental Management Agency officers were included for their expertise in environment and climate change issues. NGOs were included for their all-round expertise, experience and passion for programme design, and their implementation and monitoring of end evaluation of various developmental and humanitarian projects. The chiefs were included by virtue of being custodians of communities and having great involvement in development issues while for councillors it was for their involvement in development programmes at ward level and for their close proximity to communities. Heads of schools were included on the basis of their administrative role and experience with implementing school feeding programmes, while RDC CEOs were included by virtue of their administrative experience and expertise in the area of rural development. Those who were excluded were all persons who work in the communities, development and DRR sectors, but with less than one year of work experience.

Therefore, the reason for exclusion were limited work experience and not holding any leadership position in their communities. The defined scope in this context is the custodianship of communities, knowledge, experience and expertise in the field of study. A purposive sample size of 85 was informed by technical recommendations on sampling in research put forward by De Vos, (2002). There were 45 semi-structure interviews, and four focus group discussions (FDGs) with five to 12 participants each. The section below presents data collection analysis adopted by the study.

6.2.4 Data collection and analysis

In order to ensure a well-coordinated data collection process, the researcher drew a plan from the research questions (see Section 1.5). Thereafter, checks were done to verify the availability of data to address the research questions to determine the amount/quantity of data on clear patterns and trends frequency. After determining the quantity of the needed data, collection methodology, measurements, instruments and the location and source of data was established. The decision was made on what to measure (sample or the whole population) and the sampling methodology. Last but not least, data were collected, analysed and presented.

6.2.4.1 Interview procedure

In order to ensure the recording of all participants' responses, notes were taken and an audio-recorder was used with the consent of participants (see Section 6.2.6). Interviews were conducted in the offices of various government departments, NGOs, schools and homesteads respectively (see Section 6.2.31). A copy of the interview schedule and the contact details of the researcher was provided to each interviewee for possible future enquiries. In addition to the interviews, focus group discussions were conducted at the DDC's offices. The collection of empirical data commenced on 10 October 2019 and ended on 13 January 2020. To ensure order in the field, certain measures were taken, such as training on research ethics, questionnaire administration, data capturing, field work protocols, resources management, among others.

6.2.4.2 Data analysis

Data analysis is a process of bringing order to the data, organising what has been collected into concepts, categories and basic descriptive statements (Patton, 1987:144). The intent of the analysis was to organise the data into a meaningful, individualised interpretation or framework that describes the phenomenon studied (Burns & Grove, 2003:29). Audio-recordings of focus group discussions and interviews were transcribed in the language in which they were held. Meanwhile, empirical data collected using the methods reviewed in Section 6.2.1 were reduced

and organised to produce findings that required interpretation by the researcher (De Vos, 2002:339; Burns & Grove 2003:479). A comparative analysis of empirical evidence from various participants and document sources was used to capture different dimensions of the same phenomenon. The data gathered through focus group discussions and in-depth interviews were subjected to cleaning, transcribing and the use of qualitative tools that will then be used. Qualitative data analysis was employed by the researcher to come up with themes and to identify patterns in the data (Willig, 2014:147). The researcher used QSR NVivo, a qualitative computer data analysis programme to assist in analysing the data. This analysis programme is faster and more efficient than hand-coding and can facilitate comparison of different codes. Analysis was done to establish order, structure and meaning to mass collected data and to present it in a systematic manner (De Vos *et al.,* 2011:96; Archer, 2018:3). Therefore, this process ensures a coherent, consistent, holistic and quality focused approach that advances constructive research findings and deductions. The data were analysed according to the eight steps of data analysis as outlined by Tesch (1990:142-145):

- Thoroughly read and make notes of all transcribed material;
- Consider the substance of interviews conducted by looking for the underlying meaning;
- Compile a list of all topics that came to the fore in the research;
- Cluster these topics;
- By using a clustered list, once again consider the data. Code the topics and correlate coding with data (Chapters 2, 3, 4 and 5 were coded);
- Elaborate on the topics with the aim to turn them into certain categories to determine interrelationships;
- Make a final decision on the coding of the categories and alphabetise the list;
- If necessary, recode existing data.

Data were subsequently grouped and analysed according to accepted scientific practices. The transcribed data from the focus group discussions and in-depth interviews were subjected to qualitative analysis to determine links. Qualitative analysis sought to determine the relationship between theories, themes, relationships, perceptions and the preferences of participants. The participants were traditional chiefs, GoZ departments and NGOs and focus, groups. Mind-mapping was used to reduce data collected from focus group discussions and in-depth interviews. This analysis allows for the organisation of data into ideas, trends and patterns to come up with relationships that are easy to understand. Thus, Tesch's analysis provided the

backbone for the development of the study's different themes and categories. The conclusion of the analysis component paves the way for review efforts to ensure validity and reliability.

6.2.5 Validity and reliability

Due to the nature of the phenomenon under investigation, it was imperative that all respondents understood sustainable livelihood and FS resilience, assessment and DRR. The research ensured the credibility of a methodology and outcomes point of view by testing focus group and key informant reports against the theoretical chapters of the research (see Chapters 2, 3, 4 and 5). The use of more than two data collection methods as discussed in Section 6.2.1 helped verify what facts had been obtained by using another method. This was a significant contribution to the validity and reliability of the study. Follow-up interviews ensured the trustworthiness of the process. Cross-verification of more than two data sources and the subsequent use of various data collection instruments contributed to the validity and reliability of the research. This ensured that checks and balances between different sources of data were in place (see Annexure D). Having reviewed the issues of validity and reliability, it becomes imperative to review how ethics issues were addressed om the study.

6.2.6 Ethical considerations

Ethical issues were addressed before going into the field to gather data (see Annexure G). This included autonomy, consent, confidentiality and anonymity, respect and dignity, the dissemination of results, voluntary participation and the right to withdraw from the study. Taking cognisance of these issues ensured that participants were not harmed (Patton, 2002:408–409), in any way, whether physically and mentally (Creswell, 2013:58–59). The researcher did what was right in the context of Zimbabwe, by simply following the laws, prohibitions, prescriptions and norms. First the researcher obtained ethics approval (NWU-01665-20-A9) to carry out the study on human subjects from NWU ethics committee. Before the commencement of the field work, the research assistants were oriented on observance of ethical issues during data collection. To ensure adherence to and the observance of ethical guidelines, the researcher sought permission to conduct research from the provincial administrator of the Matabeleland South province of Zimbabwe (see Annexure E). Permission to conduct research in the study was granted (see Annexure F). Furthermore, the researcher organised meetings with government officials in the provinces and districts to explain the purpose and importance of the study in the participants' language to acquaint them with its terms of reference. Before and during data collection, the consent of the participants was sought

and they were informed that they could withdraw their consent at any point. Data sets were accessed through permission from respective PA and DDCs' offices, who were the gatekeepers. Political and traditional leaders were also contacted to seek permission to conduct transects walks on their land to take photographs. The researcher sent introductory emails explaining the background of the study and the need for participation to prospective participants, while face-to-face meetings were arranged with those without emails. Respondents who indicated willingness to participate in the study were given consent vorms, which they signed.

From the onset and throughout, the researcher explained the main purpose of the research and assured participants that the ethics guidelines will be followed. Participants were assured that the information they provided was solely for educational purposes and that confidentiality will be maintained. Participants were also given the right to opt out of the study should they feel that the issues being discussed were against their conscience. Those who opted to participate in the study signed consent forms that addressed ethical issues after reading through them. A checklist or a consent form or both ensured that ethics guidelines were observed (see Annexure G). These procedures had to be done, since the research intruded into people's lives during data collection. This intrusion was in the form of interviews and observations, involving personal and interpersonal interactions. Research methodology would be incomplete without the exploration of the limitations and delimitation of this study.

6.2.7 Limitations and delimitations

The findings of this study have to be seen in light of some limitations. The first limitation is the research design adopted by the study. Since the underlying idea of the interpretivist approach is that the researcher is part of the research and interprets data, he can never be fully objective and removed from the research. Therefore, the approach has strong elements of selectiveness and subjectivity. The second limitation is the scope of the sample, time and geographic area. The researcher was forced to limit the observations/study to a part of the population (Section 6.2.3–6.2.4) and geographic area (see Section 6.2.2). It was physically impossible to obtain information from the entire population due to limited resources and time. The third limitation bears reference to serious economic challenges that resulted in energy and power challenges and which affected the study's field work, especially the data collection process. Hence the rescheduling of appointments and an elongated data collection period.

The delimitations of the study bear reference to the scope and sampling of the study. The study was narrowed to cover four districts, namely Bulilima, Gwanda, Mangwe and Umzingwane in agro-ecological regions IV and V (see Map 1, Section 1.3) on the basis of their geographic location, high susceptibility hazards and being perennial recipients of humanitarian assistance. Some of these hazards are drought, floods, HIV/Aids, cereal prices, crop pests and diseases, animal diseases, diarrhoeal, diseases. The inclusion and exclusion criteria of participants were based custodianship of communities, knowledge, experience and expertise in the field of study (SL, assessment, resilience, FS and DRR) and purposely excluded those without such attributes. However, the limitation and delimitation did not impede the achievement of the research objectives. The section on the limitations and delimitation of the study concludes the corpus of the research methodology.

6.3 CONCLUSION

This chapter outlined the research design and methodology. A specific research design was identified to ensure the accomplishment of the main aim of this study, namely the development of a multi-sphere assessment framework for FS initiatives in Zimbabwe (see Section ~~1.6~~). The research design and methodology helped lay a framework for the study from which the researcher chose appropriate models for data collection and process. Eligibility criteria for participation in the study were determined on the basis of being custodians of communities and having experience and expertise in SL, resilience, FS and assessment. As such, the sample was drawn from the DDCs, NGOs, traditional leaders, and various government departments. The engagement of various data collection techniques helped cater for the validity and reliability aspects of the study. Therefore, to ensure coherence, consistency, quality and constructive research findings and deductions, data were subjected to qualitative analysis. Overall, this study was structured around the qualitative research design, population sampling, data collection and analysis, ethical considerations, validity and reliability, limitations and delimitations of the study. Chapter 7 presents the empirical data and analyses, describes and interprets it in a systematic manner.

CHAPTER SEVEN

EMPIRICAL RESEARCH FINDINGS AND ANALYSIS

7.1 INTRODUCTION

The preceding chapters laid the foundation for the methodology of the empirical investigation that follows in this chapter. Theoretical underpinnings from Chapters 2–5 formed the basis for assessing the influence of sustainable livelihood projects on FS resilience levels in Bulilima, Gwanda, Mangwe and Umzingwane districts of Zimbabwe. This chapter addresses research objectives 4 and 5 stated in Chapter 1 to reach the main aim of the study, which is "to develop a comprehensive assessment framework". The framework will guide the assessment of sustainable livelihood projects that ensures FS and resilience. The empirical findings and analysis emerging from focus group interviews, observations and semi-structured interviews are presented in the sections to follow.

7.2 EMPIRICAL RESEARCH FINDINGS

Empirical research findings provide a clearer perspective of SL assessment in the respective districts. In order to ensure a constructive report on the findings, this section systematically discusses the participants' responses to the research questions posed in Section 1.5 and Annexures A, B and C. The study participants' eligibility criteria to participants' in this study is described in Section 6.2.3.1 in Chapter 6. At the outset, an overview of the characteristics of participants' is presented in a tabular form showing occupations, gender and age categories. Table 7.1 summarises the study participants' characteristics.

Table 7.1: Participant characteristics

Category of participant	Gender		Total	Age Group
	Female	Male		
Agritex	2	2	4	18-35 years (29)
Chief Executive Officer	0	4	4	
Chiefs	0	5	5	
Councillors	1	5	6	
District Development Coordinator	2	2	4	36-50years (32)
Environmental Management Agency	3	2	5	
Focus Group Discussion	20	20	40	
Non-Governmental Organisation	1	5	6	
School Principals	8	3	11	>51 years (24)
Total	**37**	**48**	**85**	

A total of 85 respondents with three distinct age range categories participated in the study. A total of 29 respondents were aged between 18 and 35 years, while 32 were in the 36-50-year-old range, and 24 were over 51 years old. The average age of the study participants was 31 years, and the oldest participant was 84 years old. The older participants were very significant to the study as they were mature and experienced and could provide rich input into the study. The elderly participants had accumulated knowledge and experience over time in their respective communities. Gender representation in the study was 45% females and 55% males. The research established that the chiefs, headmen and councillors were mainly males in all the districts, except for Mangwe, which had a female councillor. However, in the Department of Education, the proportion of female school principals was higher than males in all the four districts. Out of the 11 that were interviewed, nine were female, translating to 82% representation. This could be attributed to Zimbabwe's drive to promote gender parity in all positions of influence. However, with regard to the district development coordinators in the four districts, gender representation is balanced at 50% male and 50% females. Therefore, the larger number of males in the traditional leadership category attests to the fact that the patriarchal systems are well embedded in Zimbabwe's rural communities. This results in a continued male dominance in leadership roles. Having reviewed the participants' characteristics, the discussion turns to the emerging themes from the study. The next section elaborates on the emerging themes that emanate from the empirical research findings and already considered frameworks.

7.2.1 Emerging themes

After a detailed analysis following the procedures explained Section 6.2.4 of Chapter 6, the empirical data yielded components from which themes were derived. The themes articulated are used to justify the development of a multi-sphere assessment framework for sustainable livelihood projects in Zimbabwe (see Chapter 8). Furthermore, these themes complement SL strategies, which are reviewed in Chapter 2, 3, 5 and the guiding criteria for assessment, discussed in Chapter 4. The emerging themes guide and structure the argument in the respective categories as outlined in Table 7.2.

Table 7.2: Themes

Themes	Categories
7.2.1.1 Sustainable livelihood assessment	• Conceptualisation of sustainable livelihood assessments • Livelihoods construction • Components of sustainable livelihood assessments
7.2.1.2 Stakeholder commitment	• Legal and regulatory framework • Political support • Institutional structures and systems
7.2.1.3 Finance and resources	• Finance and resources
7.2.1.4 Assessment principles and standards	• Assessment principles and standards
7.2.1.5 Multistakeholder approach	• Stakeholder analysis • Community participation
7.2.1.6 Disaster risk reduction	• Hazard assessment • FS analysis and coping strategies • Disaster risk reduction initiatives for sustainability • Impact of livelihood project on beneficiaries and communities
7.2.1.7 Knowledge production and management	• Knowledge production and management
7.2.1.8 Sustainable livelihood assessment process	• Assessment procedures/processes • Current livelihood assessment practice • Livelihood assessment-DRR linkages • Assessment based challenges • Merits and demerits for adopting the multi-sphere assessment model • Assessment-related annotations • Components of a multi-sphere assessment framework

7.2.1.1 Sustainable livelihood assessment

Sustainable livelihood assessment practices were probed by interrogating participants' perception of SL and its purposes, livelihood construction, and the identification of prevalent livelihoods by district. Participants' ability to identify and link aspects of assessment to their environment was also scrutinised during interviews and focus group discussions. Testing participants' conceptualisation of the term helped clarity their basic understanding and ensure uniformity.

- *Conceptualisation of sustainable livelihood assessments*

Questions 5, 7 and 8, in Annexure C, interrogated the participants' understanding and conceptualisation on SL assessment. The questions posed were: *Have you ever been involved in sustainable livelihood assessments? What, in your opinion is sustainable livelihood assessments? What has been the aim of carrying out sustainable livelihood assessment in your*

region? Clarity on the basic understanding of sustainable livelihood assessment was key to ensure a uniform understanding among participants. Figure 7.1 summarises participants' perceptions of SL assessment.

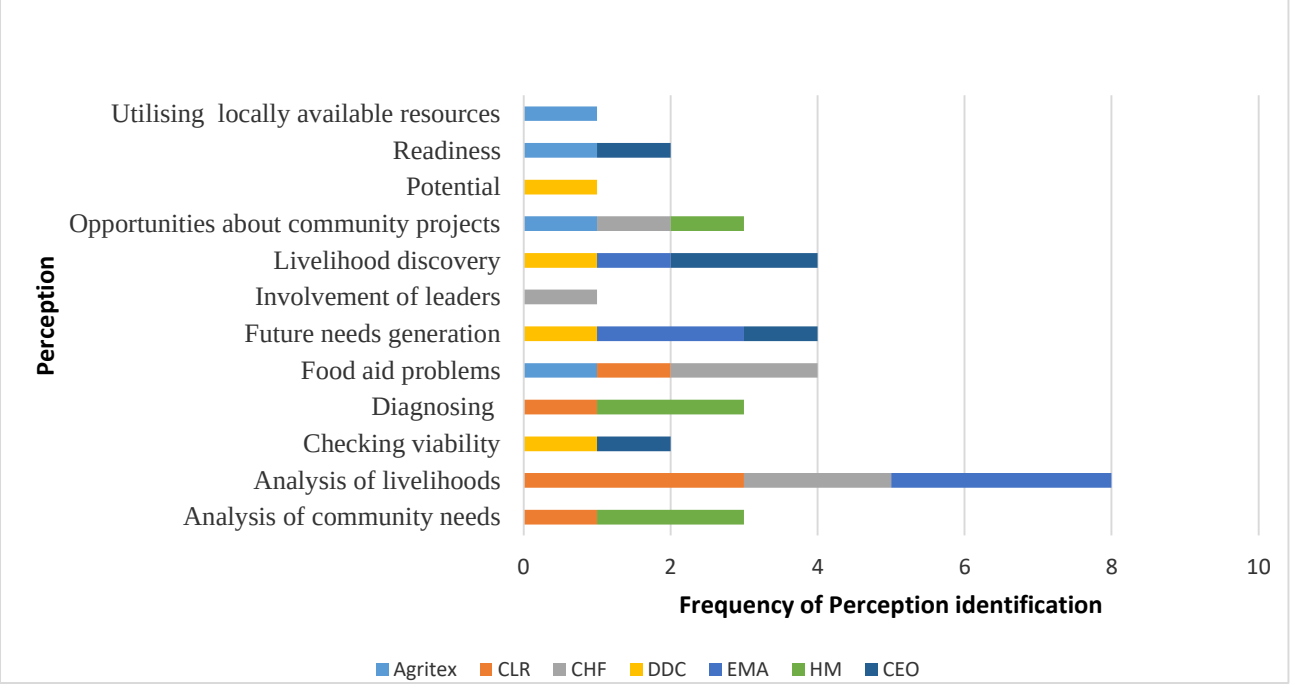

Figure 7. 1: Participants' perception of sustainable livelihood assessments

Key: Agritex: Agricultural extension services, DDC: District Development Coordinator, EMA: Environmental Management Agency, HM: Headmaster, RDC CEO: Rural District Council Chief Executive Officer.

Sixty-six per cent (66%) of the participants in the four districts indicated that they had been involved in SL assessments, while 34% could neither confirm nor deny involvement. This attests to the diverse definitions given on sustainable livelihood assessments. One of the most significant findings of the research is that "sustainable livelihood" is not clearly understood, while, "assessment" is understood variedly across disciplines and levels of responsibility. The aspect of SL proved to be more problematic than anticipated as most participants failed to explicitly address it, save for one EMA officer who defined sustainable livelihood assessment as an:

"analysis done to check the livelihood programme's ability to meet the future needs of generations and also checking livelihood options that are available and their ability to assist in the long run" (Interviewee 38).

This view resonates well with that of Investopedia (2020), which emphasises the aspect of meeting the needs of the present without compromising the ability of future generations to meet their needs. Conversely, the responses given by other participants clearly indicated a limited understanding of the concept vis-à-vis definitions given in Section 2.2.2. These definitions emphasise the aspect of meeting the needs (economic, environmental, and social) of the present without compromising the ability of future generations to meet their needs.

The empirical findings indicate that people's understanding of livelihood assessment varies across disciplines and levels of responsibility. The chiefs, councillors and headmasters view assessment as an analysis and diagnosis of community needs, livelihoods, food aid challenges and involvement of leaders. Their perceptions and diction indicate the frequency of their interaction and involvement in projects in their communities. Equally, Agritex, DDC, EMA, HM and RDC CEOs' view assessment as an analysis and diagnosis of opportunities, potential, preparedness levels, utilisation of locally available livelihoods, viability levels and needs of future generations.

Thus, all the interview participants agreed that assessment involves analysis and diagnosis, though they differed on what is being assessed. Therefore, the interpretation of the terms and their application varies considerably. Summed up, the given definitions resonate well with the definitions by Chambers *et al.* (1981:1), the Austrian Development Agency (2008:4), Bamberger (2012:2) ad Elizondo (2015:4) (as discussed in Chapter 4 of the thesis). The term is defined as a systematic and empirical investigation of the effects of an intervention on a system or entity's (livelihoods) resource productivity on a long-term basis.

The study found government functionaries displaying a good grasp of interpretation and understanding of the concepts. This could be attributed to their many years of practice, experience and higher educational qualifications in the field of DR. Figure 7.2 presents the aims for carrying out sustainable livelihood assessment as presented by participants.

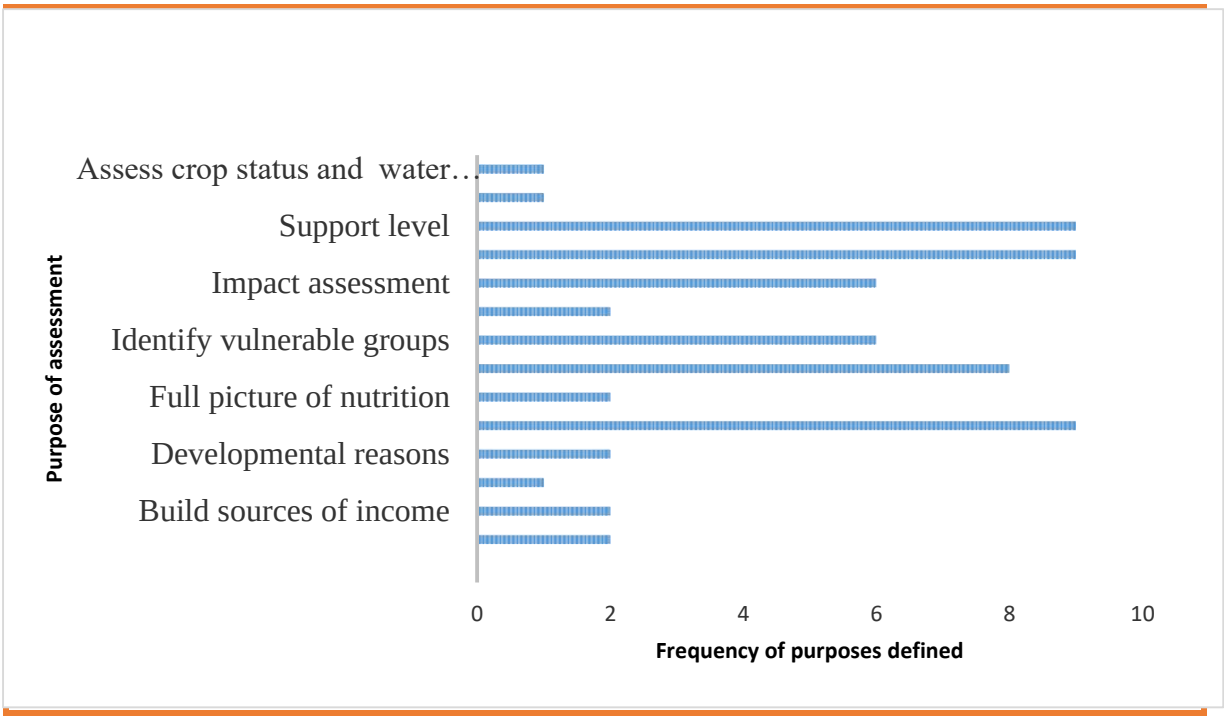

Figure 7. 2: The purpose of carrying out sustainable livelihood assessment

The empirical findings on the purposes of assessments based on interviews and FGDs show varied views. The purposes given were to get a full picture of food insecurity, determine support level, gather information, identify gaps that exist in livelihoods, assess the impact, and identify vulnerable groups. These were inconsistent with those propounded by White (2009:3), Terrell (2012:258) and Brown (2012:4) as discussed in Chapter 4, "to identify the actual outcomes of a programme, to explore the how and why of the programme outcomes and to bring understanding of the success or failure and provide direction for programme improvement". It can be assumed that a lack of uniformity in understanding the purpose of assessments indicates the need to make capacity-building, training and education and stakeholder participation a permanent feature. This could promote a correct understanding and application of the terms, thereby significantly contributing to the expansion of the multisectoral knowledge of the DRR practice. Section 7.2.2 scrutinises the participants' knowledge levels on how communities construct their livelihoods.

