

**BUILDING A CULTURE OF SAFETY: THE NATURE OF
COMMUNICATION BETWEEN THE MAQUASSI HILLS FIRE
SERVICES AND THE COMMUNITY**

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"You gain strength, courage, and confidence by every experience in which you really stop to look fear in the face. You must do the thing which you think you cannot do." – Eleanor Roosevelt

Summary

Citizens in many provinces in South Africa have increasingly become more vocal about their unhappiness concerning service delivery in many departments of Government; their needs are not being met. Their violence and anger are usually aimed at emergency planners and government institutions, such as the police services, emergency medical services and fire services, therefore adding to various other challenges and difficulties these institution experience in carrying out their responsibilities (News Today, 2008). These institutions are also directly involved in the Disaster Risk Reduction process and play a key role in building a culture of safety and prevention within their communities by distributing knowledge and teaching skills (Twigg, 2004). Twigg (2004) argues that providing communities with information is the only way in which the scale, frequency, and complexity of disasters can be addressed. This should be done by following a multi-disciplinary approach that includes participatory development communication as a tool. The term participatory development communication refers to communication between parties where information transfer is de-emphasised and the process of dialogue between participants is favoured (Jacobson & Kolluri, 1999). This allows for solutions to problems to be identified in a collective fashion (Twigg, 2004; Jacobson & Kolluri, 1999). In light of the above the Maquassi Hills Fire Service's relationship with the community has a major impact on the contribution the fire services make to building a culture of safety and also to what extent the community works towards building a culture of safety -- and thereby reducing disaster risk within the community. This study, consequently, aims to investigate the current relationship between the Maquassi Hills Fire Services and the community they serve, as well as the role of participatory development communication in this relationship. In order to do so this study explore various guidelines and principles set out by the literature in terms of participatory development communication and culture of safety to establish to what extent the Maquassi Hills Fire Services adhere to these principles and guidelines in their day-to-day functioning. This has been done by using a qualitative research design. Data collection methods appropriate to the qualitative research design were used to collect the necessary data. These methods included focus group discussions with members of the communities in the Maquassi Hills area and semi-structured interviews with the staff and management of the Maquassi Hills Fire Services. Guidelines and principles established in theory were used to describe and evaluate the current situation between the Maquassi Hills Fire Services and the surrounding communities to

whom they provide the service of fire fighting. The two main areas of theory addressed were that of Participatory Development Communication and that of a culture of safety as it presents in the Disaster Risk Reduction field. These were also the two main areas investigated in the empirical phase of the study. From the research it was found that in terms of Participatory Development Communication very little is being done by the fire services to establish dialogical communication. Thus creating opportunities for communities to communicate with the fire services by developing relevant communication channels is not being facilitated. However communities are eager to establish such an interactive relationship with the fire services. The data indicated that when the principles and guidelines for building a culture of safety are considered there exist various positive aspects. If these aspects are utilised and facilitated in the correct manner it may facilitate the process of building a culture of safety. It is therefore recommended that the fire services should start interacting with the communities in the Maquassi Hills area. Most of the issues experienced in the relationship between the fire services and the communities can to some extent be ascribed to the fact that the fire services do not reach out to the communities they serve. Interactions with the community should be based on the principles of participatory development communication which will ensure that dialogue is established and information is exchanged. Also very important in the Maquassi Hills area is supplying the communities with relevant, regular, correct and coherent fire safety information and skills. People in these communities need the necessary fire safety information to ensure their safety in terms of fire. By allowing people in these communities to participate in planning and implementing initiatives aimed at informing people, awareness campaigns and information sessions will be suited to the specific areas. This will mean that communities receive information relevant to their situation and circumstances and ultimately initiatives will be more effective, allowing the opportunity for a good culture of safety with regard to fire to be built.