- *Livelihoods construction in the four districts*

Livelihood construction is a practice through which community members use various means to construct livelihoods for survival. This section presents the respondents' general understanding of the most common ways that communities use to construct their livelihoods

across the four districts (see Annexures B3 & C12). Interviews with key informant were meant to identify community livelihoods by district. The four districts studied have various livelihoods as presented in Figure 7.3.

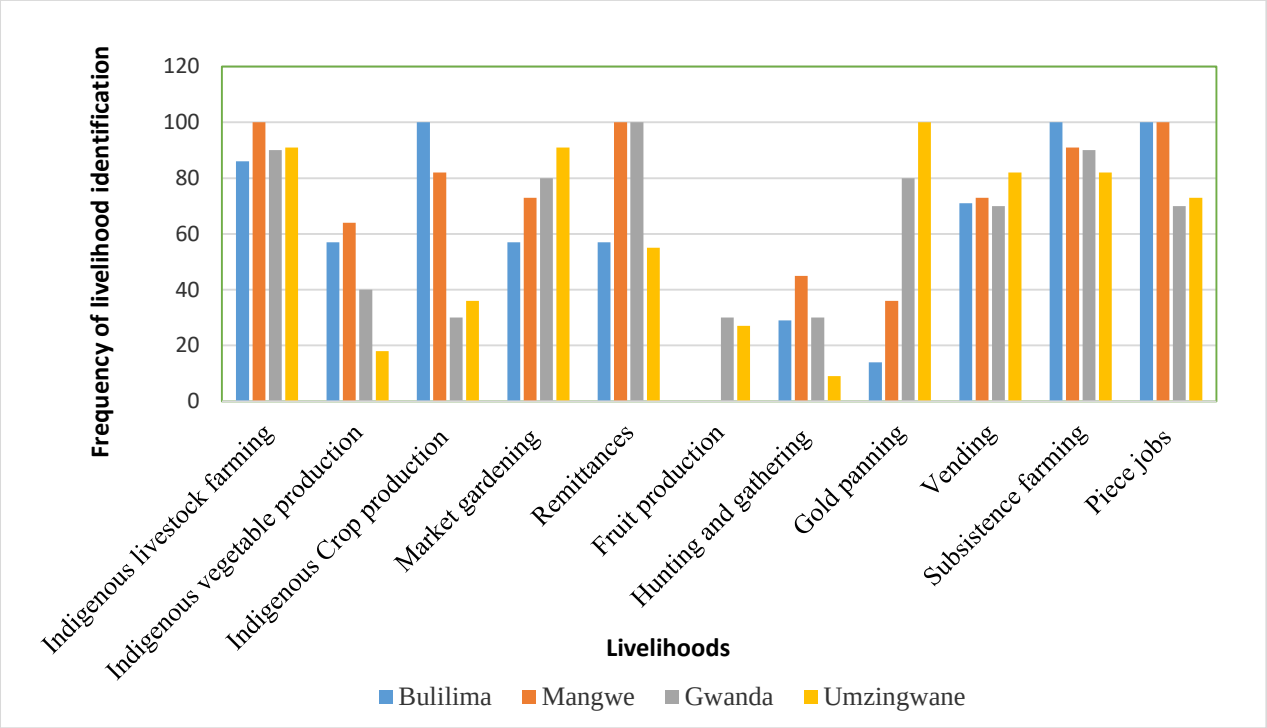

Figure 7. 3: Livelihoods construction by district

The findings indicate that the most prevalent livelihoods in the four districts are subsistence farming and livestock farming. Of the four districts, Bulilima has the most subsistence farming, while Mangwe has the most livestock farming. The indication is that livestock production is a significant component of livelihood and FS. Therefore, the attachment that communities have with livestock indicates the economic and religious values ascribed to livestock. Furthermore, interview participants (key informants) indicated that piece jobs were prevalent in Bulilima and Mangwe district. The interview participants indicated that vending has become the main livelihood source for Mangwe and Umzingwane, while mining was done in Gwanda, Mangwe and Umzingwane. Mining was also affirmed by FGDs in the three districts. However, the study found illegal gold panning to be the most prevalent form of mining in especially in Umzingwane. Gold panning as a livelihood approach directly contradicts the ethos of sustainability (protecting the environment and improving environment management) as discussed in Chapter 2 (Section, 2.2.2). Gold panning and poaching result in environmental degradation, which has the propensity to affect the livelihoods of future generations.

Focus group discussions advanced that districts adopt vast means to construct the livelihoods. In Bulilima district, one FGD participant observed*:*

"Members of our communities make their livelihoods through many activities, like nutritional gardens, village savings and lending, receiving remittances in the form of money or groceries, subsistence farming, crafting, brick moulding and livestock."

However, in Gwanda, FGDs revealed that communities do agricultural activities, gold panning (*isitsheketsha* in Ndebele), selling and cross-border trading to construct their livelihoods. In the Umzingwane district, the indication was that communities make a living from gold panning, vending, livestock and low-scale poultry farming, stone and wood carving, remittances, commercial farming, cattle fattening and dairy farming. Likewise, in the Bulilima district people in Mangwe produce livestock, do cross-border trading, do vending, sell firewood, mould bricks, trade currency and receives remittances for a living. Drawing from this discussion, there are commonalities in the way communities construct their livelihoods across the four districts. For example, market gardening and nutritional gardens are a common activity in Bulilima, Gwanda and Umzingwane. Through transact walks in the districts, the researcher observed brick moulding, carvings and crafting, and cross-border trading activities in Bulilima, Mangwe and Umzingwane. The researcher also observed that illegal currency trading has found its way into the lists of livelihood sources, especially in Gwanda and Mangwe. These observations affirm the findings revealed through interviews and FGDs, alluded to in the paragraphs above. The assumption is that currency trading in Gwanda and Mangwe districts is due to their proximity border towns and the availability of foreign currency from remittances.

FGD participants revealed that communities use their livelihoods to achieve FS in various ways. Communities that are into livestock production use them as draught power, as well as a manure source to improve soil fertility for increased agricultural output. At the same time, livestock provides meat, milk, and money if sold. For example, in Gwanda district a FGDs participant observed:

"*Other livelihoods like gold panning and nutritional gardens are self-explanatory, the proceeds they get they consume them, meanwhile surplus is sold and income used for other purposes".*

The indication is that those involved in various livelihood activities sell their produce and get returns that they use to buy other food varieties. This to a certain extent addresses the nutrition aspect of FS (Section 3.3). Furthermore, they advanced that they use their returns to procure

various buy productive assets, pay school fees and so forth. An assumption that can be derived from the above is that the level and degree of comprehension of SL is the determining factor in terms of the prominence, commitment and approach to the process and its results. Having reflected on the community's livelihoods, the stakeholder commitment level to sustainable livelihood assessments is discussed next.

7.2.1.2 Stakeholder commitment

Stakeholder commitment was important to ascertain their commitment levels to see how they mobilise political systems and institutions, adopt policies, allocate resources and coordinate responses. In the context of this study, commitment depicts the stakeholders' expressed and budgetary will to engage and support sustainable livelihood assessment. The sections below review participants' awareness of stakeholder commitment in terms of the legal and regulatory framework, political support, and the institutional frameworks.

- *Legal and regulatory framework*

Empirical findings from interviews with NGOs indicate that participants are aware of the relationship between assessment and legal and regulatory framework. The NGOs expressed that they do assessments to comply with legislative and donor requirements. Interview and FGD participants indicated that the proposed multi-sphere assessment framework must be aligned with and informed by the laws and regulatory frameworks of the country (see Section 7.2.1.8). These findings indicate the value that participants attach to the legislative frameworks. Despite the high value attached to the framework, the assessment practice has not been fully supported by the government and its partners. The assumption is that limited support and commitment from stakeholders is the reason why assessments are done in an ad-hoc manner, despite the value they bring to DRR and sustainability. Having discussed the legal and regulatory framework, it becomes imperative to review the nature and degree of political support awarded to the four districts.

- *Political support*

Political support and commitment by all key stakeholders (the public and private policymakers, local community leaders), is key in bringing developmental change. Hence the need to assess stakeholder commitment levels in terms of actual execution and practice. Empirical findings from FGDs and interviews with participants revealed that the districts are incapacitated (financially and logistically), mainly due to limited political support by the government (see Table 7.7). In the same vein, 62% of the interview participants acknowledged that they had no

capacity do assessment, while 38% indicated they did have it (see Figure 7.7). Therefore, the inadequacy experienced in the four districts indicates a political commitment that has failed to translate into action. Equally, the level of political support directly or indirectly influences an entity's capacity to achieve its aims and objectives. For example, project assessment, documentation and archiving project information (discussed in Section, 7.2.1.7). The section that follows reviews the institutional frameworks and their role in promoting effective assessment.

- *Institutional structures and systems*

The Framework for DRR (ISDR, 2005) propagates institutional structures and systems as critical in guiding and monitoring DRR. These institutional structures and systems develop, build and strengthen communities' resilience to cope with disaster risks. The focus groups were asked to identify established structures and systems and to comment on their functionality, while NGOs identified structures and systems they had been established in communities. Meanwhile, NGOs were further asked to assess the functionality of structures and system and identify the beneficiaries (Annexure E number 2,7&8). Therefore, in this study, "structures and systems" denote intangible (institutional) and tangible (physical) structures used to reduce and minimise the impact of hazards. Table 7.2 presents the structures and systems identified by FGDs in the four districts.

Table 7.3: Structures and systems

Structure and system in place	Bulilima	Gwanda	Mangwe	Umzingwane
DRR Committees, teams	X	X	X	X
Asset Management Committees			X	
Bridges				X
Irrigation				X
Communication platforms				X
Early warning systems	X			

The focus groups and in-depth interview responses confirmed the existence of such structures within their districts and wards. The FGDs indicated that bridges and irrigation systems, DRR committees, asset management teams and communication platforms had been established in the districts. From the district meeting that the researcher attended, it was observed that civil protection committees and drought relief committees do exist and are under the auspices of the district development coordinators. Therefore, DDCs oversee and ensure that structures and

system work toward DRR in their districts. NGOs concurred with the FGDs findings and added student committees, support groups, farmer field schools, the lead farmer approach, support of bottom-up approach and intangible systems. With regard to the tangibles, NGOs indicated that they had set up nutrition gardens, waste collection facilities, market stables, and rehabilitated infrastructure such as dip tanks and boreholes in the four districts. NGOs and focus groups were unanimous on the establishment of committees but differed greatly on other components. Disharmony was observed on the records of implemented programmes. This exposition signals a conflicting angle where implementing stakeholders are aloof and not as actively engaged as they should be. Therefore, it poses serious contentions with respect to stakeholder engagement and commitment to DRR and documentation of initiatives.

On the functionality of the structures and systems, diverse responses were given. There was unanimity from all district FGDs that structures and systems help keep the districts informed about the situation on the ground. However, Umzingwane indicated that a communication platform has been set up. This agrees with the NGO-identified U-report information platform. One NGO observed:

"*This platform is currently used to transmit various forms of information. For example, DRR information, early warning awareness, weather forecasts, market forecasts and extension of information to communities*" (see Interviewee 45).

The FGDs findings indicated that in Bulilima district farmer groups and agricultural extension officers give advice on the approaches, disseminate early warning information, and give seasonal forecasts to communities. In the same vein, one participant observed: "*Asset management committees were performing much better than DRR committees"* (FGD 1). This member's view was generally accepted as the position of the district with regard to the functionality of committees. Meanwhile, the Gwanda district FGD observed the functionality of DRR structures, citing their use in saving the lives of Sibhula Village in ward 8 Gwanda, when it had been marooned by floods. One focus group member observed: "*The community used the structures to contact CPU in Harare to flag SOS, when Gwanda contacts were down, thus they were evacuated*" (see FGD 2). Despite the positive contributions alluded to above, Gwanda district teams are concerned by the fizzling out of DRR structures in the event of donor pull-out or project end. However, NGOs concurred that there are systems and structures in the areas of operation. This efficiency bears reference to community consultation, participation, the sense of programme ownership, efficient, fast, efficient and reliable communication platforms. The assumption is that communication platforms enhance information, thereby

keeping the district informed on DRR issues. An interview with an NGO officer revealed that, *"Promotion of gender equity was an efficiency indicator, as women have been empowered to occupy positions of leadership in DRR and Development committees"* (Interviewee 41). Furthermore, NGOs argued that training of committees in leadership skills and the subsequent adaptation of newly acquired skills and their use outside the project scope shows the efficiency of structures. Therefore, the functionality of structures in some and not all the wards, indicate the need to mobilise and engage communities and to set up structures and systems. Consequently, the existence of such structures creates a good platform for community awareness and transmission of information to cover a wider spectrum.

Interviews with NGOs identified the beneficiaries of the structures and systems as children, community members, the vulnerable, the vulnerable but viable, volunteers, women and youths. Varying reasons for targeting these beneficiaries were given. NGOs indicated that active youths were targeted for the sustainability of the projects, while women were included to eradicate poverty in their ranks, with a long-term view of ending the dependency syndrome. Therefore, the functionality and efficiency of these structures depends on the level of support they receive from relevant stakeholders. The following section reviews the finances and resources theme.

7.2.1.3 Finance and resources

Participants from FGDs and interviews proposed that the new assessment framework should be well resourced to ensure its capacity (control, finances, human and logistics) (see Section 7.2.1.8). Interviews with Agritex, councillors, chiefs, DDCs, EMA, RDC CEOs, NGOs and headmasters indicated the need for a budget/managed fund or finance plan to ensure the successful implementation of the assessment framework. Interviews with headmasters indicated the need for proper funding and an assessment budget by the government and NGOs. They indicated that the fund will be used to procure resources and the development of educational material. The DDCs in the four districts also affirmed the need for a budget for M&E purpose. Unlike the headmasters, the DDCs advocated for a managed fund where everyone contributes towards DRR and assessment of projects continuous and DRR training. The DDCs' thinking resonates with inclusivity, involvement participation discussed in section 7.2.1.5. The call for the inclusion of budget is in line with Bizeducator's (2016) view that the budget controls project costs and ensures that they are in the approved budget line and expected project goals. In the context of this study, resources refer to equipment (vehicles, computers, stationery, information and education material, iPads) team (skills and expertise), finance and time. Resources, if availed at the right time, quantity and quality, have the propensity to

promote the achievement of project goals. Therefore, finance and resources are a significant component of any given project, just as blood is to a living organism. The resources that an organisation needs to function effectively and to achieve its objectives are dependent on the financial support it receives, as determined by political support and commitment. The importance of finance and resources at all stages of the project continuum cannot be over-emphasised. The following section reviews assessment practices and standards.

7.2.1.4 Assessment practices principles

Participants in FDGs and interviews voiced that practices and principles are key components of the assessment practice (see Table 7.8). Practices and principles guide assessments to ensure that they meet international standards and requirements (Chapter 4, Section 4.2.1). Principles guide assessments to ensure that they are useful, appropriate, effective, and plausible (Brown & Abeywickrama, 2010), thereby improving project credibility and quality. Thus, practices and principles are the cornerstones of the assessment practice (JCSEE, 1994:63). In this study, practices are things that are usually or regularly done, often as habits, traditions, or customs (Cambridge Dictionary, 2020). Principles are values that guide and give credibility to practices.

Participants in focus groups were asked to suggest practices and principles for inclusion in the proposed multi-sphere assessment framework. One participant of the focus group in Mangwe district discussions observed: *An independent District assessment team be put in place* (FGD 3). The participant's view was adopted by the group, namely that the establishment of an independent district team could ensure harmony and understanding of assessment activities. Meanwhile, the Umzingwane district FGDs proposed the adoption of an open-door policy, accessibility, transparency, inclusivity, integrity, reliability as practices and principles to guide the framework. In Gwanda district, a member of FGD said:

"Let the experts do what they are good at. I advocate the use of an appropriate assessment tool that is applicable to the district situation. In addition to this let the relevant government departments do their own assessments and let us respect their expertise. There too many NGOs doing the same programmes in bits and pieces they bring a lot of confusion, why not combine such, Hence the need for control measures, for easy administration" (FGD 2).

The views of the member were supported by the group members, with a great emphasis on a high regard for expertise, partnership, pooling of resources, standard operation procedures as practices for the envisaged assessment framework. In the same manner, one member of Bulilima district FGD proposed an economist for all districts for assessment advisory purposes

(FGD 1). More so, they emphasised the need for a strong drive towards documentation and archiving. However, Umzingwane FGDs members advocated the framework to ensure open-door policy, accessibility, transparency, inclusivity, integrity and reliability as its principles and practice (FGD 50). Therefore, the proposed practices and principles for the assessment framework include regard for expertise, value operation standards, pooling of resources, partnership synergising and integration, innovation, inclusivity, information sharing centralisation and documentation and resourcefulness. Accordingly, the credibility of the suggested practices would be guided by the principles of transparency, independence, reliability, participation, openness, and integrity. Gwanda and Bulilima districts enunciated that people who execute assessments should have some form of exposure in the area, hence the need for capacity-building through training and education. Inclusivity and participation were emphasised practices by focus group participants in the four districts.

The participatory thrust suggested by respondents resonates with well with the philosophy of SL and Nyerere's (1963:58-60) views of participatory engagement, discussed in Chapter 2. Inclusivity and participation help strengthen the community's social capital, which is a key component of DRR. The identified practices and principles are congruent with international evaluation principles and standards that guide assessment practice (JCSEE, 1994: 63; ERIC, 1995:2; Austrian Development Agency, 2008:5) (see Section 4.2). It is important to note that one of the major lessons learnt from the participants' suggestions is that practices and principles are not limited only to the academic literature. They add the new dimensions, archiving and the establishment of information dissemination platforms. Despite being key to the envisaged framework, practices and principles alone cannot guarantee this, from there the need for other components substantiated in Section 7.2.5.8. These components are key drivers for the envisaged framework.

7.2.1.5 Multistakeholder approach

Achieving SDGs requires a change in the way people work together and a recommitment to inclusive partnerships (Global Partnership for Effective Development Cooperation (GPEDC), 2017:1). These attributes are key to the success of any assessment programme. To scrutinise this argument, two components of the multistakeholder approach are reviewed. These are stakeholder analysis and community participation.

- *Stakeholder analysis*

Stakeholders help to systematically gather and analyse qualitative information to determine interests that should be taken into account when developing a policy or programme. The

analysis aspect focuses on stakeholder characteristics, some of which are policy knowledge, interests to the policy, position for or against the policy, potential alliances and ability to affect the policy process through power and/or leadership. Therefore, the success of partnerships is determined by the quality and type of competence, experience, building synergies to co-creating something new and impactful for sustainable development (Dodds, 2015:5). The participants were asked to identify assessment stakeholders in their districts. Figure 7.4 below presents assessment stakeholders at the district level**.**

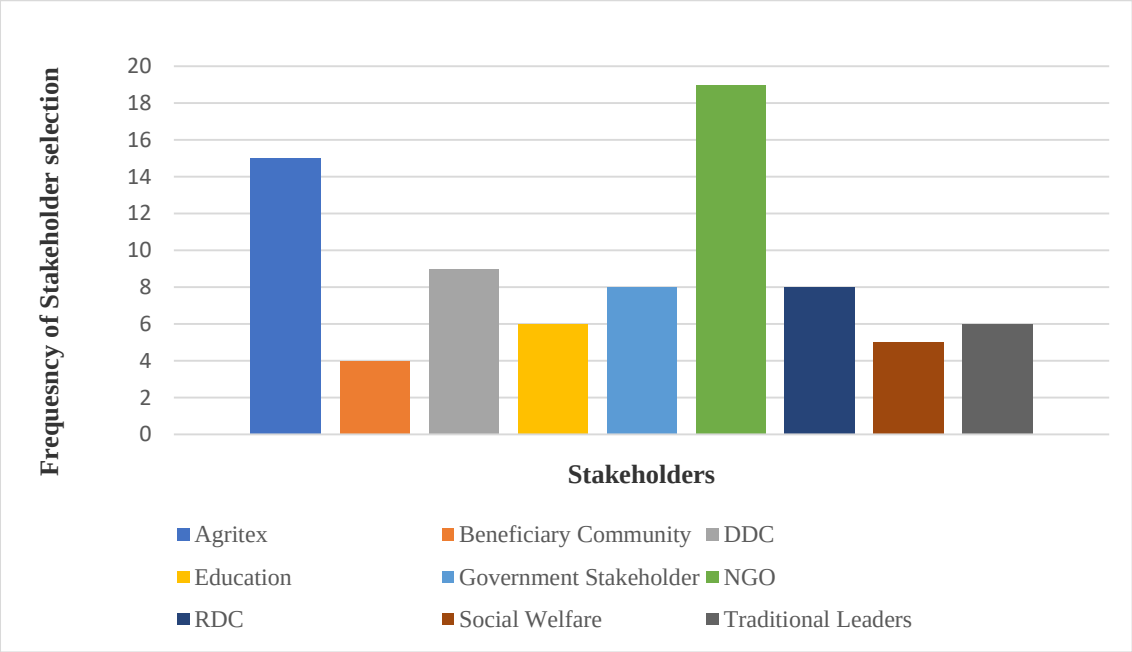

Figure 7. 4: Assessment process stakeholders

Drawing from Figure 7.4 above, various stakeholders play varying roles in the four districts. These stakeholders range from the one with the highest frequency to the one with the lowest. Interviews and FGD participants identified NGOs, Agritex, DDCs, RDCs, Government stakeholders, Education Department, traditional leaders, other Government departments, DSW and the beneficiary communities as assessment stakeholders. These stakeholders use their skills and expertise in various ways to expedite assessment practices and processes. One headmaster indicated that:

"NGOs monitors financial records, identify the weakness of project and provides advice, while the Department of Education monitors feeding programme, and provide structure for food distribution to school" (interviewee 12).

In the same vein, an EMA officer advanced that the NGOs' other role relates to sourcing funding for livelihood related initiatives. Meanwhile, a chief had this to say: *"NGOs mobilise communities, collect data, analyse data and also do advisory consultancy"* (interviewee 25). They further reiterated that agricultural extension officers train farmers, monitoring projects, organise and evaluate field days. Meanwhile, another EMA officer observed that "*RDCs were mandated to ensure documentation of project activities, as well as identifying possible future project interventions*. There was unanimity among the FGD participant, that the GoZ and its various departments ranked first in the stakeholder list. Hence, the justification that they are custodians of the people, key informants, as well as the district entry points.

NGOs were asked to identify the main assessment role-players within their organisation. Sixty-seven per cent (67%) of the respondents identified the M&E departments as key players in the assessment process. The reasoning was on the basis that M&E departments design data collection tools, train enumerators, analyse data and generate assessment reports. Thirty-three per cent of the respondents identified the head of the project as key assessment stakeholders.

In an interview with an NGO representative, he observed: "*The beneficiary community and enumerators as key, in that they play the respondent role, without whom no assessment process can be done* (interviewee, 40). The view was accepted by other NGOs as their position. There was consensus among NGO representatives that the heads of projects and coordinators play a key role of introducing the assessment teams to the stakeholders, while project officers and programmes officers guide the direction of the assessment, speed, coverage and direction. An NGO officer in an interview expressed: "*Field officers were regarded as key in identifying assessment areas, testing tools and providing leadership to ensure that targets are met, while enumerators' tasks are to collect data*". The above exposition shows that various stakeholders do exist and can be ideal in facilitating sustainable livelihood assessments. Drawing from the findings of interviews and FGDs, the stakeholders' composition tends towards NGO benefit. This shows the need for an all-inclusive assessment team that is fully owned and influenced by all stakeholders and not by one entity. Therefore, stakeholder analysis is imperative to the study for advancing the participation of stakeholders in the assessment process. Participation is non-negotiable as it ensures that strategies are socially acceptable and more responsive to the needs of communities. The next section reviews community participation.

- *Community participation*

Action approaches that districts use in communities were captured through focus group discussions in all the four districts. The focus groups required participants to substantiate the action approaches they have adopted when implementing development initiatives. Group discussions indicated that they support community participation by way of the action approaches they use in designing and implementing sustainable livelihood initiatives. In Umzingwane district FGD one participant indicated that "*The district uses the top-down approach in conjunction with the bottom-up approach".* Meanwhile, in Mangwe district one participant observed: "*We use the bottom-up approach to come up with projects from the grassroots levels*. The views of these participants were embraced as the district positions of the two respective districts. In Gwanda district one participant had this to say: "*Our approach is interactive, participative and consultative, meaning there are some that should be bottom-up and some that are top-bottom in that aspect, or one that is both" (FGD 47).* It appears as if most participants agreed with this interviewee's observation. Therefore, Gwanda district uses an interactive, participative and consultative approach that merges the bottom-up and top-down methods to manage ownership issues. However, in Bulilima district a FGD participant expressed that; "*Bulilima district uses a hybrid approach, that combines the top-down approach for administration and down- up approach for consultation.* Thus, the Bulilima approach is neither top-down nor bottom-up but a combination. The approaches adopted by the four districts bear witness to some levels of community participation and consultation before the inception of any new programme/project.

To further investigate the inclusion of communities in DRR policy formulation, the question, *"How can communities influence policy for DRR and enhance their livelihoods, FS and resilience concepts that had been discussed in question 3 and 4, was posed.* Focus groups responses by district are presented in Table 7.4.

Table 7.4: Influencing policy for DRR

District	Responses to how communities can influence policy for DRR
Bulilima	People who are into livestock production can participate at village and ward level to lobby the government to come up with projects that support and promote livestock production. For example, the production of stock feed, construction of dams. The communities can also lobby the government to influence NGOs to embark on sustainable livelihood projects such as water harvesting, in the form of dam construction and rehabilitation for improved resilience even when drought strikes.

Gwanda	Communities can influence policy if there are platforms to discuss their way of life. They must come forth to say out how to work and point out challenges that they encounter so that those who can help them improve their working conditions, helping them to address the issues that originate from them. In rural areas where we come from, every ward has an Environment Support committee that makes recommendations and solutions that are cascaded to higher levels down from the ward to the district. Such information can be made into by-laws which feed into policy and the interpretation of the law which applies to Agriculture, Environmental Management Agency, Forestry. As such by interacting with the law, they can influence policy.
Mangwe	The communities can start engagement from village to ward level. Looking at the committee at ward level they can engage in consultation and cascade their views up to the district. They can lobby for by-laws that promote DRR, and as a result, their area could be safeguarded.
Umzingwane	They can include their ideas and projects in ward development plans, that is information channelling and participate in DRR projects and other community activities.

The table above captures how communities can influence DRR policy to enhance their livelihoods, FS and resilience. The study found that communities in the four districts use various ways to influence policy: First, it can be by way of participating in community development activities at ward level; second, engagement and consultation among each other; third, lobbying government and, fourth, through consultation and information channelling from the grassroots level to influence DRR policy. These consultations and engagement start at village level and cascade up to the national level, making communities part of the exercise. Therefore, engagements have been happening for many years and have ended up at the district level and have not yielded much success.

These findings on community participation and how it can influence policy for DRR resonates well with the founding principles of the SL validated by Nyerere (1973:58-60) and Lienert and Burger (2015) in Chapter 2, Section 2.2. The sustainable principles assert that development endeavours that negate participatory community engagement are useless as they are bound to fail to achieve their intended goals. In the same vein, Kumar (2002:23) adds that development cannot be sustainable and long-lasting without the active participation of people in the development process itself. Therefore, the participation factor is key in empowering communities to make an informed decision and to become involved in their self-development. Thus, without the community participation factor, development becomes redundant and resilience levels diminish. Thus, it becomes imperative to review the fourth theme, DRR.

7.2.1.6 Disaster risk reduction

The GFDRR (2010:10) and Ashdown (2011: 15) report that DRR minimises vulnerabilities and disaster risk and limits loss of life to disasters. DRR has four components, namely: hazard

assessment, FS analysis and coping strategies, disaster risk reduction initiatives for sustainability, and the impact of livelihood projects on beneficiaries and communities.

- *Hazard assessment*

The most prevalent hazards in the four districts are determined using the hazard assessment, a cornerstone of DRR, through multisectoral cooperation. Hazard assessment helps identify the characteristics of hazards and to map emerging hazards. Prevalent hazards were identified according to the investigating participants' understanding of the vulnerability contexts in which communities construct their livelihoods. Question 9 in Annexure C asked the participants to identify the disasters they had experienced between 2000 and 2015. The participants' responses are presented in Figure 7.5.

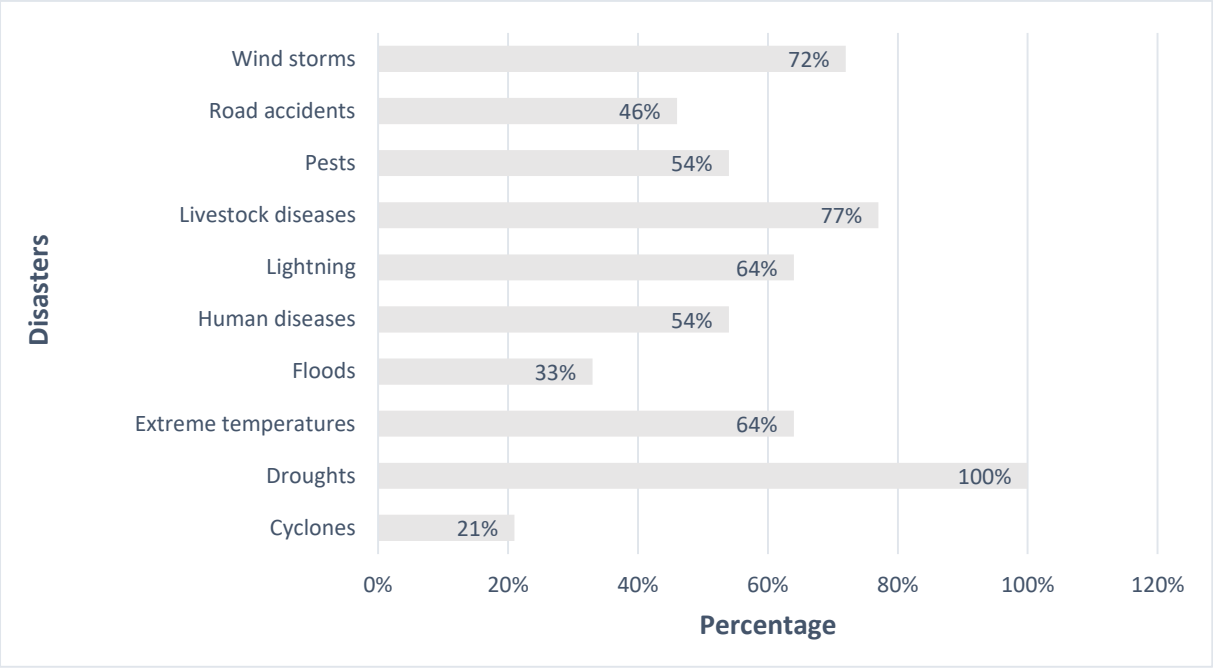

Figure 7. 5: Disasters experienced between 2000 and 2015

Empirical findings from in-depth interviews indicated that participants in the four districts have been directly affected by some kind of disaster risk in the past, especially droughts. Droughts are attributed to climate change-induced shifts in the regions' rainfall patterns (Manyeruke *et al.*, 2013:27) as affirmed by (Sango & Godwell, 2015:1), discussed in Chapter 1, Section 1.2. Drawing on the above responses, the indication is that communities are fully aware of their vulnerability context and understand the disaster risk concept. Moreso, the implication is that there are many disaters in two years. The vulnerability context is one of the major components

of the SLF, discussed in Chapter 2, Section 2.3.1. Doing transect walks in Gwanda, it was observed that the grazing and farming land had turned into a mini-dessert and the carcases of cattle could be found at dry water points due to climate change-induced droughts. In Bulilima district reclaimed gullies at Gwampe in ward 2 and Hingwe in ward 12 were observed, and this brought memories of the cyclone Eline devastation of 2000. The memories of devastation due to the 1992, 2002, 2004 and 2012 droughts, 2000 floods and windstorms were still vivid in the minds of respondents. The second most frequently experienced hazard is livestock diseases and windstorms, which were found to be prevalent in Bulilima, Mangwe and Gwanda districts. This could be indicative of the effects of environmental degradation due to deforestation as communities tried to construct their livelihoods (see Section 7.2.3) and the negative impact of climate change over the years. Meanwhile, extreme temperatures and lightning are some new entrants in the list of the most prevalent hazards in the area. Vulnerability to lighting was highlighted as a trans district hazard, with more prevalence in Gwanda district. There could be a direct link between lightning prevalence and environmental degradation and climate change phenomenon. Therefore, a community's knowledge and ability to identify endemic hazards does not guarantee its resilience to such hazards. This is evidenced by their appeal for external help after a hazard of small magnitude. This assumption resonates well with the aspect trajectory of an ability to anticipate, propounded by the IFRC (2014) (see Table 2.6). Having discussed the most prevalent hazards in the four districts, it is equally important to assess their impact on FS.

- *FS analysis and copying strategies*

The FS situation and coping strategies adopted by communities in the four districts was analysed through interviews with various participants (see Questions 10 and 11 in Annexure C). Reviewing the community's current FS situation, one headmaster in Umzingwane district, indicated that, *"A few able members are able to grow their own food while the elderly and child-headed families depend on NGO handouts. Food is there in the shops but people cannot afford the prices*" (interviewee, 30).

It appears as if most participants agreed with this interviewee's observation. Sixty-four per cent (64%) of the headmasters indicated that the inaccessibility of food has created a heavy dependency on handouts, especially the most vulnerable communities. During the interviews, chiefs, councillors, RDC CEOs and DDCs identified affordability as a contributor to food insecurity in their districts. This view corresponds with the economic food insecurity causative theory. The

economic theory asserts that food insecurity emanates from FED, availability decline (FAD) and market (Sen, 1984:497 & Pottier, 1997:335) as substantiated in Section 3.5.3 in Chapter 3. One DDC in Bulilima district observed: "*The situation is dire due to poor harvest in the 2018/ 2019 season and the barns are empty and the food prices are quoted in South African Rands" (interviewee 1).* The direness of the FS situation was also echoed by chiefs, DDCs, headmasters and RDC CEOs in other districts. The dire FS situation was attributed to climate change-induced erratic rainfalls in Mangwe and Bulimia districts, while in Gwanda and Mangwe districts are affected by limited diversity of food commodities. Transect walks and observation across the districts affirm the direness of the FS situation as indicated by the sight empty barns and fields that testify of nil harvest during the agricultural year. The direness of the FS situation, bare fields and empty barns signal a compromised FS situation in Bulilima, Gwanda, Mangwe and Umzingwane districts. Meanwhile, the researcher observed the sale of food commodities in foreign currency, especially in Bulilima district. As a result, food commodities were kept out of the reach of the most vulnerable community members. An EMA officer summarised the FS situation in all districts as, *"generally poor, district marred by food insecurity owing to the low rainfall and frequent droughts (interviewee 38).* The state FS directly contradicts with the CTNA (2014:14) and Haug's (2018:3) secure availability, accessible utilisation and stability of all food components to promote health and balanced diet (see Section 3.3). The prevailing state in the districts tends towards food insecurity as explained by Sanchez *et al.* (2005:11) and FAO *et al.* (2018: 30). This is a situation where one does not have physical and economic access to sufficient, safe, nutritious and culturally acceptable food for a healthy and active life. The assumption is that the portrayed state of food insecurity depicts a compromised resilience and ineffectiveness and shortcomings of sustainable livelihood initiatives implemented over the years. Communities indicated that they have adopted various coping strategies to manage their food situation.

Empirical findings from interviews with participants in the four districts indicated that diaspora remittances and reliance on handouts were the most used coping strategies. Drawing from Table 7.5 below, the indication is Bulilima, Mangwe and Gwanda districts engage in agricultural activities and entrepreneurship (buying and selling small items) to cope with FS challenges. In the Gwanda, Bulilima and Mangwe districts, participants observed that skipping of meals has been adopted as their copying strategy to manage food issues. Skipping meals coping strategy was also observed by a chief in Mangwe district (interviewee, 25). Furthermore, the chief observed that food-insecure households have engaged in low magnitude prostitution as a coping strategy. This prostitution view was also echoed by a headmaster who said, "*Girls are involved in prostitution,*

they go and dance in beer halls to get money for food" *(interviewee 4)*. Furthermore, headmasters highlighted that households have resorted to reducing their food intake quantities, poaching, illegal gold panning and stealing as copying strategy. They also highlighted that parents send their children to school because they are given a hot meal. By so doing they are able they will have saved on food at the household level to last them a bit longer. Table 7.5 presents a summary of coping strategies by the four districts.

Table 7.5: Coping strategies by district

Copying strategy by district	Bulilima	Gwanda	Mangwe	Umzingwane
Agriculture practice	X	X	X	
Vending	X	X	X	
Government and NGOs food handouts	X	X	X	X
Isiphala senkosi (chief's granary)				X
Prostitution			X	X
Skip meals	X	X		X
Gold panning		X	X	X
Poaching			X	X
School feeding schemes				X
Stealing			X	
Borrowing food and money			X	
Sharing and trading				X
Diaspora remittances	X	X	X	X
Pensions			X	

Table 7.5 in essence indicates that illegal gold panning especially in youths and women is more prevalent in Umzingwane, Mangwe and Gwanda districts. Hence, the communities' exposure to horrific mining-related accidents, deaths and serious environmental degradation. However, the *Isiphala senkosi* (chief's granary), prostitution, schools feeding programmes and sharing of food as copying strategies are mostly used in Umzingwane district. In the Mangwe district household members are reported to have resorted to stealing, poaching and borrowing food and money as coping strategies. The above exposition indicates compromised resilience levels, evidenced by the communities' failure to bounce back or forward, in the face hazards using their own capabilities (EUGS, 2016:23), only to rely upon handouts for survival and adoption of risky or negative coping strategies. For example, stealing, poaching and prostitution. This directly contradicts the DRR and SL goals of building resilience as substantiated by (UNISDR, 2015). Having examined the FS situation and the strategies that communities adopt to manage their situations, it becomes imperative to review DRR structures and systems in the four districts.

- *Disaster risk reduction initiatives for sustainability*

The implemented DRR initiatives and their goals were interrogated through focus group discussions and interviews with NGOs project coordinators. This section is addressed by the questions: *What project is your organisation implementing in this district? What are the aims /objectives of the programmes you identified in Q4 Annexure E4&5?* In Table 7.6 the implemented projects and their aims/objectives harnessed through FGDs and interviews with NGOs coordinators is summarised.

Table 7.6: Implemented project and aims/objectives

Focus Group Discussion		**Implementing partners (NGOs)**	
Projects	Aims /objectives	Projects	Aims /objectives
• Agricultural projects • Command agroforestry • Developmental fund • Drought Relief Programme • Feeding programmes • Food for Assets • Poverty eradication • Seed bank • Water and sanitation	• Build resilience • Develop a sense of ownership • Empower community • Socio-economic empowerment • Ensure food security	• Agricultural programmes • Basic entrepreneurship • Capacity-building • Drought relief • Financial literacy • Fodder crop project • Food distribution • Small grain project • Social service ministry • Technical skills	• Capacity-building • Empowering women economically and social • Improved technologies and practice • Irrigation for access to food • Mentoring • Poverty eradication • Reaction to El Niño • Resilience against shocks • Minimise CF and livestock conflicts • Ensure FS

The responses as in Table 7.6 were taken from the FGDs and the NGO staff. The findings indicated that livelihood programmes undertaken by the GoZ and its partners are many, as revealed during interviews and focus group discussions. These programmes present in various forms and magnitudes (see Chapter 5, Section 5.4). The indication is that agriculture-related projects, feeding programmes, poverty eradication, and drought relief programme rank high in all districts. From the FGDs' findings, command agroforestry, developmental fund, seed bank and water and sanitation add to the list of projects which were not raised on the NGO list. Conversely, NGOs affirmed their implementation of programmes identified through FGDs, with the addition of stock feed production, basic entrepreneurship and capacity-building. The study found most government designed and implemented projects to be biased towards agriculture, while those by NGOs focus on capacity-building and food distribution respectively. The above exposition shows that the number of projects under implementation is

too high, geographically spaced and too small to have a great impact. It can be assumed that these phenomena could lead to management challenges, the demise and reduced impact of the implemented projects. Despite a plethora of disaster risk reduction initiatives, achieving FS remains a dream, with trends suggesting a downwards trajectory.

Empirical findings from FGDs and interviews with NGOs tabulated in Table 7.5 above correspond with DRR initiatives' aim/objectives. According to the FGDs, projects exist to build resilience, ensure FS, empower communities and for socio-economic empowerment purposes. Meanwhile, the NGOs observed that projects serve to build the capacity of communities, eradicate poverty, minimise human and livestock conflict, react to El Niño impacts, improve technology, safeguard national assets. Therefore, the observed aims and objectives of projects agree with those propagated by Mudimu (2003:36) and Mabhena (2013:2), "to ensure national food security, reduce poverty and improve rural people's living standards". Furthermore, NGOs advanced that projects work towards socioeconomically empowering women and vulnerable communities, at the same time developing beneficiaries' sense of programme ownership. With regard to beneficiary selection, NGOs and focus groups were unanimous, that the vulnerable members of the community mainly the women, girl-child and the primary school children, and those with demonstrated interest were targeted. The assumption is that project implementers come up predesigned selection criteria that exclude communities. Therefore, this could be a direct contradiction with the SL principle of community participation and involvement substantiated in section 7.2.1.5. Having identified the DRR initiatives for sustainability, their purpose/objectives and their target population, it is worthwhile to review how they have influenced community resilience and FS.

- *Impact of livelihood projects on beneficiaries and communities*

Questions A11,12,13; B7 and C16 investigated the actual impact or influence of the initiatives on the beneficiaries and the community at large. The questions interrogated the community's perception of livelihood projects across the four districts, the projects' impact on beneficiaries, the good and bad memories of projects, and their contribution to communities at large.

- *Community perception of projects*.

Question B11 probed the participants to get the community's perceptions on implemented or ongoing projects. Focus groups discussions observed that projects are perceived differently by districts. One participant in the Mangwe district FGD observed:

"Cash transfer programmes are viewed sceptically in that they create divisions, as it is not everyone who benefits from it. People always ill-talk, as projects fail to cover everyone. As such, people are frustrated, they believe projects bring more harm than good" (FGD 3).

The FGD participants' views were embraced by others as the Mangwe district position. Meanwhile, one FGD participant in Umzingwane reaffirmed the opinion that cash transfers bring division in communities. The division in the communities can be detrimental to social capital, a crucial component in the creation of livelihoods (see Chapter 2, Section 2.3.2). The Umzingwane district also brought to our attention that the reception of small gardening projects was poor, while drought relief programmes are well-received (FGD 2).

In the Mangwe district's FGDs, the general feeling of participants was that the uptake of the bulk of the projects had been very good, and communities appreciated them. Meanwhile, in Gwanda district FGDs one participant observed:

"*It is like removing a thorn that has been tormenting one's flesh. The projects have been embraced by communities especially women and of late youths are slowly embracing the projects which are now another reliable source of livelihood. Fodder is being produced for resale and their livelihoods are sustained" (FGD 2).*

However, the Bulilima district expressed mixed feelings on the implemented projects. One FGD participant observed:

"To be honest, fine, we were promoting small livestock to be more specific the production of goats, then we put up a dip tank. That project I don't want to lie to you, it was not well received, thus, rendering it a white elephant. These facilities now, are lying idle with no users." (FGD 1).

These views bear reference to the Mpimbira goat dip tank project, which was never used after its construction because communities shunned it. The reason given was that the community was not consulted to identify the project that would meet their needs. In essence, the exclusion of communities is in direct contradiction with presentation substantiated in section 7.2.1.5 which strongly support proactive community participation in livelihood related initiatives.

- *Impacts of sustainable livelihood projects on beneficiaries*

The study found that implemented projects have impacted beneficiaries and communities in many ways. During interviews, headmasters revealed that school feeding programmes (SFP) improved nutrition levels and attendance and reduced school dropout rates in Bulilima,

Gwanda, Mangwe, and Umzingwane districts (interviewee 4, 6, 13, 14, 21, 22 & 28). The general feeling was that improved attendance would translate into increased pass rates at their schools also. NGOs highlighted that some community members in Gwanda and Bulilima acquired the skills to produce stock feed, through which they are now earning a living. An interview with an NGO participant indicated that project beneficiaries in Gwanda district have adapted the mulching techniques they acquired from CA and are now using them in other agricultural activities. One participant in FGDs in Mangwe observed: "*Women are also earning a living through producing morula products for resale" (FGD 3)*. In the same vein, Umzingwane district's ward 16 households have diversified their income sources, credit to income savings and lending projects. Accordingly, this group started with money lending scheme project, that gave birth to a sprouting goats project, which has become their source of livelihood.

Drawing from the various discussions, it is concluded that sustainable livelihood projects benefitted the micro-level in several ways. These benefits bear reference to the establishment of DRR structures, enhanced beneficiary's self-reliance, improved nutrition, reduced school dropout rates, and capacity development. However, during an interview one CEO revealed that: "*Uncontrolled cutting of trees for fencing nutrition garden and for burning moulded bricks cause the trees to suffer from all directions. As a result, environmental degradation has resulted in the increased soil erosion and siltation of rivers (interviewee 2*).

The inference is that, though livelihood projects are good for communities, they have the propensity fuel environmental degradation and violate the ethos of sustainability. The following section ponders on the good and bad memories of implemented projects.

- *Good and bad memories of projects*

Empirical findings on memories related to implemented livelihood projects show varying memories across participants divide. One EMA officer in an interview revealed that:
"*The implementation of a sustainable mining project made communities aware of sustainable and appropriate methods of mining, leading to a reduction of illegal mining activities in the district" (interviewee 36)*.
Meanwhile, in Gwanda district, DDC cited the completion of Mashaba solar mini-grid project as a memorable occasion. He exclaimed, "*This mini grid powers an irrigation, a clinic and a school`s ICT section and business centre*" *(interviewee 34)*. Accordingly, this project has

become the envy for many districts. In an interview with an NGO representative in Umzingwane, expressed excitement and gratefulness for of their clients who had graduated as teachers, doctors and lawyers. Her gratification was premised on the fact their programmes have produced job secure professional who was capable of bringing food on their family tables. During an interview with an NGO representative in Gwanda district, it was revealed that:

The bush mill project was a success because beneficiaries were using indigenous knowledge to mix amahababahaba (monkey bread) and maize to produce stock feed. The bush mill is used to grind maize meal and stock feed for resale (interviewee 41).

This project proved to be a memorable one to him in that indigenous materials were used in the production of stock feed, hence its generation of widespread interest amongst non-beneficiary communities. As a result, the non-beneficiary communities have made requests to be trained in fodder production and processing. In the same manner, the participant expressed his excitement about the continuous improvement of farming methods and innovations using indigenous knowledge. For example, the use of cattle urine to control the fall armyworm. Based on the above views, it can be concluded that implemented projects have promoted innovativeness (incomes diversification, feed production, pest control) and enhanced resilience (self-reliance) at the household level. More so, an EMA officer observed: "*Women's groups involved in morula oil pressing have had success stories where they now own livestock from the proceeds at Mlomwe in ward 3 in Bulilima district (interviewee 37*).

This project brought good memories in that it helped women use the locally available resources (natural capital) to create their livelihoods. The major aspect that makes the project memorable is that the women were able to buy livestock using the returns the amassed from the oil pressing project. Despite an array of good memories, participants professed they bad memories related to projects beneficiaries and further strained stakeholder relations. An NGO officer indicated that they gave a certain community chicken which they did not know that they were infected. These chicken in turn infected most community chickens and they died. This memory was still fresh in the mind of the affected communities and was affirmed by other stakeholders such Agritex. This incident created great antagonism among beneficiary and non-beneficiary community members was highlighted. The section that follows examines the changes after human and environmental projects.

- *Human and environmental project induced changes*

Participants were asked to identify changes due to human and environmental they had noted in communities. Interviews with NGO representatives revealed that the implemented programmes

to diversify household incomes, created assets for communities, grew resilience, eradicated poverty, worked on capacity developed and empowered women. The inference of this finding is that the existence of projects bears witness to their contribution to resilience-building, thereby addressing food insecurity.

Empirical findings indicate that nutrition gardens have brought some observable human and environmental changes to all the four districts as attested by various participant responses. In an interview, an EMA officer indicated:

"*The implementation of gardening projects had a positive influence on the environment, in that they diverted community's attention from interacting with the forests thereby reducing pressure on the environment (interviewee 36).*

The assumption is that sustainable livelihood programmes helped reduce human pressure on the environment by diverting their focus and energy to the projects. Hence, the observed reduction in land degradation in the mining wards. In a focus group discussion, one participant highlighted that interventions offer alternative livelihoods, thereby reducing reliance on rain for agriculture as an option for survival. During an interview with the Umzingwane DDC, she observed:

"*Nutritional gardens help to balance diets. The surplus thereof is sold and it helps to improve the livelihoods. Development projects have resulted in infrastructure development. For example, toilets, rehabilitated dip tanks and boreholes, piped water schemes, provision of stock feed" (interviewee, 23).*

The interviewee's perception of nutrition gardens is similar to that of Gwanda FGD, while, infrastructural construction and rehabilitation resonate well with those of Bulilima and Mangwe district. The FGD participants in Bulilima observed that several dams had been rehabilitated in the district, while in Gwanda district, a decline in malnutrition levels was reported (ZimVAC 2019). The decrease in malnutrition levels was attributed to the influence of nutrition gardens projects. In the Mangwe district, the DDC observed: *Tshitshi piped water schemes provided tapped water to the communities (interviewee 17).* A councillor in Mangwe district echoed that:

"*Availing agricultural implements and training have equipped some farmers to compete at field days. these field days, act as motivation to engage in production-oriented agricultural activities, at the same time ensuring household FS" (interviewee, 35)*.

Drawing from the above observations, it can be concluded that interventions have reduced reliance on rain for agricultural activities, equipped farmers, motivated them to engage

agriculture production, enhanced the culture and ethic of working. Therefore, working together increases the chances of participation in programmes that ensure FS.

In an interview with DDC, indicated that the training that communities received had inculcated self-sufficiency in some households. Such households now use their project returns to buy food and pay school fees. In an interview with an NGO official, the participant indicated that*, "open defecation had been eradicated in Umzingwane, thanks to the implemented projects*". Consequently, the exposition above demonstrates that various livelihood projects continue to be implemented by the government and its partners for a small percentage of households in some parts of the four districts. The resilience level built by projects is too little to influence food insecurity at district and national level. Hence, the district subsequent failure to withstand the hazards or bounce back or forward as propounded by Manyena *et al.* (2011) in Section 2.2.4. For that reason, resilience success stories are too small to cause a significant shift towards achieving the main aims and objectives of the implemented projects, propounded in Section 7.2.1.6. Having reviewed the influence of livelihood programmes on community resilience and FS, it becomes imperative to review how organisations create and manage knowledge to ensure their sustainability and continued existence.

7.2.1.7 Knowledge development and management

Knowledge development is critical for an organisation's sustainability and survival and is a source of documents from which it draws its lessons to inform its plans. To ascertain each districts' approach to knowledge development and management levels, a question Annexure D was asked. *"How many wards have benefited from sustainable livelihood projects over the past 15 years in your district? To what extent have these wards benefited?*

These questions proved to be more problematic than anticipated as they tested the documentation and archival practice in the districts. One FGD participant in Bulilima district remarked, "*For the past 5 years have been here I have seen so much. I can say to a greater extent" (FGD 1).* This participant's view was accepted as the district's view. In the same vein, Bulilima participants identified pen feeding programme in ward 15 (Vulindlela), Wuwana fodder stock feed production project and the morula harvesting project (see Section 7.2.1.6) as the successfully implemented interventions. As a result, project beneficiaries are sustaining sustain their livelihoods through these projects.

Meanwhile, in the Gwanda district, FGD participants reported that all the district wards had benefited from livelihood programmes. However, in the Mangwe district, one FGDs participant indicted that:

"*Amalima in Mangwe project is in 14 wards. If we look in terms of adoption rate is very high, but because of climate change we are not yet there. There are groups within each ward, that is because we target groups. After the World Vision WASH projects, we formed groups and initiated projects, such as vegetable gardens. If you go toward 6 something is happening."*

This view was supported and adopted as the district's view. However, in the Umzingwane district FGDs, one participant opined: "*Considering the fact that there are various programmes being implemented I can safely say, "all the 20 wards have benefited to a greater extent"*. This view denotes that all Umzingwane wards have benefited from implemented projects. It was observed that participants in all districts partly responded to the question, on project coverage. They could not commit to detailed numbers of projects that had been implemented. The impression given respondents was not substantiated by documented of quantitative or qualitative evidence to ascertain or justify their claims. For example, journals articles, and reports, to mention just but a few. These findings indicate a weakened documentation approach. The adopted approaches contradict the significance that Marakas (1999: 264) and Bhatt (2000:16) puts on knowledge development and management. That of knowledge creation to ensure an organisation's sustainability and survival. The finding also affirms Irigoyen (2017)'s assertion that Zimbabwe's approach to monitoring the progress and impact of programmes is weakened as represented by very little evidence except for official health statistics. Therefore, the value of knowledge development and management cannot be overlooked, hence the need to seriously consider investing it. The following subsection interrogates the Sustainable livelihood assessment process.

7.2.1.8 Sustainable livelihood assessment process

In investigating the actual status of disaster risk assessment process and practice in the four districts and organisations, specific categories of questions were developed. These questions were directed towards reviewing the assessment process, current assessment practice, livelihood assessment-DRR linkages, challenges in executing assessments, merits and demerits of adopting for adopting a multi-sphere assessment model, current assessment annotations, and proposed components of an ideal multi-sphere framework.

- *Assessment procedure/process*

Assessment was identified that it is ideal for understanding project significance and programmes information used to improve learning and development. Question 12 of Annexure D was included to trace the assessment process adopted by each of the districts, through FGDs.

The empirical findings on the assessment in Mangwe, Gwanda and Bulilima districts revealed the process is guided by the national assessment report (ZimVAC). One FGD participant in Umzingwane district indicated:

"We hold meetings; trainings and workshops; formation of projects committees; delegation of duties; monitoring of partners, partners bring their own assessment equipment (that is, questionnaires, etc.) projects. Finally, we do the assessment by the district monitoring team" (FGD 4).

The interviewee's views were adopted as the district's views by other participants. However, a FGD participant in Bulilima district enunciated:

"I think now and again we do baseline surveys before the start of any project. These surveys help the district assess how it has been doing over the years. I have also seen the deficiencies and weaknesses that we have in our monitoring and evaluation committees, our M&E system at the district" (FGD 1).

This view was embraced by other participants. The inference is that assessment in the district refers to a baseline survey that informs them of deficiencies in the M&E system. The identified weaknesses relate to lack of experts in the area of M&E to give guidance to the district team. Thus, the lack of expert advice creates a weak link between the district and the actual practice. Meanwhile, over FGD participant in Gwanda district highlighted that:

"*The district uses the crop and livestock assessment questionnaire* that *comes in three rounds namely: 1st round preliminary survey which is done at the start of season; the 2nd round that is done estimate yields (during season); and the 3rd round referred to as the post-harvest where the actual yields are compared with estimates" (FGD 2).*

Drawing from the views above, the questionnaire is the mainstay assessment tool that is used in the four districts, while NGOs engage external consultants to expedite the assessment process.

To interrogate the key informants' views on outsourcing consultancy services in disaster risk assessment practice, a was posed (see Question 35 in Annexure C): *Do you regard the services of consultants as essential in disaster risk assessment?* The participants' views are presented in Figure 7.6.

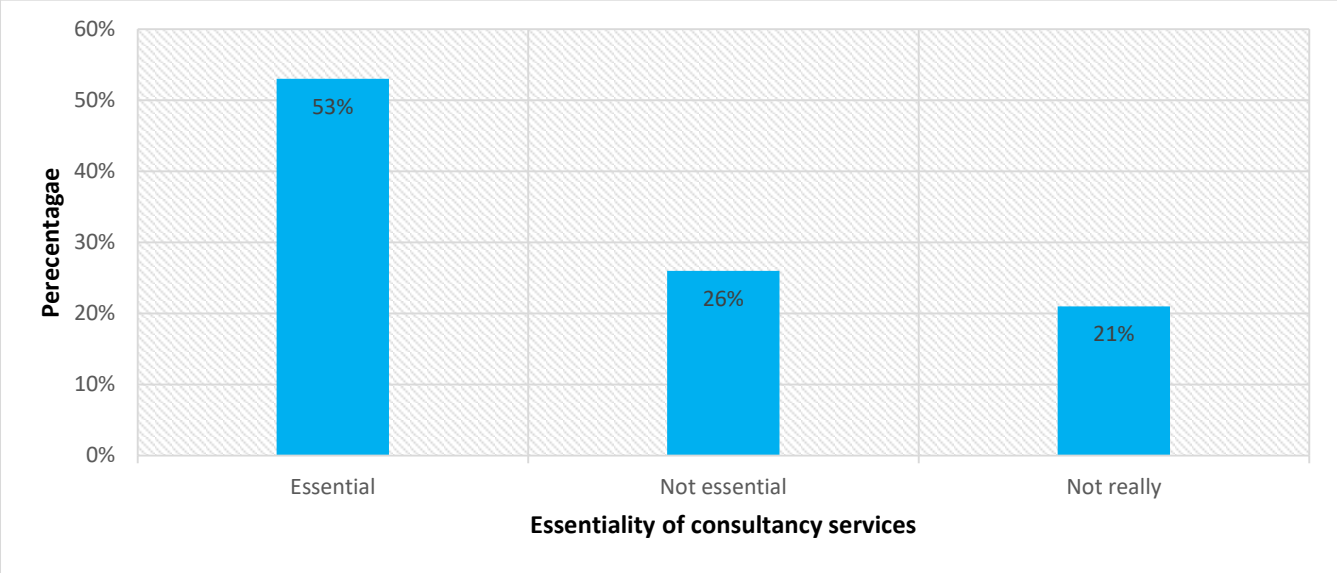

Figure 7. 6: Essentiality of consultancy services

Fifty-three per cent (53%) of the participants were of the view that outsourcing consultants is a necessary practice in disaster risk assessment. The DDCs, councillors, chiefs and RDC CEOs indicated that consultants are essential in disaster risk assessment because of the depth, new knowledge, and innovations they bring into the assessment practice. In support of this contention, one DDC said, "*The consultants bring new knowledge and new experience that can be used for planning purposes" (*interviewee 1*).* In the same way, the chiefs, DDC and school headmasters added that consultants have the expertise and can give technical and guidance on assessment. Furthermore, one RDC CEOs expressed that,

"*consultants are relevant for updated information hubs and reservoirs. They bring an academic approach and research that adds value to practical experiences for continuous innovation (interviewee 8).*

NGOs enunciated that they engage consultants to avoid internal assessments to avoid conflict of interest, to get an independent opinion or view on the settings, to interrogate the organisation's strategies, triangulate information, get genuine information that informs the organisation planning and programming (interviewees, 41,42.43.44 & 45). The NGOs argued that they outsource consultants because they are well resourced and equipped to offer guidance, based on their expertise and vast experience in the assessment field. Drawing from the above discussion the consultants have the propensity to help management change focus, guard against self-interest, thereby enhancing transparency and accountability standard of (as discussed in

Chapter 4, Section 4:2.1). However, 47% of the participants viewed consultancy outsourcing nonessential exercise. One RDC CEO argued,

"*engaging consultants was mere wastage of resources, what is to be done is just train department heads and other relevant organisations*" *(interviewee 18)*. In the same vein, one chief expressed that: *Outsourcing consultants shutting out the local job opportunities and come with unacceptable practices and external customs. For example, problematic practices such as corruption (interviewee 10)*.

The inference is that engaging consultants exposes the district to unacceptable practices and disempowerment of locals, depriving them of opportunities to practise and grow professionally. Likewise, interviews with chiefs and RDC CEOs revealed a view that consultants were too detached from communities and not independence, thus, their recommendations could not be trusted (interviewee, 18 & 25). They could not be trusted because they write what the donors and programme implementers want as they cannot bite the hand that feeds them. Furthermore, the chiefs and RDC CEOs argued that consultants do not bring anything new to the community since they get information from communities. In the same manner, the NGOs advanced that consultants: come with costs, have a bias towards their employer, suffer the temptation of copying and pasting results of similar projects, cook data and it is a time-consuming and rushed exercise (interviewee 40,41,42,43,44,45). Drawing from the arguments above, it can be assumed that consultancy limits regular participation and feedback. Hence, its contradiction of principles and practices of inclusivity and engagement, which are the crux of SL (see Chapter 2). Having reviewed the consultancy outsourcing debate, it becomes paramount to review an entity's capacity to carry out assessments.

Empirical findings indicate that 38% had the capacity, while 44% had little capacity and 18% had none. These findings indicate limited or weakened capacities on districts and strengthened capacities on the part of NGOs. During interviews with the DDCs, headmasters, councillors and Agritex, there unanimity on capacitation in terms of human resources and Indigenous Knowledge (IK) in the four districts. One chief observed: "*We have a way of identifying hazards within our area through IK and experience (interviewee 9).* In the same context, an Agritex officer said: "*The district has got structures which help in the identification of the most affected areas, and Human resources are available*" *(interviewee 7).* Affirming the same view, one councillor indicated: "*Expertise is there, Agritex, teachers and other departments. We have people who are involved in these assessments in other areas (interviewee 11).* Given the

availability of resources, a headmaster also affirmed the resources contention, adding that communities had been trained at village and ward levels (interviewee 13). Figure 7.7 summarises the views of participants on their capacity to carry assessments.

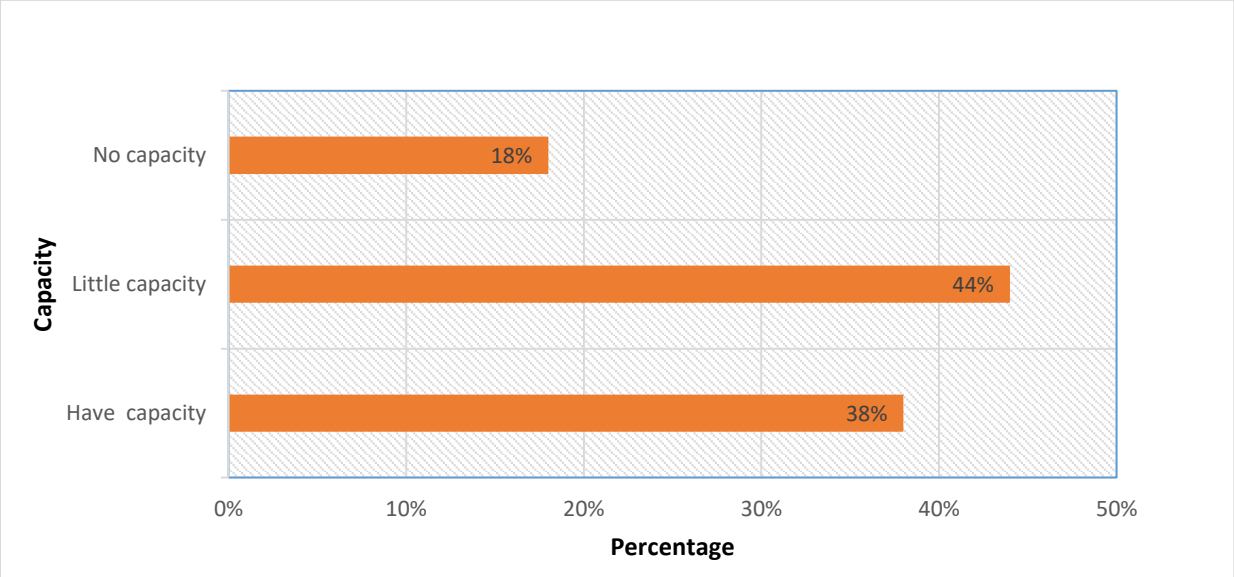

Figure 7. 7:Capacity to carry out assessments

Drawing from the Figure 7.7 findings and discussions above, the indication is that district capacitation is skewed towards one aspect, "the human resources". Hence, their incapacitation in other areas, which thwart their assessments processes. In the same vein, one EMA officer observed: "*Financial resources are always limiting for assessments to be carried out regularly and also for monitoring to be done on implementation of plans" (interviewee 38)*. Therefore, financial resources limit districts' capacities to acquire the necessary resources to do livelihood project assessments. In this regard, limited resources are indicative of limited or lack of stakeholder support and commitment to the assessment agenda. Contrary, to the views of limited or no capacitation, one NGOs participant said: "*We have human resources, with the right expertise and experience, vehicles, gadgets and funding to carry out assessments" (interviewee 40*). This view was supported by other NGO participants, to be a true reflection of their capacity levels. The inference is that NGOs have all the capacity (everything that is needed) to carry out assessments at any level. An observation by the researcher affirms, that NGOs well-resourced in terms of resources (expertise, funding, gadgets and vehicles) compared to other stakeholders in the districts. Therefore, the above exposition attests to the existence of parallel assessment regimes that fragment and weaken assessment practiced in all districts. this disintegrated approach defeats the whole purpose assessment. This is in direct

contradiction with the principles of inclusivity, participation and reliability, as propounded in Section 4.2.1 of Chapter 4 of the study and Section 7.2.4. The next section scrutinises the participants' perceptions around the assessment practice.

- *Current livelihood assessment practice*

An investigation and review of the current assessment practice were undertaken in the four districts by way of FGDs and interviews. The findings were that, in practice, assessments are exercises done to analyse various needs, to get information to inform the present and future plans. The other finding was that political commitment levels to the assigned practices determine the resource allocation support levels, to function effectively and efficiently. The current view on assessment practice was interrogated using the quantile classification. A grade is applied between 1 and 5, with the weakest value signifying a weak influence and the highest value signifying a great influence. Question 17 in Annexure E sought to determine participants' current conception of the assessment practice to inform the envisaged multistakeholder assessment framework for FS related projects in Zimbabwe. Table 7.7 presents a quintile classification of assessment practice.

Table 7.7: Current view on the assessment practice on quantile classification

Description	1 Strongly Disagree	2 Disagree	3 Neither Disagree or Agree	4 Agree	5 Strongly Agree
A systematic way to gather project evidence and significance to learn and improve delivery	-	-	-	1	5
Compliance with legislative requirements	-	1	1	3	1
Compliance with donor requirements	-	-	-	3	3
A proactive DR mechanism	-	1	2	1	2
The first step towards/developing a DRR plan	-	2	-	2	2
A means to responding to/disaster situations	-	2	1	2	1
Part of the disaster recovery and rehabilitation process	-	2	-	2	2
A systematic way to gather project evidence and significance to learn and improve delivery	-	-	-	1	5

Accordingly, the following deductions are drawn. First, the apprehension of assessment by NGOs across the various districts covers a scattered range from disagree to strongly agree. In the light of the theoretic underpinnings clarified in Chapters 2, 3, 4 and 5 there is strong support

for the proactive implementation of Livelihood assessments. Five out of six NGOs strongly agree that assessment is a systematic way of gathering project evidence and significance to learn and improve delivery. As such, four out of six NGOs, agree that assessments are only done to comply with donor and legislative requirements. Meanwhile, three out of six participants viewed assessments as a proactive DR mechanism and as a means to respond to/disaster situations. However, the only concern was that assessments are driven by the need to comply with the donor and the legislative requirements. As such, the assessments' commitment, true value and its outcomes may be questionable. This is in direct contradiction with assessment values as discussed in Chapter 4 Section 4.2.1, for example, objectivity and independence (JCSEE, 1994: 63 and ERIC, 1995:2). Therefore, when assessments are not done in accordance with practices and principles their credibility is compromised, hence their failure to achieve the objectives of the programme. This causes the perpetuation of the situation they were trying to address. The section that follows reviews the livelihood assessment's linkages with DRR.

- *Livelihood assessment-disaster risk reduction linkages*

This section interrogates the participants' understanding of livelihood assessment-disaster risk reduction links. Question 13 Annexure D and 25 of Annexure C are addressed. "*Do you think assessing livelihood projects would help to lower risks of disasters happening? Kindly elaborate on your answer*". Empirical findings of the study found that 90% of the interview participants believed that assessing livelihood projects can help to lower risks of disasters happening, while 10% disagreed. Various reasons for and against were given.

In an interview with an RDC CEO in Mangwe, it was revealed that: "*Assessments may be misleading because people have been over-researched. More so, wrong responses by participants can lead to serious consequences (interviewee 18).* This view assumes that communities have been over-researched and their responses could compromise the credibility of the assessment. Thus, trusting such results could be suicidal. Conversely, those who believed that assessing livelihood projects can help to lower risks of disasters happening gave various reasons for. In an interview with the study's oldest participant, he had this to say, *"Assessments broaden prevention awareness. Prevention is better than cure" (interviewee 26).* In support of the same view, another councillor added*:*

"Assessment sheds light on successes and failures (on track or out of track), makes it easy to correct before missing the target. It guides future plans and the projects that are feasible for

the selected area, and also enlightens the planners on the risks that are prone in the area so that they plan accordingly" (interviewee 11).

These views were echoed by 66% of the councillors. The indication is that assessments mirror successes and failures of a project, making it easy to correct before missing the target. One RDC CEO in Mangwe observed: *"By doing assessment you are able to identify issues early and take preventative measures to avert disasters"* (interviewee 2). In the same vein, headmasters advanced that assessments enlighten the planners on the area risk profiles and hazards to plan accordingly to mitigate their threats (interviewees 4, 5, 6). Meanwhile, an interview with a DDCs revealed that assessment results inform plans for projects that can improve yields and provide food in times of drought (interviewee 1&23). In an interview with an Agritex officer, it was observed that assessments results provide early warning information for disaster that can be used as a basis to advise farmers on when and how to use feedlots in times of drought to avert the death of livestock. More so, assessments information help provides farmers with crop varieties suitable for their region and it aids in planning to ensure FS (interviewee, 33). In an interview with an RDC CEO, in Gwanda district he said that:

"*assessments create space for sensitisation awareness through sharing of relevant experiences/ findings. It stimulates information gathering for correct and applicable decisions*" *(interviewee 8).*

An EMA officer added:

"*From the Environmental management perspective assessment help reduce disaster risks. Seeing that a project has environmental effects, such as siltation during assessment helps reduce soil erosion, which will later reduce the chances of flooding*".

Drawing from the assertions above, assessments help in the early identification of issues to take preventative measures to avert disasters through sensitisation and awareness and sharing of findings and plan for the proper response to reduce the impact of disasters.

During the FGD in Umzingwane district participants agreed that assessments help detect a project's sustainability, strengths and weaknesses, thereby preparing communities for disasters. Meanwhile, in Mangwe district assessment was viewed as a pre-planning tool that informs communities on various forms of disasters that helps communities to pre-plan accordingly. Equally, Gwanda district felt that assessment help detects anomalies that exist in districts, providing early warning information as well as a preparedness platform to reduce disaster impacts. Bulilima district concurred with assertions laid forth by other districts, adding that assessments strengthen livelihoods, build resilience that enhances FS. Furthermore, the

Bulilima district voiced that assessments give a picture of what is happening in the district and a view available livelihood options and FS levels. Therefore, the ability of the assessments to inform future programming, preparedness planning strongly links it with disaster risk reduction as a management tool. The exposition above indicates the relevance that participants attach to the assessment practice in the DRR matrix. For that reason, the knowledge that communities possess denotes their likelihood to take action in assessments, given its benefits with regards to DRR. To further enhance the appreciation of the assessment practice, understanding the challenges experienced in undertaking it becomes essential.

- *Assessment-related challenges*

The empirical findings have clearly shown that various challenges negatively impact on the current assessment practice within the four districts. Interviewees and FGD participants were asked to identify challenges they experience/d in undertaking assessments. Table 7.7 presents the assessment-related challenges as identified by focus groups.

Table 7.8: Assessment-related challenges

Challenges by district	Bulilima	Gwanda	Mangwe	Umzingwane
Creating identity crises	-	X	-	-
Failure to see the importance of assessments	X	-	-	-
Falsification of data	X	-	X	-
Incapacitation (resources)		X	X	X
Lack of locally generated assessment tools	X	-	-	-
lack of commitment by stakeholders			X	
Lack of feedback amongst stakeholders	X	-	X	-
Our tools suffer copy and paste syndrome	X	-	-	-
Poor mobile network coverage	-	X		X
Poor platform for information dissemination	-	-	X	-
Staff turnover and staff mobility	-	-	-	X
Misunderstanding assessment tools	X	-	-	-
Uncoordinated development partners	-	X	-	-

The challenges identified through FGDs and interviews bear reference to incapacitation due to limited resources and support in terms of funding, lack of resources and inadequate logistics, lack of a standardised feedback platform. Poor mobile network coverage challenges are mostly experienced in Gwanda and Umzingwane districts, the challenge of uncoordinated development partners prevalent in Gwanda district. Falsification of data was raised in the Bulilima and Mangwe districts, while, lack of locally generated assessment tools was

highlighted in Bulilima district. Staff mobility and turnover was recorded in Umzingwane district, while lack of commitment by stakeholders was observed in Mangwe district.

Meanwhile, in Bulilima district indicated that many times assessments tools are misunderstood resulting in the collection of wrong and irrelevant data. Therefore, the identified challenges if not addressed can pose a big threat to the implementation of the proposed multi-sphere

framework. The assumption is that the identified overarching assessment challenges emanate from the lack of political will and commitment, inclusivity and duplication of effort. This scenario portrays a relaxed attitude *vis-à-vis* the assessment practice, its principles and standards (see Chapter 4, Section 4.2.1). Consequently, this relaxed attitude thwarts inclusive participation, brings disharmony to the assessment approach, results in the duplication of effort and fruitless expenditure of donor and state funds. It justifies the need for an all-inclusive assessment framework FS related projects that will help address these challenges. Having explored the challenges experienced when undertaking assessments, it becomes apparent to review the merits and demerits for adopting a multi-sphere assessment framework.

- *Merits of the envisaged multi-sphere assessment framework*

This section interrogates the merits of adopting a multi-sphere impact assessment framework for Zimbabwe. These merits were captured by interrogating NGO representatives during interviews. The interviews required them to suggest the merits of adopting a multi-sphere impact assessment framework. The empirical findings on merits show that the envisaged multi-sphere assessment framework will be user friendly in that it draws its strength by pooling resources across all spheres (expertise, experience, interest, material and financial stamina). The strength that various stakeholders bring on board to gives framework an urge over other framework. In an interview with an NGO representative, he said: "*The framework will be user friendly, adaptable to other regions, promoting wide coverage and effective programme delivery (interviewee, 41)*. In the same vein, one NGO representative added: "*The multi-sphere assessment framework will inculcate the ethic of working together as a unit, sense of programme ownership" (interviewee, 42)*. This participant's view was also shared by interviewee 44 and 45. Meanwhile, in another interview, one NGO representative observed: "*Experts bring suggestions that help in the development of the community (interviewee, 40)*. Another participant had this to say: *the envisaged framework will promote accountability and transparency (interviewee 44)*. The inference is that bringing on board various experts adds diversity and efficiency to the assessment practice among others. Hence, promoting a culture

of working together, cross-pollination of ideas, improved efficiency, service delivery and fostering an integrated and expert assessment approach. Another NGO participant said; *The multi-sphere framework will be ideal for giving an indication on the successes or failure of the project (interviewee, 40)*. Therefore, assessments results drawn from the multi-sphere assessment will be used to inform DRR planning and programming of SL. The all-embracing nature the framework gives it the flexibility to be adapted and used across disciplines. Hence, its propensity to add value to the assessment practice in Zimbabwe and beyond. The section that follows reviews the proposed components of a multi-sphere assessment framework for Zimbabwe.

- *Components of a multi-sphere assessment framework*

The participants in focus group discussions and interviews suggested various components for inclusion in the multi-sphere assessment framework for Zimbabwe. These components range from approaches, practices to indicators/parameters. These components are addressed by questions A30, A31, 32 & B14 and C37 in Annexures A, B and C.

The first component of the multi-sphere assessment framework bear reference to approaches. An approach is a method of doing something or dealing with a problem (Longman Dictionary of Contemporary English, 2020). In the context of this study, approaches denote the direction followed by the framework to achieve its objectives. Empirical findings from interviews with NGO staff advocated the inclusion of an approach to guide and define the multi-sphere assessment framework. Accordingly, the NGO participants advanced that this approach should be should tend to collective stakeholder involvement, a mixture of competences, freedom of access, capacity-building, clear stakeholder terms of reference, drive for feedback, coordinated planning, experience sharing, intolerance for discrimination, field-friendly techniques, adherence to practice and procedures and research orientation. The impetus for the development of this framework was to promote stakeholder ownership of the programme results, objectivity, elimination of connivance and bias in the assessment process. The NGO representatives opined that adoption of this approach could build the stakeholders' confidence, reduce criticism during collaborations, build a culture of collective participation, accountability, consensus and experience sharing platforms. Therefore, these platforms could be used to dispute, verify and validated facts (triangulation). Having reviewed suggested approach for the proposed framework, it becomes paramount to focus on suggested practices and principles as well.

The second component of the framework pertains practices as substantiated in section 7.2.1.4. The participants in focus groups were asked to suggest practices for inclusion in the proposed multi-sphere assessment framework. An FGD participant in Bulilima had this to say: *"Recording keeping for long-term should be prioritised.* A participant in Gwanda district said:

"Use the appropriate assessment tool applicable to the district situation. NGOs should form partnership with government departments and come up with standard operation procedures. More so there is need to synergise and integrate project to cover mileage".

In a focus group in Mangwe, one participant recommended the establishment of an independent district to come up with its own assessment instrument. Meanwhile, a FGD participant in Umzingwane district, advocated for open-door policy, accessibility, transparency, inclusivity, integrity and reliability inclusion in the multi-sphere assessment framework. Drawing from various views from the four districts the proposed practices bear reference to a regard for expertise, valuing operation standards, pooling of resources, partnership synergising and integration, innovation, inclusivity, information sharing centralisation and documentation and resourcefulness. Therefore, the credibility of the framework can only be realised if it is guided by the principles, for example, transparency, independence, reliability, participation, openness, and integrity as described in Section 4.2.1 in Chapter 4. It is important to note that one of the major lessons learned from the participants' suggestions is that practices are not limited only to the academic literature. Hence, the addition of the new dimensions, archiving and the establishment of information dissemination platforms. The final component of the multi-sphere assessment framework is indicators.

The third component refers to indicators of the framework. According to UN DESA (2007:3), indicators perform many functions. For example, communicating ideas, thoughts and values, measuring and calibrating progress toward assessment goals. Therefore, an indicator is a practice measure providing a signal that something exists or is true (UNAIDS, 2010:14). In the context of this study, indicators are performance gauges that give guidance to the implementation of the sustainable livelihood assessment practice at a strategic management level, substantiated in Table 7.2. Therefore, interview participants were required to identify indicators/parameters for inclusion in the proposed multi-sphere assessment framework.

In an interview with a NGO staff member indicated: *Consider the different expertise from stakeholders and a team from different fields. Also clearly state the goal of the project".* In pursuit of the indicators, another NGO staff added that: *"Assessment framework should have*

assumptions, proper governance structure, financing and development education awareness. Meanwhile, a councillor advocated for the inclusion of local capital in the execution of the framework. DDCs, councillors and headmasters called for the establishment of governance structure, well-articulated structure flow, and a clear analysis of stakeholders and roles. They reiterated the need for the formation of standing and ad-hoc assessment committees and clearly articulated standard operation procedures and protocols. The issue of committees was raised by a female, headmaster who advocates for their independence from project implementers. One important indicator identified by all interview participants was inclusivity. This indicator was envisaged to foster the participation of all stakeholders and to ensure the fair representation of socio-economic groups.

Interviews with, the DDCs and CEOs highlighted the need for a new framework to be aligned to and informed by the laws and regulatory frameworks of the country as substantiated in section 7.2.1.1. Furthermore, chiefs and headmasters strongly emphasised equal representation as one of the key indicators, while the DDCs, NGOs and headmasters advocated for the incorporation of the time frame calendar of events, vision, objectives and outcomes. Furthermore, there was unanimity by the interview participants on the involvement of all stakeholders regardless of class. One EMA official echoed; *"Involve all stakeholders, for example EMA, Department of Health, Education, Agritex, Police, Social Welfare, traditional leadership, councillors, the affected community, NGO in crafting all assessment instruments" (interviewee 36).* In the same vein, EMA, RDC, CEOs, Chief, NGOs and Headmasters called for the incorporation the following: sensitivity to various issues (gender, environment and climate). Agritex, councillors, DDCs, RDC CEOs and school headmasters advocated for the inclusion of needs and area analysis to be the crux of indicators for the envisaged assessment framework. Meanwhile, Agritex, chiefs and school headmasters advocated for the inclusion of capacity development, documentation and archival of projects information and assessments as an indicator of the framework. Their argument was that capacity development and documentation could promote knowledge development, storage, dissemination and develop the capacity of all stakeholders on the processes and practices. Therefore, clear processes and practices should promote the use of field-friendly techniques, clearly stated frequency of the assessments, clearly stated project goals, and describe indicate the type of project, specify the period of assessment, identify assessment respondents, guiding questions and an assessment flow chart. Table 7.9 summarises the proposed components of a multi-sphere assessment framework.

Table 7.9: Proposed components of a multi-sphere assessment framework

Components	Description
Approach	Contextual relevance; Collective stakeholder involvement; Mixture of competences; Open-door policy; Capacity-building; Clear stakeholder terms of reference; Feedback drive; Coordinated planning; Collaborations, Experience sharing; Zero tolerance for discrimination; Adherence to assessment practice and procedures; Research orientation; Use of field-friendly technique to cut on time
Practices/principles	Flexibility; Regard for expertise; Valuing operation standards; Team formation Pooling of resources; Partnership synergising and integration; Innovation; Inclusivity; Archiving and documentation Information sharing centralisation and resourcefulness; Transparency; Accountability and adaptability independence; Reliability; Participation; Integrity;
Indicator/parameters	Budget/managed fund or finance plan; Governance structure; Clear analysis of stakeholders; Formed standing and ad-hoc assessment; Time frame calendar of events, vision, objectives and outcomes; Respect for rights and cultural sensitivity Needs and area analysis; Knowledge management levels; User-friendly techniques Finance and resources.

The application of identified components should not be confined to the respondent groups only, but be flexible to ensure contextual relevancy. Therefore, the application of the components should become common practice in all districts. Having interrogated the ideal components for the proposed multi-sphere assessment framework it becomes paramount harness other information that could add value to the study.

- *Assessment-related annotations*

The question addressed in this session sought to harness additional information that could add value to the study. The participants in FGDs in Bulilima and Gwanda districts strongly emphasised the need for districts to be given feedback on all studies done in the area. The participants described feedback as necessary, as it could help them improve service delivery and work towards the development of their districts. Therefore, this quest for feedback indicates a great opportunity to arouse interest in the new development projects. The participants in FGDs advanced that various projects failed to reduce and build resilience because the projects have been recycled under different names and organisations. The interviews participants advocated for the inclusion of youths for the sustainability of the livelihood projects. Meanwhile, NGOs recommended the inclusion and adaptation of IK to improve livelihoods. They further advocated for the introduction of project management and entrepreneurship at a tender age, and the embracement of all-inclusive targeting and partnership approach.

7.3 CONCLUSION

Checking and diagnosing the abilities of livelihoods to meet the needs of the present and future generations, updating and informing community copying strategies are processes meant to address sustainable livelihood assessment. Sustainable livelihood assessment was construed as a significant process to advance DRR, but stakeholder support proved to be limited. The existence of DRR systems and structure is evident in the districts. These are used for DRR coordination, weather forecasts, market forecasts, and relaying extension information. Communities are aware of vulnerability contexts of their districts. Their awareness is evident from their ability to identify disasters that have affected them in the past, such as droughts, floods, livestock diseases and lightning among others. The GoZ and its partners have implemented various livelihoods initiatives (agriculture-related, vulnerable group feeding, stock feed production and basic entrepreneurship) to reduce disaster risks and boost FS. Some projects like cash transfers have been viewed sceptical and blamed for creating divisions in communities. Meanwhile, other initiatives have been squarely blamed for promoting laziness and dependency syndrome. Yet, agriculture and food-oriented programmes were greatly appreciated. Headmasters commended SFPs for helping reduce school dropout rates and improving attendance and pass rates. Equally, FGDs opined that DRR awareness levels, self-reliance, asset creation, household income diversification and women empowerment have been realised through livelihood initiatives.

The actual practice of knowledge development and documentation is weak and its results are not visible in the four districts. Meanwhile, outsourcing consultancy was perceived as an essential practice in assessment for bringing depth, new knowledge and innovations and eliminating bias. The critics outsourcing consultancy view this practice as the tool used to disempower local talent. The capacity of districts to carry out assessments is compromised, while NGOs are well capacitated. Assessment is strongly related to DRR in that its reports inform future programming and preparedness planning for disaster risks. Falsification of data, incapacitation, staff turnover and staff mobility, misunderstanding of tools, respondent apathy, lack of interest, lack of cooperation are challenges that affect assessment. The merits of the framework are that it promotes and ensures participation, order and sanity, ownership of results, elimination of bias, expert diversity and accountability in assessment. Contrariwise the framework is susceptible to coo

challenges, being misunderstood and resource challenges. The ideal components of the proposed assessment framework are related to the approach (stakeholders involvement, a mixture of competences, open-door policy), indicators (financial plans, governance structure, stakeholder analysis, committees, standard operation procedures and protocols, inclusivity, fair representation, respect for rights), practices and principles (regard for expertise, operation standards, pooling of resources, partnership synergising, innovation, inclusivity, information sharing documentation and resourcefulness). Equally, lack of feedback, recycling of projects and the exclusion of youths compromise the success and sustainability of most livelihood projects.

Chapter 8 of the study presents a framework towards a multi-sphere assessment approach for Zimbabwe. The chapter discusses the multi-sphere livelihoods assessment framework and it the implementation process map.

CHAPTER EIGHT

A COMPREHENSIVE MULTI-SPHERE ASSESSMENT FRAMEWORK

8.1 INTRODUCTION

Chapter 7 presented the empirical research findings and the analysis the findings. Objective 6 is addressed in this chapter with an emphasis on a multi-sphere project impact assessment framework for FS and resilience in Zimbabwe. The framework can serve as an assessment guideline for FS related livelihood programmes in all spheres of government on a strategic level in order to assess their impact/influence. The multi-sphere framework is comprehensive since it covers all aspects of SL, FS, resilience and assessment. It is flexible enough to be adapted for specific application. This chapter presents key issues that the multi-sphere framework in Zimbabwe must address. These issues are central to any approach that seeks to inject a new dynamism into Zimbabwean assessment practice. The issues mirror aspects of what has already been discussed in this research as components/indicator parameters of the framework in Chapter 7. The sections that follow present the multi-sphere livelihood assessment framework, process map for framework implementation and conclusion.

8.2 A COMPREHENSIVE MULTI-SPHERE ASSESSMENT FRAMEWORK

The multi-sphere livelihoods assessment framework for Zimbabwe was developed from the research findings from Chapters 2 up to 7. The framework comprises of two parts:

- the guiding components; and
- the process.

The guiding components consists of approaches, practices and principles, and indicators (see Section 7.2.1.8). Approaches bear reference to the overarching focus of sustainable livelihood assessment process. Practices and principles guide the realisation, selection process and appraisal of evaluation (Derbinski, & Reinhardt, 2017:12). It is important to understand that indicators serve as performance gauges, as well as qualitative strategic guides to the requirements for striving towards sustainable livelihood assessment. Their uniqueness is in addressing sustainable livelihood assessment from an all-inclusive multisectoral viewpoint.

The process describes the logical sequence and linkages of the framework's activities (see Figure 8.1). The multi-sphere assessment framework is driven by unitary, collective and

coordinated approaches that foster stakeholder collaboration, and involvement in all stages of its activities. Therefore, the approaches adopted by the framework can kindle stakeholder ownership of results, a culture of collective participation, consensus, experience-sharing platforms and a strong diverse team of experts to drive the framework implementation agenda. A multistakeholder team is ideal for drawing up plans and coordinating the assessment process. This team has the mandate of carrying out risk assessment to inform the design of new SL initiatives. Meanwhile, the assessment process helps monitor adherence to the principles and standards that guide the assessment practice. Furthermore, it establishes the project outcomes, discrepancies and recommended remedies. If the remedies suggest adaptation, modifications or readjustments, stakeholders are given feedback.

This framework hinges on two principles of inclusivity and participation that prominently feature in all the stages of the assessment framework cycle. These principles ensure and embolden stakeholders' belief that everyone has a contribution to make, regardless visible and invisible differences. The collective functioning of a multistakeholder team highlights the integrated and holistic perspective of the sustainable livelihood assessment practice. This holistic view is enhanced by all stakeholder involvement through all forms of political commitment (see Section 7.2.1.2). M&E is also important in that it helps keep track of the implementation activities of the framework. It provides the management team with ideal strategies to plan and guide future activities. For this reason, M&E runs through all the stages of the framework to ratify the framework as an inherent quality-driven and adaptable mechanism. The above exposition forms the core of the proposed multi-sphere sustainable livelihood assessment framework for Zimbabwe. The simplicity of the framework makes it adaptable, practical, flexible and easy to use across all spheres of government. Table 8.1 contains the new comprehensive framework for sustainable livelihood assessment in Zimbabwe.

Table 8.1: The new multi-sphere assessment framework for sustainable livelihoods

G **U** **I** **D** **I** **N** **G**	**FRAMEWORK APPROACH** Adherence to practices and procedures All stakeholder involvement Collaboration Commitment Contextual relevance Coordinated planning Embracement of diverse expertise Engagement Experience sharing	**PROCESS STAGES** 1. Stakeholder engagement: process initiation 2. Management team formation

COMPONENTS	Feedback drive Integrated approach Jointly coordinated Open-door policy Participation Partnership Systematic Unitary (Shared goals and vision)	3. Development of process map activities
	PRINCIPLES AND PRACTICES Accountability Accuracy Credibility Fairness Feasibility Flexibility Inclusivity Independence Integrity Mutual respect Openness Participation commitment Propriety Reliability Transparency Utility Validity	4. Community mapping and profiling 5. Community risk assessment 6. Hazard mapping 7. Vulnerability profiling
	INDICATORS Action and contingency plans Alignment to country laws Assessment reports and tools Communication protocols Community maps and environment profiles Developed plans (DRR, Finance Response) Emerging risk trends Goals Objectives and Outcomes Governance structure and management team Hazard maps and profiles Historical data Knowledge development and plans Livelihood practices M& E teams and schedules/timeline Process maps and project timelines Publications Terms of reference for committees User-friendly techniques Various teams	8. Disaster risk analysis and categorisation 9. Development and implementation of a sustainable livelihood assessment plan 10. Monitor and evaluate livelihood assessment process

The summary of the significant issues as presented in Table 8.1 reflects the simple, practical nature and structure of the comprehensive sustainable livelihood assessment framework intended for its universal relevance and applicability at all forums. Having discussed the comprehensive assessment framework for Zimbabwe, it becomes imperative to focus on the process map for framework implementation. The flow process is clarified in Section 8.3.

8.3 PROCESS MAP FOR FRAMEWORK IMPLEMENTATION

In order to facilitate the implementation of the above framework, a process map is presented to explain the logical sequence and links between activities. The process map comes in two parts, the guiding components and the process. These components address and prioritise the variables. Meanwhile, the process focuses on the planning and implementation aspect of the framework, showing how variables of the new framework link. The process map's numbering follows the sequence adopted in Table 8.1. Section 8.3.1 explains the first part of the framework, the components guiding the framework.

8.3.1 Components guiding the framework

The framework is guided by the variables that distinguish it. These are the approach, practices and principles, and indicators.

8.3.1.1 Approach

An approach is imperative for the framework to achieve its objectives in that it directs how assessment is done or how problems that present are dealt with. Therefore, the direction that the framework adopts define it and guide its operation cycle (see Section 7.2.1.8) in accordance with the laid down practices and principles of the framework.

8.3.1.2 Practices and principles

Practices and principles are cornerstones of the assessment framework. Practices denote customary, habitual, regularly expected assessment procedures that are regarded as standard and which the framework will follow. Meanwhile, principles are values that guide and give credibility to assessment practice (see Table 7.8). Practices and principles can also be used as indicators to assess compliance.

8.3.1.3 Indicators

Indicators perform many functions. They are ideal for communicating ideas, thoughts and values, measuring and calibrating progress towards assessment goals. Indicators act as a practice measure or performance gauges, signalling the achievement of objectives, compliance with the framework's guiding approach, practices and principles.

8.3.2 Process

The process describes the sustainable livelihood assessment practice and the relationships of various components of the framework. It further explains the logical sequence and links between the activities of the assessment process of the framework under the scope of DRR

assessment. The assessment process consists of two aspects that describe the planning and implementation process of the assessment framework (see Sections 8.3.2.1 to 8.3.3.3).

8.3.2.1 Planning

The planning process has three stages that explain the framework implementation. These stages bear reference to stakeholder engagement, management team formation and the development of the process map and related activities.

- *Stage 1: Stakeholder engagement*

The research findings have shown that multisectoral stakeholder engagement and involvement is key to the successful execution of assessment programmes. The need for engagement in the assessment of SL is imperative, hence the justification to make it a priority. There is a link between stakeholder engagement and the will to engage in sustainable livelihood assessment and the actual application of the sustainable livelihood measures (see Chapters 2 and 3). The different values stakeholders hold have to be considered to ensure that their unique perspectives are understood. Taking into consideration various stakeholder views ensures ownership of the assessment process and results in commitment to the whole assessment process. In this stage, stakeholders describe the programme's core components and elements, its ability to make changes, its development stages and how it fits into the larger organisational and community environment. The programme objectives and plans (DR and assessment, financial and resources) are formulated at this stage. These plans are aligned with the legal and regulatory frameworks of Zimbabwe. Therefore, stakeholder engagement initiates the assessment process, identifies and prioritises risks and formulates DRR, finance and a resources plan for the assessment framework. Stakeholder engagement gives impetus to the development of a management team to drive livelihood assessment framework.

- *Stage 2: Formation of the management team*

The management team is vital to drive the assessment activity or process. The team gives strategic guidance on the aspects to be included in the terms of reference of all stakeholders and project teams. A fairly selected and all-inclusive team drawn from diverse experts across spheres and sector makes it possible to for all stakeholders to engage in assessment activities. The success factor should thus be regarded as an enabler of the whole sustainable livelihood assessment process. Overall, the management team provides the necessary expertise and competences needed to fully execute the assessment process. The formation of the all-inclusive

team motivates the development of the process map and activities of the assessment framework.

- *Stage 3: Development of the process map activities*

A jointly developed process map and activities are key to the success of sustainable livelihood assessment activities as they give direction to the process. The management team sets assessment goals and objectives, setup governance structures, and clearly defines the terms of reference for programme teams and other committees. Furthermore, the management team sets up communication platforms and protocols and allocates resources (finance, logistics, human, infrastructure and so forth) for the assessment process. The availability of finance resources makes it possible for various stakeholders to engage in assessment activities. In pursuit of the same agenda the management team develops the contingency, knowledge development plans and standard operation procedures to guide the assessment criteria for various programmes. The community mapping and profiling aspect concludes the planning component of the framework and introduces the process.

8.3.3 Implementation

The implementation aspect of the framework describes the process of putting a plan into action to accomplish the strategic objectives and goals of the framework. The framework draws from DRR assessment practices. Disaster risk reduction assessment practices entail various aspects that contributes to the overall assessment practice for the updated framework. Practice follows community mapping, community risk assessment, hazard mapping, profiling vulnerability levels, disaster risk assessment and categorisation, knowledge development, and M&E. Practice should be seen as the inherent elements that must form an integral part of the day-to-day focus of all stakeholders. The success of assessing these factors depends on the influence that they have on each other and the adherence to the components that guide the framework (see Section 7.2.1.8).

- *Stage 4: Community mapping and profiling*

Community mapping and profiling is the first stage of DRR assessment and defines and maps out the profile of the community and the environment. This process is done through gathering data and information and scoping the disaster risk profile of the community through databases. Furthermore, the needs, infrastructure, critical facilities, and resources of communities are analysed and community risk profiles are developed at this stage. Community mapping and profiling provides the impetus for community risk assessment. The community risks profile

information can be used for programming livelihood projects, as well as an avenue for assessing the impact of the implemented projects. They can also be used as a barometer for detecting status of food security levels by community. Community mapping and profiling paves the way for another process, the community risk assessment.

- *Stage 5: Community risk assessment*

Community risk assessment mobilises communities, analyses their resources and vulnerability contexts and identifies their roles and responsibilities. The community is assessed and the risks to which they are susceptible are analysed. This assessment helps in the mapping of the existent risks and their levels before or after the implementation of a programme. Therefore, the mapping of the existent risks of communities is ideal in assessing the influence of sustainable livelihood programmes to reduce risk levels in the areas under study. It provides a baseline as well as a benchmark for assessing the influence of a given food security related project. Section 8.3.6 reviews the hazard mapping process.

- *Stage 6***:** *Hazard mapping*

Hazard mapping is about identifying hazards that are prevalent in the area, where they occur, and what time(s) they occur and why? This process helps create risk profiles that can be used for planning sustainable livelihood projects that build and strengthen livelihoods. Hazard mapping is done through field surveys, multi-hazard identification, risk mapping, prioritisation and profiling. Once the risk and livelihood profiles are determined, they have to be constantly monitored and reassessed. Therefore, hazard assessment is key to the framework in that it provides the motivation to gather the information on the hazards on which livelihood practices and risks of the communities being assessed. Having mapped and profiled the risks and projects, it becomes imperative to profile the community's vulnerability levels.

- *Stage 7: Profiling vulnerability levels*

Profiling community vulnerability levels helps identify community vulnerability, the vulnerable groups and the vulnerability patterns. This process brings into perspective the profiles of conditions that fuel vulnerabilities, and the periods when vulnerability is extremely high. Such information is ideal for DRR planning and the promotion of informed food security initiatives. Therefore, information is a powerful and valuable tool for promoting food security. The section that follows focuses on disaster risk assessment and categorisation.

- *Stage 8: Disaster risk assessment and categorisation*

The disaster risk assessment and categorisation process entail the identification and categorisation of new emerging trends of risks and their subsequent comparison with historical data. Group vulnerabilities are rated, priority risks identified and high-risk levels profiled. The actual assessment exercise is implemented only after the rating and prioritisation of community risks. Therefore, this process provides planners with a full picture of actual trends of disaster risks that threaten community's livelihoods. Based on this information, planning for and assessment of food security related programmes can be improved and achieved. Thereafter, the approach is adopted for implementation.

- *Stage 9: Assessment and implementation plan*

In this stage the assessment plan is executed, turning the objectives and strategies of the framework into action plans. Knowledge development is mainstay of this stage. Data is collected, analysed and findings are derived, followed by the review and validation of results through a cost benefit analysis. To ensure validity of the assessment results, independent external assessors are engaged to review and validate the assessment report. Stakeholders are debriefed on the findings and recommendations. Thereafter, the sustainable livelihood assessment is ratified and reports are shared through established communications platforms and protocols. Knowledge development can be incomplete without reviewing M&E.

- *Stage 10: Monitoring and evaluation*

M&E is critical to the framework in that it provides ways of checking adherence to the components of the framework (see Section 7.2.1.8). M&E ensures a continuous review of programme outcomes in relation to objectives throughout all the stages of the framework. It is ideal for determining the cause and effect of the programme outcomes and the effectiveness of the programme. Periodic M&E exercises help detect anomalies and deviations in the implementation of sustainable livelihood programmes. Therefore, M&E offers a way to critically review outcomes, identify and detect early gaps, challenges, and problems encountered during the assessment cycle (planning and the implementation process).

The identification and detection of gaps, challenges and problems prompts the modification, mending and upgrading of objectives and programme strategies. Thereafter, the programme is adapted to the changing environment and reports are compiled and shared with stakeholders through established communications platforms and protocols (see Section 7.2.1.8). The links between the variables of the new framework is presented in Section 8.3.4.

8.3.4 Process map: Comprehensive multi-sphere assessment framework

Section 8.3.4 forms the last segment of the process plan and indicates the links between the variables of the new framework. It should be noted that many of the success factors of each of the variables are inter-related and interdependent on each other. Figure 8.1 illustrates the relationships.

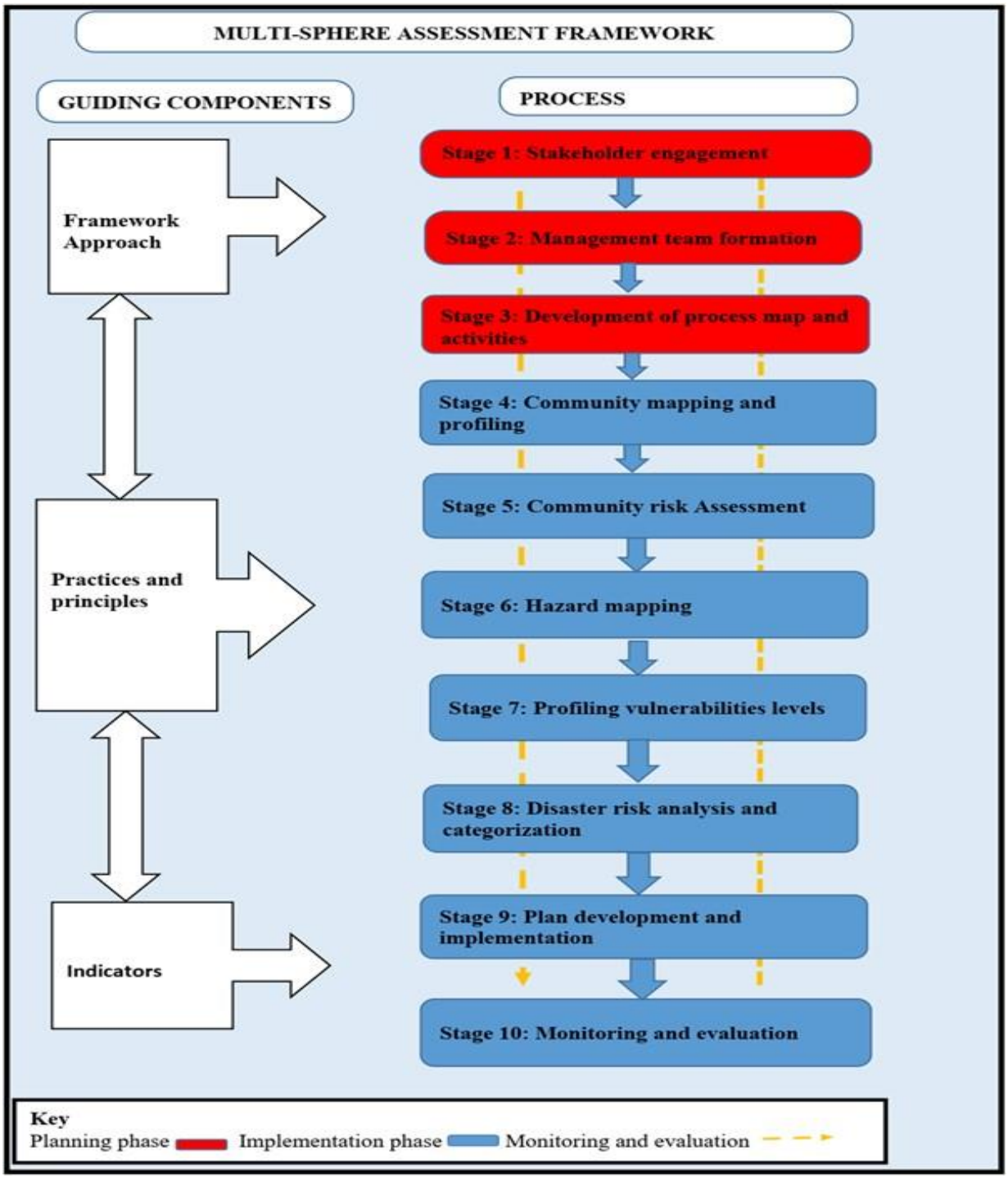

Figure 8. 1: Multi-sphere assessment framework (Ngwenya, 2020)

Having prioritised the variables of the updated multi-sphere assessment framework and indicated the links, the merits of the adapted framework can be considered.

8.4 MERITS OF THE ADAPTED FRAMEWORK

The merits of a multi-sphere assessment framework for sustainable livelihood initiatives in Zimbabwe are that it:

- provides appropriate direction, structure and rationale to improve sustainable livelihood assessment planning and facilitation processes;
- promotes a well-coordinated, uniformed and standardised approach in undertaking sustainable livelihood assessment in line with the requirements of the international assessment guidelines and principles;
- adds value to the assessment process by integrating and coordinating the various activities across different stakeholders, disciplines and sectors, taking advantage of the diversity that they bring along;
- offers flexibility to adapt programming if contextual relevant factors necessitate it;
- facilitates the pooling, sharing and harmonising of resources (the expertise, experience, interest, material and financial stamina) across all spheres towards the attainment of common goals; and
- fosters principles of inclusivity and participation of all stakeholders, inculcating an ethic of working together as a unit, a sense of programme ownership, diversity and efficiency in the assessment practice, among other things.

8.5 CONCLUSION

The discussion in this chapter centred on the development of a multi-sphere project impact assessment framework to serve as an assessment guideline for FS and resilience programmes in Zimbabwe. The development of the framework was driven by the desire to design an all-inclusive, coordinated and flexible sustainable livelihood assessment model to promote and enhance the assessment practice. This model can inform current and future FS and resilience plans and programmes that contribute to the achievement of SDGs and the DRR agenda. The insights from the theoretical and empirical perspectives of Chapters 2 to 7 were considered and ideas were integrated, culminating in the development of new assessment framework. The elements listed in Table 7.8.1 are central to framework, which seeks to inject a new dynamism into Zimbabwean assessment practice. The multi-sphere framework comprises of the guiding components and the process. The guiding components are approaches, practices and principles,

and indicators, while process refers to practice, the links between various components and the logical sequence of the assessment framework's activities. Ultimately, each of the framework stages was expressed as a process map to illustrate their application. The newly suggested framework informs and guides the planning and implementation of a coordinated sustainable livelihood process. As such, it links and converts the results of the sustainable livelihood assessment process into appropriate sustainable livelihood strategic actions. The all-purpose and flexible structure of the model makes it convenient and adaptable across all sectors of government, nationally, regionally and internationally. The chapter presents a process map of the framework, taking into consideration the interrelations, dependencies, priorities and interaction of various objects of all of the success factors. Thus, the expertise, experience and resources embedded across the stakeholder divide, when used effectively, can foster empowerment, self-reliance, an ethic of working together, programme attachment and ownership. The emphasis of participation and inclusion illuminates and encourages high-level stakeholder participation that can lead to the development of cost-effective, participatory and sustainable effective strategies.

Chapter 9 of the study enunciates the lessons learned from the scholarly research and the fieldwork process and ratifies the deductions that argue in favour of a framework towards a multi-sphere assessment approach for Zimbabwe.

CHAPTER NINE
CONCLUSION AND RECOMMENDATIONS

9.1 INTRODUCTION

This study reviewed SL assessment practice and processes by exploring the participants' perspectives and the values they attach to their views to grasp the enduring debates around assessment. This chapter summarises the lessons learned in pursuit of the research objectives during the literary review and the fieldwork process. It confirms the deductions formulated for arguing for a framework towards an upgraded multi-sphere assessment framework. The chapter outlines the research conclusions and recommendations with regard to the research topic of this study, namely the influence of livelihood projects on FS resilience levels in Zimbabwe.

9.2 RESEARCH SUMMARY

Various theories complement SL initiatives to enable communities to cope with and recover from shocks and to maintain their capabilities and assets, both now and in the future, while not undermining the natural resource base. This research links the assessment practice with sustainable livelihood approaches, working towards DRR, resilience-building and FS. The critical elements of Chapter 2 and 3, the valuable principles, characteristics and objectives of the SL, resilience, and FS models, permeate the study. The research findings acknowledge that sustainable livelihood assessments are a proactive DRR mechanism directed towards disaster risk reduction. The empirical findings of the research indicate that the components and processes of SL should be systematically addressed to ensure and enhance the quality and validity of the assessment process and outcomes. Therefore, the outcomes of the assessment process are instrumental in shaping DRR strategies and for the implementation of new initiatives that work towards building resilience and FS levels (see Chapters 3 and 5). The SL, resilience, FS and DRR imperatives were interrogated, leading to a comparative analysis of the three assessment models that could be used to assess FS initiatives. The comparative analysis of these models (see Chapter 4) revealed the prominent attributes, commonalities, organisers, purposes, strengths, and weaknesses of these models. These findings further articulated the important principles and characteristics of the SL, resilience, FS and disaster risk reduction models discussed in Chapters 2 and 3. These principles and standards inform the development of the proposed sustainable livelihood assessment framework in Chapter 8.

The research outcomes draw attention to the conceptualisation of the process and practice and provides a review of the current sustainable livelihood assessment practice in local districts of Zimbabwe. These districts are represented by the selected focus groups, key informants and implementing partners (see Section 6.2.3). The research methodology and data collection process (see Chapter 6) enabled the accomplishment of these research findings. The research findings motivated the development of the appropriate assessment framework and guided the recommendations for improving sustainable livelihood assessment in Chapters 6 and 7. The development of the multi-sphere livelihood assessment framework for Zimbabwe derives from the key principles and lessons drawn from the study. The new framework is modelled on the SL primary pillars of inclusivity, participatory stakeholder engagement and a bottom-up approach. This chapter provides insight into how questions stemming from this study were addressed, and appropriately contextualises and justifies the adoption of the multi-sphere assessment framework for Zimbabwe. Moreover, the chapter prompts recommendations for further improvement of the new framework. These were judiciously and tactically used in the study to accentuate the scope, value and outcomes of the research process. Section 9.3 presents the final research findings.

9.3 THE RESEARCH FINDINGS: AN ANALYSIS

This section shows how the research objectives were addressed and derives recommendations from the findings. The major broad recommendations are made to aid the implementation of a comprehensive sustainable livelihood assessment framework, presented in Table 8.1. Areas of further of research are discussed, followed by concluding remarks.

9.3.1 Scholarly theories that inform the foundations of this study

One significant finding of literature review is that there are various interactive and mutually reinforcing theories that explain SL and FS. Some of these theories include SL, DRR, resilience and FS. The SL theory endeavours to conceptualise how people work in a vulnerability context that is shaped by different factors (De Stagé *et al.*, 2002), and how they draw on different types of livelihood assets or capitals in different combinations in a sustainable manner. This model advances a pro-poor development agenda that promotes bottom-up and participatory approaches to encourage stakeholders to engage and debate issues that affect their livelihoods. The significance of this model for this thesis is underpinned by the fact that study areas are perennial targets of sustainable livelihood programmes that endeavour to ensure FS, resilience and create safety. Therefore, the SL model improves understanding of the dynamic nature of

livelihoods and what influences them, building on people's strengths and opportunities to support existing livelihood strategies. From this model, the study adopted benchmarks against which implemented programmes can be assessed to determine their influence levels on FS and resilience. For example, the entity's ability to plan, self-organise, converse, store, farm, and use capital in a sustainable way.

The DRR model seeks to promote a culture of safety, prevention and preparedness to limit the adverse effects of hazards (UNISDR, 2004:17) to protect livelihoods and boost FS. Thus, DRR matters to SL and FS in that its activities safeguard livelihoods from shocks and strengthens food production systems in the face of disruptive events. In the same vein, the resilience model builds the abilities of communities to adapt and recover after being subjected to a stressor. This observation makes the model relevant to the thesis in that it provides ways to identify the at-risk elements, its stressors and its capacities. Subsequently, the resilience concept now shapes the thoughts of DRR and sustainable development (Mitchell, 2013). The FS theory aims to ensure that an entity (household or community) has physical, social and economic access to sufficient, safe and nutritious food to meet its dietary needs and food preferences at all times (FAO 2000; FAO, 2001). FS is validated by met nutritional needs, with no evidence of food insecurity and having access to sufficient and affordable food for a health life (Pinstrup-Andersen, 2009: 137; Mishra, 2016:42). FS is an outcome of the livelihood strategies that people pursue.

The nexus of dimensions of SLF, resilience and DRR is interactive and mutually reinforcing (Henly-Shepard, 2019). Their attributes define each other. The models identified above have some benefits for the thesis in that their components were used as benchmarks and indicators to guide the assessment process. These are key to providing evidence-based data to inform the decision making of stakeholders to improve accountability. Indicators allow for systematic collection of data in accordance with recognised standards to create reliability and consistency (Global Food Security Cluster, 2016:4). Therefore, sustainability is realised when improved vulnerability and community wellbeing is evident, coupled with strong stakeholder commitment and strong institutional commitment by the legislature.

9.3.2 Impact of assessment project frameworks and principles related to FS that Zimbabwe can rely on for insight

The empirical findings and literature review constitute a detailed analysis of three impact assessment models in Chapter 4. This aided the conceptualisation of the term in Chapter 7.

Literature review findings were that assessment works towards programme improvement, social betterment, investigating cause and effect, observed outcomes and the generation of knowledge to inform learning and decision making (Bamberger *et al.*, 2012:2). The purpose is to investigate or judge the merit, worth or significance of an ongoing activity (Simonson, 1997:88; Stufflebeam, 2001; Scriven, 2007; Kahan, 2008). The credibility of an assessment is determined by the assessor's commitment and responsibility to ensure high standards of performance as informed by international assessment principles and standards (Chapter 4). Therefore, the effectiveness, relevance, efficacy and disclosure of assessment findings to stakeholders, are the epicentre of the assessment practice. These principles and standards are crucial to the new framework in that they provide checks and balances to ensure accountability, transparency, and efficiency, among other things (Sphere Project, 200:1 & LeClair, 2015:1). The three assessment models are the combined objective and non-objective method, the theory-based method, and mixed-methods.

The GB and GF model endeavours to test and assess the programme performance against goals, allowing for simultaneous examination of both expected and unexpected outcomes. Goals are used to draw the parameters (performance targets, outcomes) for assessing programmes. Therefore, the clarity of goals, the consensus about them and their measurability is paramount to this model (Hansen, 2005). The outcomes are used to finetune, reorient and replan FS programmes and to assess Zimbabwe's position with regard to its international and national obligations.

TBA seeks to understand programme development and impact based on a theory about how a programme works to produce the desired effects (Smith, 1994: 83; Fitz-Gibbon & Morris, 1996:177). This model is used to scrutinise the programme implementation conditions and mechanisms that mediate between processes and outcomes. Therefore, the model's ability to explain the how and why of programme success or failure helps provide additional explanations on problems and how the programme works.

The mixed-methods model endeavours to generate insightful and meaningful evaluative claims by crosschecking findings from various viewpoints, offering many design choices from which to draw lessons and conclusions. This model provides direction for improving programmes as they evolve, using multiple methods to comprehensively assess a programme's merit and worth (Stufflebeam, 2001). Therefore, the MMM contributes a range of qualitative indicators, provides detailed contextual analysis of projects, provides appropriate collection methods to address sensitive topics and issues, and triangulates data sources for validity.

One of the most significant empirical findings of the research is that "assessment" is understood differently across disciplines and levels of responsibility. Therefore, the level and degree of comprehension of assessment is the determining factor in terms of the prominence, commitment and approach to the process and its results. Assessment is a popular practice that is given little priority and that is done in an ad hoc manner, lacking an all-inclusive assessment tool. This finding corresponds with Echanove (2017:46) assertion that there is lack of a consolidated monitoring mechanism to determine the overall coverage and influence of the intervention in Zimbabwe. Despite the value attached to the framework, the assessment practice has not been fully supported by the government and its partners. The limited support and commitment from stakeholders indicate their level of attachment to assessment. This sheds light on why assessments are done as an ad hoc routine, despite the value they bring to disaster risk reduction and sustainability.

9.3.3 Past and current FS efforts and challenges in Zimbabwe

The empirical findings and literature show that Zimbabwe adopted various FS trajectories during the three historical eras (pre-colonial, colonial and post-independence) (Mudimu, 2003:36; Mabhena, 2013:2). In the pre-colonial era, the FS system centred on small grains, vegetable farming, animal husbandry and trade (Matutu, 2017), with a strong emphasis on massive agricultural production and food storage. This resonates with the Malthusian orientation (see Section 3.5.1). The Malthusian theory views FS from an "availability" perspective, negating the other FS pillars such as access, utilisation and stability (see Section 3.3). The food insecurity challenges of this era relate to widespread aridity, drought, violence and outbreaks of diseases (Illife, 1990; Chigodora, 1997). This time also saw production-oriented approaches to ensure national FS for its growing population against the backdrop of periods of famine (Mugandani *et al.*, 2012:362). Food production was achieved through the wide use of extension services. Extension services were adopted to improve farming practices, managerial skills and efficiency in the use of existing technologies (Hanyani-Mlambo, 2002; Veerabhadraiah, 2012:25). The post-independence era has been characterised by drought relief programmes (DRFs) from 1982 to 2020, land reform and Zimbabwe's Agenda for sustainable socio-economic transformation (Zim ASSET) 2013–2018 as some of its FS efforts. These initiatives sought to reduce poverty, suffering, build sustainability, resilience, capacity and ensure national FS. Still, the efforts to reduce this challenge have not yielded much success (Lunga & Musarurwa, 2016:1 & ZimVAC, 2017). The subsequent failure of these efforts is attributed to various factors, such as droughts, economic sanctions, partisanship, corruption,

inadequate inputs and back-up support, lack of training and a viable support system, nominal national budgetary support, and a weakened agricultural institutional setup to support implementation. These challenges rendered the whole exercise less helpful than it otherwise could be. There was a downward trajectory in FS trends despite the implementation of scores livelihood programmes.

The literature review indicated that Zimbabwe did not have a clearly articulated agricultural policy, nor one on FS during the three eras until 2002 (Hanyani-Mlambo, 2002; Mudimu, 2003). Zimbabwe's Food Nutrition Security Policy was crafted to harmonise sectoral plans and programmes that affect food and nutrition security for cohesive and cost-effective action to occur and to provide a mechanism to facilitate progress and foster a shared vision and strategy for improved household food and nutrition security (FNC of Zimbabwe, 2014). The FNSP is complemented by some sections of the law to fulfil the FS agenda.

9.3.4 Reflecting on early 21st century sustainable livelihood projects towards enhancing FS and resilience in Zimbabwe

The empirical findings revealed that implemented livelihood programmes had varying effects on beneficiaries and communities. On the positive, they helped create assets, build resilience, culture and ethic of hard work, improved pass rate, infrastructure development, reduced poverty, communities received, empowered communities and established DRR structures and systems. However, the impact levels of these positives could not be substantiated for the following reasons: lack of organised knowledge development and documentation practice, disharmony among stakeholders. Documentation of implemented programmes was found to be lacking and done in a haphazard manner, individually and selectively. This finding affirms Irigoyen (2017)'s assertion that Zimbabwe's approach to monitoring the progress and impact of programmes is weak with very little evidence except official health statistics. The lack of documentation and achievement creates a weak link between the district and the actual practice. Disharmony among stakeholders, as recorded in the research, signals compromised engagement and commitment and a conflicting angle where cooperating stakeholders are aloof and not as actively engaged as they should be. The implemented projects were criticised for perpetuating dependency syndrome and sowing division among community members. The major challenge of these projects was limited financial resources. Limited resources are indicative of stakeholder commitment levels to the livelihood assessment agenda. Another key finding was that communities detach themselves from programmes or projects that threaten the communities' existence. Despite the implementation of a plethora of sustainable livelihood

projects, communities' susceptibility to food insecurity still persists. Therefore, the impacts of these projects are too micro- and household-based with little or no significance vis-à-vis the totality of the community. This could be attributed to too high numbers of projects being implemented in too wide area, making it too small to have a great impact (see Chapter 7). Most of the implemented development initiatives have become white elephants in one way or the other in all the districts. The demise of such projects could be attributed to lack of community buy-in as a result being excluded from project design or imposition and beneficiary targeting inconsistences. This is inconstant with the principle of community participation and involvement expounded by Nyerere (1973).

9.3.5 Performance indicators should be incorporated into a comprehensive multi-sphere project impact framework for Zimbabwe

The empirical findings and literature review revealed various performance indicators to be incorporated into a comprehensive multi-sphere project impact framework. These components include approach, practices and indicators/ parameters. In terms of approach, the framework should ensure stakeholder involvement, a mixture of competences, an open-door policy, embrace capacity-building; be guided by clear stakeholder terms of reference; feedback drive; coordinated planning; adhere to assessment practice and procedures and research orientation.
In practice, the framework should have regard for expertise, value for operation standards, embrace pooling of resources, partnership synergising and integration, inclusivity, centralisation, transparency, independence, reliability and information sharing, participation, resourcefulness, openness, innovation and integrity. Other domains that also emerged are the generic indicators (DRR, SL, FS and resilience, assessment principles), clear processes and practices, embracing knowledge management and documentation, finance and resources, alignments to laws and regulatory frameworks, embracing of diverse expertise, a respect for the rights of all, the involvement of all stakeholders, a well-articulated structure, an analysis of stakeholders and roles, clearly stated project goals, an indication of the type of project, and clear project indicators. These components are very useful to the new framework in that they guide the approach, practice and indicators to be embraced by stakeholders.

9.3.6 A multi-sphere impact assessment framework for Zimbabwe

Scholarly research and models guided the drafting and adaptation of the multi-sphere framework for Zimbabwean in Chapter 8. The framework's purpose is to address various challenges, concerns and gaps obstructing the pursuit of effective assessment of sustainable

livelihood projects. This framework focuses on building stakeholder confidence, lessening criticism during collaborations, building a culture of collective participation, accountability, consensus and experience sharing platforms, pooling of resources, inclusivity, total stakeholder commitment, achieving FS and resilience. The pooling of resources provides expertise, experience, interest, and material and financial stamina that various stakeholders bring on board to give the framework an edge over other frameworks. Therefore, working together as a unit creates good ground for the cross-pollination of ideas, improved efficiency, service delivery and foster an integrated and expert approach**.** The multi-sphere assessment framework can bring order and harmonise the assessment practice. It will further develop and enhance total stakeholder ownership of the programme results, objectivity, eliminate bias in the assessment process and create platforms that could be used to dispute, verify and validate facts. This justifies an all-inclusive assessment framework FS projects that will help address these challenges.

However, the reality as evident from the research findings is that certain anticipated challenges have to be addressed before such a framework can be successfully implemented. Recommendations, as observations from the research are suggested in Section 9.4, as well as what kind of continuous research might be considered (in Section 9.5).

9.4 RECOMMENDATIONS FROM THE RESEARCH, AND TOWARDS CONTINUOUS RESEARCH ENDEVOURS

This section provides recommendations for this research. Out of this study on the influence of livelihood projects on FS resilience levels in Zimbabwe come some lessons with wider applicability.

9.4.1 Continuous education and training for all stakeholders

The study recommends continuous education and training for all stakeholders to continually improve stakeholder knowledge of SL and food-related theories (SL, resilience and DRR). Education and training will help stakeholders come to terms with and appreciate the relationships that exist between these three theories. Capacity-building, continuous training and education and stakeholder participation should become a permanent feature, because of the value it brings in all fields. Such training will allow stakeholders to appreciate the purpose of theories for this study and the vulnerability contexts within which they construct livelihoods. This will promote a correct understanding and application of the terms, thereby significantly

contributing to the expansion and embracing of the multi-sectoral knowledge of DRR practice. Continuous education and training should be adopted to develop the knowledge and skills that stakeholders need to successfully implement the framework. SL, DRR, resilience, FS and assessment process and practices should be the crux of this training. Training should foster uniform comprehension of concepts, practices, procedures, roles and responsibilities, terms of references and correct use and application of framework tools. Furthermore, education and training will help develop and strengthen stakeholders' capacities, increase confidence and improve their work performance. Therefore, training should be on an ongoing basis for continuous improvement of performance and confidence levels, prepare all stakeholders with the relevant knowledge and information to promote and sustain their decisive and active engagement throughout the sustainable livelihood assessment process**.** Training and education can include public awareness, campaigns, skills and knowledge development of all stakeholders, improving stakeholders' understanding of the sustainable livelihood assessment and developing their capacities.

9.4.2 Adoption of a radical shift from an *ad hoc* approach

The study recommends a radical shift from an ad hoc approach to a proactive approach towards the sustainable livelihood assessment agenda. This can be achieved when all stakeholders adopt and adapt their actions and convictions to the guiding standards and principles of assessment, programme improvement, commitment, providing direction for improvement, provision of clear insight and evaluation of claims, knowledge generation to inform learning. Adopting a radical shift to a proactive approach can foster confidence, participatory equity, accountability, transparency, partnerships and networks, sense of programme ownership and trust among different stakeholders. This shift can bring about change in the stakeholder's mind-set, contributing to innovations to help improve the assessment practice. Innovations and action are key in the establishment of fully-fledged assessment practice and functional units to inform districts' DRR planning.

9.4.3 Knowledge development and management should be made a top priority

The study recommends that knowledge development and management be made a top priority to safeguard the assessment. Bhatt (2000:16) substantiates that prioritisation of knowledge development and management could enable the districts to create knowledge to ensure its sustainability and survival. This recommendation was echoed during interviews and focus group discussions in the four districts under study, and affirmed as a component for inclusion

in the multi-sphere assessment framework (see Table 7.8). Knowledge can be developed and managed through education and training, development and documentation and management processes. Therefore, education and training processes should form the foundation of knowledge development and documentation. Thus, it should be embraced and prioritised as a mechanism to foster uniform comprehension of sustainable livelihood assessment an d collaboration of stakeholders into a partnership approach. Knowledge can be developed through research, development and consulting by experienced experts from various fields. It is important for the districts' sustainability and survival, and it is a source documents from which to draw lessons that can inform future planning of development initiatives. Meanwhile, the management aspect sets the parameters, standards and principles for the processes for directing the collection, organisation, storage and provision of information in the district or organisation. The application of management and documentation procedures enables managers to make faster and better decisions, and helps preserve history, best practices and knowledge memory of development initiatives, which are critical for the districts' sustainability and survival. Knowledge can be created through research and development and consulting by experienced experts. In this context, knowledge development will be facilitated through established fully-fledge d all-inclusive M&E structures in all districts. Documented knowledge can be archived electronically and in hard copy as reports, briefs, magazines and journals, among others. Therefore, knowledge development and management should form the crux of the all-inclusive assessment framework and accorded top priority.

9.4.4 Strategic lobbying for stakeholder commitment towards sustainable livelihood assessment

The study recommends strategic lobbying for increased stakeholder commitment towards the support of sustainable livelihood assessment programmes. Commitment defines the mobilisation of political systems and institutions, the adoption of policies, the allocation of resources and the coordination of responses for as long as necessary to ensure results (te lintela & Lakshman, 2015; Baker, 2018). Therefore, these commitment levels are key and they should be secured before the onset of the programme. This commitment is ideal for the successful implementation of the framework; thus, it is a "cannot do without" and a crucial resource. Stakeholder commitment denotes the expressed, institutional and the budgetary commitment towards the support assessment programmes. Without it the success of the project is compromised. About 62% of the participants revealed that the incapacitation and demise of most sustainable livelihood programmes had strong links with lack/limited stakeholder

commitment towards the project (see Section 7.2.1.7). These empirical findings indicate low stakeholder commitment. This directly contradicts the UN's commitment recommendations to stakeholders. The urge is to put disaster risk assessment at the centre of all their development and poverty eradication programmes plans (UN, 2005:1). Commitment can be created and strengthened through consciousness-raising, pushing and pressing the politically dynamic systems for support. This support can be expressed verbally, in terms of policies and through budgetary allocations. Lobbying entails taking strategic actions like networking political systems and trying to influence them through advocacy and presentations. Commitment to support the sustainable livelihood assessment framework is defined by the clarity of programme vision, objectives, and implementation strategies among others.

Commitment to SL assessment could be demonstrated by setting up a financial planning and resources mobilisation unit. The function of this unit will be to mobilise finances and resources for assessment process before the implementation of the framework. The imperativeness of the finance and resource mobilisation unit for the implementation of the sustainable livelihood assessment framework should not be overemphasised. This unit will give strategic guidance to all the aspects that should be in place in terms of financial arrangements and resources. Finance and resources are a significant component of any given project, just as is blood to a living organism. Finance planning and resource mobilisation coordination should lie with a multistakeholder team. This unit's terms of reference will include among others fundraising, appropriation, reporting and management of all the finances in line with the approved budgets.

Therefore, stakeholder commitment is key for the successful implementation of the multi-sphere assessment framework and provides the necessary motivation for multi-sphere support before and during its cycle. Thus, it becomes imperative to make it a top priority for the framework.

9.4.5 Stakeholders should set up appropriate structures and systems for the implementation of the multi-sphere assessment framework

The study recommends the setting up and improvement of appropriate structures systems and processes to support the implementation of the framework, in accordance with indicator parameters (governing policies, approach, practices and indicators). These have to be set up before the implementation of the assessment framework to support its roll-out. Structures should be set up through wide consultation and stakeholder analysis. Due consideration will also be given to stakeholder's expertise, interest, networks, while equality and fairness, and

adherence to the laws of Zimbabwe will also influence the setting up of committees. The management team's task will be to draw terms of reference for all the formed structures, to bring order to the operations of structures. Thus, functions and responsibilities that enhance the implementation of the framework are clarified. Terms of reference help improve the coordination and integration of various assessment-related activities amongst various stakeholders. These structures will give proper guidance on sustainable livelihood assessment planning, facilitation and implementation processes. When these are in place, then the roll-out can commence. Therefore, the establishment of the structures, systems and processes will promote all stakeholder participation, foster good governance principles and facilitate the prompt implementation of the framework.

9.4.6 Develop cooperation and networking platforms between various sectors

The study recommends the development of cooperation and networking platforms between various sectors and fostering of new stakeholder partnerships to encourage the ethic working together to build synergies to operationalise the assessment framework. These platforms will be created at various forums at the district, province, national and international level, with organisations, various bodies and institutions of higher learning. Networking help organisations/district get access to other opportunities that can come along the way, advance the organisation's practice, help it to get advice, support, fresh ideas, more knowledge and gain different perspectives. Furthermore, networking also boosts confidence and strengthens connections and also acts as a conduit for interconnecting with contacts in various fields. Therefore, networking can help the organisation develop and improve its skills set, stay on top of the latest trends in its industry, keep a pulse on the new trends, practices, meet prospective mentors, partners, and financiers, and gain access to the necessary resources that will foster the organisation's survival and the professional development of its workforce.

Fostering stakeholder partnership helps build the strength needed to operationalise the multi-sphere assessment framework through active involvement and participation of all stakeholders. Participation is envisaged to promote programme ownership of the assessment processes and practices. Furthermore, participation fosters unity of purpose in planning, implementation, resources management and approaches to be followed. Therefore, strong partnerships could be fostered with departments like environmental management agencies, the Department of Health, the Department of Education, Agritex, the police, social welfare, traditional leadership, councillors, the affected communities and NGOs. More so, partnerships will be instrumental in the pooling of resources to get more strength in terms of resources as substantiated in section

9.3.4. As such, these partnerships will bring diversity and efficiency in the implementation of the framework. Above all, it will foster the ethic of working together and promote cross-pollination of ideas for empowered efficiency and service delivery.

9.5 RECOMMENDATIONS FOR FURTHER RESEARCH

The thesis findings enabled the researcher to uncover other areas for further research, suggested below.

- Further research should be conducted to establish the efficacy of the themes and success factors, as well as determine their nexus, once the framework is implemented;
- The strategic nature of the research necessitates the refining of the framework for strategic and practical application. It is recommended that the framework be refined to suit the particular tactical and operation needs of the different spheres of government nationally, regionally and internationally;
- A cost-benefit analysis of post-independence Zimbabwe, sustainable livelihood initiatives related to FS. This would give insight into the validity reliability, propriety, feasibility and accuracy of the programmes;
- Imperative to sustainable livelihood assessment is the linkage with SDGs. Further research into the link between strategic development goals (e.g., the SDGs) and the strategic objectives of this framework is necessary. In this way, the success of the framework achieving Zero hunger can be established.

To conclude, this chapter enunciates the lessons learnt from the scholarly research and the fieldwork process and confirms the deductions formulated for arguing towards a proposed multi-sphere assessment framework. To that end, six research objectives of this study were fully addressed through a synthesis of literature and in light of the new perspectives generated from the empirical findings. The study found that sustainable livelihood theory is explained by various interactive and mutually reinforcing theories, whose attributes define each other (disaster risk reduction, resilience and FS. Sustainability is realised when improved vulnerability and community wellbeing is evident, coupled with strong stakeholder and institutional commitment by the legislature. Sustainable livelihood assessment is a practice and process working towards programme improvement, social betterment, learning, decision making, judging merit and significance of ongoing activities to enhance FS and resilience. Much still needs to be done at the policy levels to enable genuine and sustainable all-inclusive participatory processes of engagement by all stakeholders.

Various agricultural production and food storage-oriented FS trajectories in Zimbabwe have been explored to reduce poverty, build sustainability, resilience, capacity and secure national FS. Climatological, environmental, socio-economic and political factors have rendered the whole exercise less helpful than it otherwise could be, triggering a downward trajectory in FS trends. Thus, varying projects impacts on beneficiaries and communities have been observed. Some projects positively contributed to assets creation, resilience-building, creation of the culture and ethic of hard work, improved schools pass rate, and the establishment of DRR structures and systems in the four districts under study. Contrary, these projects have promoted dependency culture and divisions in the communities. Documentation of implemented programmes was found to be lacking and done haphazardly, individually and selectively. Thus, the impact of implemented projects was found to be too micro and household-based with little or no significance vis-à-vis the totality of the community. Furthermore, the project impact levels of implemented initiatives remain minimal due disoriented knowledge development and management, lack of stakeholder commitment and lack of an all-inclusive assessment tool. An all-inclusive multi-sphere assessment framework was developed to address the highlighted challenges. The assessment framework hinges on various principles the most prominent ones being inclusivity and participation. It addresses various challenges, concerns and gaps obstructing the pursuance of effective assessment of sustainable livelihood initiatives in Zimbabwe. The effective and successful implementation of the developed framework warrants the necessary commitment and support by all stakeholders to be mandated and fully implemented as a practice. The framework is expected to bring order and harmony to the assessment practice, develop, objectivity, eliminate connivance and bias in the assessment process and create triangulation platforms (to dispute, verify and validated facts). However, some challenges need to be addressed before such a framework is successfully implemented. Therefore, there is need for continuous education and training for all stakeholders; adoption of a radical shift from an ad hoc approach; accord knowledge development and management top priority status; engage in strategic and concerted lobbying to win all stakeholder commitment; setting up of appropriate structures and systems, and development of cooperation and networking platforms between various sectors. This will enhance the implementation of the multi-sphere assessment framework. Further research to the study may be undertaken focusing on a critical review of the applicability and adaptability of the framework for further improvements to sustainable livelihood assessment and disaster risk reduction approaches at micro-, meso- and macro-level. In finalisation, this chapter provided possible areas of future research emanating from this thesis and conclusion.

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ANNEXURES

ANNEXURE A: RESEARCH DATA COLLECTION LETTER 1

School of Social Sciences
Deputy Director (Acting) & Subject Chair History: **Prof Elize S van Eeden**
For Inquiries: Administration Officer: **Ms R Serobane**
Email: Lebo.Serobane@nwu.ac.za
Tel: 016 910 3466
Web: http://www.nwu.ac.a
2 August 2018

TO WHOM IT MAY CONCERN

RE: PERMISSION FOR MR S NGWENYA TO CARRY OUT A STUDY AND COLLECT DATA

Mr Sifelani Ngwenya is currently an enrolled PhD student in the Programme: Doctor of Philosophy in Science (Disaster Risk Science) at the North-West University Potchefstroom Campus, South Africa.

The title of his thesis is:

The influence of livelihood projects on food security resilience levels in Zimbabwe

In order to complete his thesis, Mr Ngwenya must conduct a substantial part of empirical investigation and fieldwork in the country, Zimbabwe. It would therefore be appreciated if Mr Sifelani Ngwenya could be permitted to collect the necessary data in order to accommodate the above-mentioned. Mr Sifelani Ngwenya has the necessary orientation, motivation and capacity to deal responsibly with confidential information. This information will eventually be safely stored by the promoters situated at the NWU, South Africa.

Your kind consideration of this request will be greatly appreciated.

Yours sincerely

Promoter of Mr S Ngwenya
Prof Elize S van Eeden
Subject Chair History &
Deputy Director-Acting,
School of Social Sciences
Vaal Triangle Campus
PO Box 1174
North-West University
Vanderbijlpark 1900
SOUTH AFRICA
Cell: 082 752 8839
Work: 016 910 3469 http://elizevaneeden.co.za/

ANNEXURE B: RESEARCH DATA COLLECTION LETTER 2

MINISTRY OF LOCAL GOVERNMENT PUBLIC WORKS AND NATIONAL HOUSING
MATEBELELAND SOUTH PROVINCE

TEL: 0284- 22439/22572-3
ADMINISTRATOR
FAX: 0284-22575/22687
EMAIL:pamatsouth@mlg.gov.zw

PROVINCIAL
MATABELELAND SOUTH PROVINCE
KALIPATI/BIGBEN ROAD

All correspondents to be addressed to
The Provincial Administrator ZIMBABWE
P. O Box 146
GWANDA

11 July 2019

The District Administrator
Bulilima
Gwanda
Mangwe
Umzingwane

AUTHORITY TO CARRY OUT A FIELD STUDY AND DATA COLLECTION FOR EDUCATIONAL PURPOSES.

The above issue refers

This letter serves to introduce Mr Ngwenya Sifelani who is a student with the North West University of South Africa. He is a PhD student of philosophy in science specialising in Disaster Risk Science. It is a requirement that he carries out a field study in order to complete his thesis titled, *'The influence of livelihood projects on food security resilience levels in Zimbabwe"*

It is against this background that you are requested to give him all the necessary support he may require

Thank you

Ncube S

PROVINCIAL ADMINISTRATOR FOR MATABELELAND-SOUTH

Prov. Administrator-Mat. South
Min. of Rural Dev., Promotion
Preservation of Nat. Culture & Heritage
11 JUL 2019
P.O. BOX 124, GWANDA

ANNEXURE C. QUESTIONNARE FOR KEY INFORMANT: DDCs Agritex, Cllrs, Headmasters & CEOs.

Information of intent

My name is Sifelani Ngwenya and I am currently engaged with a research project in order to complete the degree, Doctor of Philosophy in Science (Disaster Risk Science), at the North-West University Potchefstroom Campus, South Africa. The title of my PhD-thesis is: *The influence of livelihood projects on food security resilience levels in Zimbabwe*. You/ your institution has been identified as a key informant in this process. I therefore kindly encourage your participation in the study. The results of the study will only be used to inform good practice in disaster risk reduction (DRR) programmes, shaping interventions in communities in Zimbabwe. All feedback will be treated as confidential, and secured safely stored for five years in the NWU-Archival repository facility, managed by my promoter Prof Elize S van Eeden. If, at any stage, you feel you no longer want to continue with providing information, you may pull out if you so wish. The questionnaire will take approximately 40-60 minutes to complete. Please confirm your willingness to participate by signing as indicated below this paragraph in the space provided indicating that you take note of what I said here. Thank you for your participation in this study.

Signature …….

Date ….....

Instruction. Write all responses in the spaces and tick in the boxes provided.

Interviewer's name……. Date of Interview……

A) BIOGRAPHIC DATA

1. Name of the position/institution/agency/community: ….....
2. Gender 1=Male [] 2=Female []
3. Age **[]**
4. What is your cultural group? 1=Ndebele []
   2=Tswana []
   3=Zegura []
   4=Sotho []
   5=Tonga []
   6=Kore []
   7=Venda []
   8=Endau []
   9= Kalanga []
   10= Other. (Specify)**……**
5. For how many years have you been part of this community? [**]**

B) **UNDERSTANDING ISSUES AROUND FOOD SECURITY AND HOW HELPFUL THE CURRENT FRAMEWORKS ARE. (food security, resilience and sustainable livelihoods and disaster risk reduction)**

6. Have you ever been involved in sustainable livelihoods assessments?

1=Yes [] 2=No []

7. If Yes, what in your opinion is Sustainable Livelihoods assessments?

……

……

……

8. What has been the aim for carrying out sustainable livelihood assessments in your region/country?

……

……

……

9. What hazards are commonly experienced in your community/district/ province? (Identify, and only tick down those that commonly apply)

1=Droughts	[]
2=Wildfires/veldt fires	[]
3=Windstorms	[]
4=Floods	[]
5=Human diseases	[]
6=Extreme temperatures	[]
7=Cyclones	[]
8= Gold panning related accidents	[]
9=Pests (insects, birds manifestation)	[]
10=Livestock diseases	[]
11=Road accidents	[]
13=Lightning	[]
14=Others (specify) ……..	

10. What is the food security situation like in your region? (in terms of availability, access, utilisation & stability).

……

……

……

……

11. How are people coping with the food security situation? (iin terms of availability, access, utilisation & stability**).**

……

……

……

12. What are the livelihoods in your community?

12.1 = Indigenous livestock farming (chicken, goats, cattle) []

12. 2 = Indigenous vegetable production (lude, ndumba, delele, bhobola) []

12.3 = Indigenous Crop production (small grains, for example rapoko, sorghum, millet) []

12.4 =Market gardening (for example vegetable farming) []

12.5= Remittances []

12.6 = Fruit production []

12.7= Hunting and gathering of insects, wild fruits, etcetera []

12.8= Gold panning []

2.9 =Vending []

12.10 =Subsistence farming []

12.11=Piece jobs (local and in neighbouring countries) []

12.12= Other (Specify…….) []

13. What livelihood projects are being implemented in your communities?

……

……

……

14. Who are benefitting from the projects?

……

……

……

15. Who is not benefitting from the projects?

……

……

……

16. What human and environmental changes have you noted overtime on the livelihoods that you have identified in your community in Question 13? Kindly elaborate.

……

……

……

17. Share any good memory on livelihood projects in your community that comes to mind.

……

……

……

18. Share any bad memory on livelihood projects in your community that comes to mind

……

……

C. LIVELIHOOD PROJECTS ASSESSMENT

19. Have you ever participated in assessments of livelihoods projects in your region?

1=Yes [] 2=No []

20.1If yes, explain what was your role and your experience?

……

……

20.2 If NO, explain why you think not

……

……

21. Are livelihood projects in your district assessed?

1=Yes [] 2= No []

22. If YES, how often are livelihood projects assessed? (In years)

…….

23. If NO, how often you think it should be done?

……

……

……

24. Do you think assessing livelihood projects would help to lower risks of disasters happening? 1=Yes [] 2= []

25. Kindly elaborate on your answer

……

……

……

……

26. Which stakeholders are involved in the assessment process within your region?

……

……

……

27. What roles does each stakeholder that you identified play in the assessment process?

……

……

……

28. How often do DRR-stakeholders meet? …….

29. Kindly elaborate on your response in question 28.

……

……

……

D. **CURRENT LIVELIHOOD ASSESSMENT PRACTICE**

30. Does your village/ward/district have the necessary capacity (expertise, experience, human and financial resources, fixed asset etcetera) to undertake LIVELIHOOD assessments?

1=Yes [] 2= little [] 3= none []

31. If YES, respond to the effectiveness in undertaking assessments within your village/ward/district

……

……

……

32. If NONE or minor assessment practices, please elaborate

……

……

……

33. Are there any challenges you have experienced in undertaking assessments within your district?

……

……

34. Do you regard the services of consultants as essential in DRR assessment? (Consider issues like guidance, leadership, structure and plan).

1= Definitely yes [] 2= Not really [] 3= No []

35. Please elaborate your answer

……

……

……

36. Kindly share your suggestions on the influence of Livelihood programme interventions on food security.

……

……

……..

37. What do you suggest should be included in the all-inclusive assessment framework for Zimbabwe? (*Indicators /parameters, organisational structure, capacity and resources needs etcetera.)*

……

……

……3

38. Do you have any other information you would want to share besides what has been discussed in this interview or questionnaire interview?

……

……

Realeboga, Siyabonga! Taboka, Thank you!

ANNEXURE D: FOCUS GROUP DISCUSSION

Information of intent

My name is Sifelani Ngwenya and I am currently engaged with a research project in order to complete the degree, Doctor of Philosophy in Science (Disaster Risk Science), at the North-West University Potchefstroom Campus, South Africa. The title of my PhD-thesis is: *The influence of livelihood projects on food security resilience levels in Zimbabwe*. You/ your institution has been identified as a key informant in this process. I therefore kindly encourage your participation in the study. The results of the study will only be used to inform good practice in disaster risk reduction (DRR) programmes, shaping interventions in communities in Zimbabwe.

All feedback will be treated as confidential, and secured safely stored for five years in the NWU-Archival repository facility, managed by my promoter Prof Elize S van Eeden. If, at any stage, you feel you no longer want to continue with providing information, you may pull out if you so wish. The questionnaire will take approximately 35-40 minutes to complete. Please confirm your willingness to participate by signing as indicated below this paragraph in the space provided indicating that you take note of what I said here. Thank you for your participation in this study.

Signature …….

Date ….....

***Instruction*.** Write all responses in the spaces and tick in the boxes provided

Interviewer's name……. Date of Interview……

A) BIOGRAPHIC DATA

1. Name of District ……
2. **Age category by gender [] years** Male [] Female []

B) UNDERSTANDING OF CONCEPTS (FOOD SECURITY, RESILIENCE, SUSTAINABLE LIVELIHOODS, DISASTER RISK REDUCTION KNOWLEDGE AND OUTCOMES)

3. What are the most common ways that people in your communities make a livelihood?

4. How do the communities use the livelihoods you identified to achieve food security?

5. How can communities influence policy for DRR, to build and enhance their livelihoods, food security and resilience concepts that had been discussed in question 3 and 4?

6. What livelihood projects/programmes is the Government of Zimbabwe and organisations implementing in the district? Please describe these projects' aims /objectives, the target groups, why these beneficiaries specifically?

7. To what extent have, the implemented projects influenced community resilience levels and food security in your region over the past 15years.
8. What DRR structures and systems have been established, in communities where interventions have been initiated? How well are these structures and systems working?
9. What are your action approaches in communities where projects have been established? (Kindly explain).

(C) COVERAGE OF THE LIVELIHOODS PROJECTS

10. How many wards and beneficiaries have benefited from sustainable livelihoods over the past 15years in the district? To what extent these wards have benefited?
11. How have the projects been perceived by the communities (i.e., positively and/or negatively)?

(D) CURRENT LIVELIHOOD ASSESSMENT PRACTICE

12. Provide insight into the current LIVELIHOOD ASSESSMENT PRACTICE within your district (phases, stakeholders & their roles and instruments (models) used).
13. Do you think assessing livelihood projects would help to lower risks of disasters happening? Please elaborate.
14. Which other assessment practices in your opinion should be considered in the proposed multi-sphere assessment model? Kindly explain your thoughts.
15. What are the challenges and difficulties experienced, by your district in the assessment practice?
16. What do you foresee as the merit and demerits of adopting a multi-sphere assessment model in assessing livelihood projects within your district?
17. Are there any other issues you may want to mention in relation to what has been discussed during the focus group discussions?

Thank you for sparing your time

ANNEXURE E: QUESTIONNAIRE FOR KEY INFORMANT II (NGO)

Information of intent

My name is Sifelani Ngwenya and I am currently engaged with a research project in order to complete the degree, Doctor of Philosophy in Science (Disaster Risk Science), at the North-West University Potchefstroom Campus, South Africa. The title of my PhD-thesis is: *The influence of livelihood projects on food security resilience levels in Zimbabwe*. You/ your institution has been identified as a key informant in this process. I therefore kindly encourage your participation in the study. The results of the study will only be used to inform good practice in disaster risk reduction (DRR) programmes, shaping interventions in communities in Zimbabwe. All feedback will be treated as confidential, and secured safely stored for five years in the NWU-Archival repository facility, managed by my promoter Prof. Elize S van Eeden. If, at any stage, you feel you no longer want to continue with providing information, you may pull out if you so wish. The questionnaire will take approximately 35-40 minutes to complete. Please confirm your willingness to participate by signing as indicated below this paragraph in the space provided indicating that you take note of what I said here. Thank you for your participation in this study.

Signature …….

Date ….....

Instruction. Write all responses in the spaces and tick in the boxes provided.

Interviewer's name……. Date of Interview……

A) BIOGRAPHIC DATA

1. Name of organisation ……
2. Gender 1=Male [] 2=Female []
3. Age **…….**

B) CONCEPTUALISATION (FOOD SECURITY, RESILIENCE AND SUSTAINABLE LIVELIHOODS KNOWLEDGE, DISASTER, DISASTER RISK REDUCTION AND OUTCOMES

4. What project(s) is your organisation implementing in the region?

.....

.....

.....

5. What are the aims /objectives of the programmes you identified, in Q 4?

……
……
……

6. What structures and systems have been introduced by your organisation to facilitate livelihood projects?

……
……
……

7. How efficiently are the structures and systems working? (as indicated in Question 6)

……
……
……

8. Who are the beneficiaries of the structures and systems, and why these beneficiaries specifically?

……
……
……

9. What have been your negative experience(s) with livelihoods projects over time in the region you are operating?
   ……
   ……
   ……
10. What have been your positive experience(s) with livelihoods projects over time in the region you are operating?

……
……
……

11. Have any negative/positive/suggestive responses been received from beneficiaries to the changes you have introduced in the region? 1= Yes [] 2= No []
12. Kindly elaborate on your response of why/why not (in your view)

……
……
……

13. Kindly elaborate on your view on how the/a project outcome has impacted on communities in ways that could have positively or negatively affected beneficiaries.

……
……
……

C) LIVELIHOOD PROJECT ASSESSMENT

14. Have you ever carried out impact assessments for the project currently operational?

1=Yes ___
2=No ___

15. If "Yes" in Question 14 how have you, done the assessments?

……
……
……

16. If "No" in Question 15 kindly elaborate on why not?

……
……
……

17. Rate the assessment practice on a Likert Scale:

	1 Strongly Disagree	2 Disagree	3 Neither Disagree or Agree	4 Agree	5 Strongly Agree
17.1 A systematic way to gather project evidence and significance to learn and improve delivery					
17.2 Compliance with legislative requirements					

17.3 Compliance with donor requirements					
17.4 A proactive disaster reduction mechanism					
17.5 The first step towards/developing a DRR plan					
17.6 A means to responding to/disaster situations					
17.7 Part of the disaster recovery and rehabilitation process					

18. How often (in years) are assessment done on average within your organisation? [] years

19. Does your institution consider the assessment process as a strategy towards Disaster Risk Reduction (DRR)? 1=Yes [] 2=No [].

19.1 If **Yes**, state how assessment is linked to DRR initiatives within your institution

……

……

……

19.2 If **No** state your reasons.

……

……

…….

20. Who is involved in the project assessment process within your organisation?

.....
.....
.....

21. How often do stakeholders meet? […….]

22. Would you consider the using other different assessment models/approaches? (Please elaborate concisely these models/approaches)

1Yes= [] 2=No []

23. Explain why you would consider/not consider (clearly indicate your choice here)

……
……
……

D. CURRENT LIVELIHOOD ASSESSMENT PRACTICE

24 Does your institution have the necessary capacity to undertake assessment(s)?

1. 1= absolutely yes [] 2= Not really [] 3=No []

25 Please explain /elaborate on your answer to Q 24

……
……
……

26 How often does your institution at times outsource the assessment function to consultants? 1= never [] 2= seldom [] 3=sometimes [] 4=often []

27 Kindly share any of your institutions' reasoning around outsourcing the assessment function

……
……
……

28 Do you consider the services of consultants necessary in assessment? (Consider issues like guidance, leadership, structure and plan).

1= absolutely yes [] 2= Not really [] 3= No []

29 Please kindly elaborate your thoughts on the merits and demerits (and/or value) of utilising the services of consultant.

……

……

……

30 What do you suggest would be the ideal assessment approach as model towards programme impact assessment and intervention in relation to resilience-building?

……

……

……

31 Please elaborate why you think this way

……

……

……

32 What indicators/parameters should be incorporated in a multi-sphere assessment framework for Zimbabwe? (For example, the *ideal organisational structure, capacity and resources needs etcetera).*

……

……

What could be the merits and challenges for adopting a multi-sphere impact assessment framework for Zimbabwe?

……

……

33 Are there any other matter(s) to be considered regarding the discussion on the influence of livelihood projects on food security resilience levels in Zimbabwe?

……

……

Dankie! Siyabonga! Taboka! Thank you!

ANNEXURE F: INFORMED CONSENT FOR PARTICIPATION IN AN ACADEMIC RESEACH STUDY

Name of Researcher: Sifelani Ngwenya

Institution: North-West University Potchefstroom Campus

Degree: PhD Disaster Risk Science

Study Title: The influence of livelihood projects on food security resilience in Zimbabwe.

Purpose of study: Framework development.

Background to the research,

Methodology:

This study is going to be conducted using a blended research design of qualitative and quantitative. Data will be collected from, District Administrators, RDC CEO and councillors, Chief and traditional leaders, Government Department and NGOs. Interviews, document analysis, and focus group discuss will be used to collect data. Participants will be required to fill in questionnaires or engage in face-to-face interview, focus group discussions with the researcher where data will be recorded on an audio-recorder.

Research ethics

Persons who are willing to participate in this research should read the following information carefully so that they can make an informed decision about their participation.

Conditions for participation

Participation in this research is voluntary and participants should do so out of their own free will. The participant is free to withhold any information that they may decide not to share with the researcher or withdraw from an interview at any point if they feel like doing so for whatever reasons. If you agree to voluntary, participate in this study, you will be invited to answer interview questions on food security, sustainable livelihood projects, DRR, Assessment, and resilience issues. You are free to ask questions or raise concerns regarding the research. The researcher will seek permission from the informants before tape recording their responses on the questions. No personal identification will be possible when the information is used. The researcher will consider and respect the community and participants throughout the study. If you so wish to be further informed or revise or withdraw your contribution you can also contact Mr Sifelani Ngwenya (the researcher) at +263772762438; +263715112169 & sifelanin@gmail.com or one of the supervisors of the research Prof Elize van Eeden at +27169103469; +27827528839 & Elize.vanEeden@nwu.ac.za and Dr. Wilfred Lunga at +27735345549; +2630773 284 425, lungawcampeon@gmail.com. It will take approximately 40-60 minutes to complete all the interview questions.

Protection accorded to Participants

- Confidentiality: Each participant's privacy will be maintained.
- Anonymity: Names of institutions and individual participants will not be divulged, instead, pseudo names will be used which may in any way link the data collected.

- Risks/discomforts: There are no anticipated risks associated with participation in this study, permission to conduct this research was granted by the Ministry of Higher Education and responsible authorities for institutions.

Data analysis

Qualitative data gathered will be analysed using the manual sort and count, classified, categorised and trends and patterns analysed as they emerge. Meanwhile, quantitative data will be subjected to statistical analysis using the statistical package for the social sciences (SPSS) and presented in tables and graphs.

Use of Data Collected

The end product of this study will be a Doctoral Thesis. It is envisaged that some of the chapters or the entire document may attract a variety of publications later on. All information about the participants will be treated with strictest confidentiality and will not be revealed to anyone else except the persons noted unless required by law.

Benefits

There will be no direct benefit to you from participating in this study. Your participation will assist the researcher, in adding to the scientific body knowledge and literature through this study. The study will serve as a valuable tool to national government, donor community and NGOs thereby offering an appropriate and relevant good practices and frameworks, for the facilitation and the promotion of building community resilience and food security through sustainable livelihood projects. These good practices will be used to design and implement, evaluate livelihood projects that enhance community resilience at the same time ensuring that donor funds are put to good use and achieve their intended goals of world poverty reduction. The study will contribute significantly to the body of knowledge that is currently in existence in Zimbabwe, the SADC region and internationally by providing new knowledge. Besides contributing to the general academic debate/body of knowledge, the findings and conclusions will be used to develop other development frameworks, models and programmes.

Consent

You are free to decline to participate in this study, or withdraw or stop participation at any time without any consequences or penalty. Your decision to participate or not to participate in this study will not have any influence on both your present and future status in this community.

Understanding by participant

I agree to participate in this study and understand that my participation is voluntary.
I understand that all data collected will be limited to the use of this study and I will not be identified in the final product.
I am also aware that all records will be kept confidential in the secure possession of the researcher.
I understand that I may withdraw from the study at any time, with nor adverse repercussions and that when I withdraw all information I provided will be destroyed and omitted form the final product.

_____	_____	_____
Participant name	Signature	Date

APPENDIX G. CHECKLIST FOR ETHICAL ISSUES

Ethics aspect	**Guidance notes**
Purpose of the study	Explaining the purpose, importance and reasons for the studies in simple understandable language, the expected value or benefit of the study to the participants.
Risk assessment	Conscious of the psychological stress the interviews or observations might cause participants.
Confidentiality	Emphasis was made that participants' identities would remain confidential and anonymous in the study documents, unless they chose otherwise. This was particularly important in socially and politically polarised Zimbabwean environment at the time of the study.
Promises	Explaining what the study would be able or unable to deliver or attend to. For examples, some issues raised by participants, which were beyond the scope of the study.
Informed consent	Before data collection and during participation, consent was sought, participants were informed and could withdraw their consent at any point.
Data access and ownership	Data sets were accessed through permission from respective PA and DDCs' offices.