Keywords: Culture of Safety, Disaster Risk Management, Participatory Communication, Stakeholder management, Maquassi Hills Fire Services, Non-profit, Relationship Management

Opsomming

Burgers in verskeie provinsies in Suid Afrika laat almeer hul stem hoor oor ongelukkigheid omtrent diensverskaffing in verskeie staatsdepartemente aangesien daar nie in hul behoeftes voorsien word nie. Hul geweld en woede is meestal gerig op noodgeval beplanners en regeringsinstellings soos polisdienste, mediese noodgevallen en brandweerdienste. Dit plaas verdere druk op hierdie diensverskaffers wat reeds ander uitdagings en moeilikhede in hul daaglikste verantwoordelikhede in die gesig staar (News Today, 2008). Hierdie instellings is ook direk betrokke by Ramprisikovermindering prosesse en speel 'n sleutelrol in die vestiging van 'n kultuur van veiligheid en voorkoming van rampe in hul gemeenskappe deur die verspreiding van kennis en opleidingsvaardighede (Twigg, 2004). Twigg (2004) meen dat die verskaffing van inligting aan gemeenskappe die enigste wyse is om die skaal, frekwensie en kompleksiteit van rampte aan te spreek. Dit moet dan ook gedoen word deur 'n multidissiplinere benadering deur middel van deelnemende ontwikkelingskommunikasie as instrument in die uitvoering daarvan. Die term deelnemende ontwikkelingskommunikasie verwys na kommunikasie tussen partye waar inligtingsoordrag onderbeklemtoon word en die proses van dialoog tussen die deelnemers voorrang geniet (Jacobson & Kolluri, 1999). Dit bied die geleentheid om probleme op 'n kollektiewe wyse te identifiseer (Twigg, 2004; Jacobson & Kolluri, 1999). In die lig van die bogenoemde, het die Maquassi Hills Brandweerdienst se verhouding met die gemeenskap 'n groot impak op die bydrae wat die brandweerdienst lewer tot die vestiging van 'n kultuur van veiligheid. Verder beïnvloed dit ook die mate waartoe die gemeenskap tot 'n kultuur van veiligheid saamwerk ten einde ramprisiko binne die gemeenskap te verminder. Gevolglik het hierdie studie gefokus op die bestudering van die verhouding wat tans tussen die Maquassi Hills Brandweerdienst en die gemeenskap wat hul bedien, bestaan. Die rol van deelnemende ontwikkelingskommunikasie in hierdie verhouding is ook ondersoek. Verskeie riglyne en beginsels van deelnemende ontwikkelingskommunikasie en die kultuur van veiligheid is deur middel van 'n literatuurstudie ondersoek en daar is vasgestel tot watter mate die Maquassi Hills Brandweerdienst in hul alledaagse funksionering aan hierdie beginsels en riglyne voldoen. Dit is bepaal deur gebruik te maak van 'n kwalitatiewe navorsingsontwerp. Data-insamelingsmetodes volgens kwalitatiewe navorsingsontwerp is gebruik om die nodige inligting te bekom. Hierdie metodes het fokusgroep besprekings met die lede van die gemeenskappe in die Maquassi Hills omgewing asook semi-gestruktureerde onderhoude met die personeel en bestuur van die

Maquassi Hills Brandweardiens ingesluit. Teoretiese riglyne en beginsels is toegepas vir die evaluering en beskrywing van die situasie wat tans tussen Maquassi Hills Brandweardiens en die omliggende gemeenskappe wat deur die Brandweardiens bedien word, bestaan. Die twee hoofareas van die teorie wat aangespreek is, sluit in deelnemende ontwikkelingskommunikasie en kultuur van veiligheid soos dit binne die veld van Ramprisikovermindering aangebied word. Hierdie was ook die twee hoofareas wat deur die empiriese fase van die studie ondersoek is. Die navorsing het getoon dat in terme van deelnemende ontwikkelingskommunikasie daar tans min deur die brandweardiens gedoen word om dialoog in en met die gemeenskap te vestig. Dus word geleentheid nie vir die gemeenskap geskep om met die brandweardiens te kommunikeer deur die vestiging van kommunikasiekanale wat dialoog fasiliteer nie. Nieteenstaande is gemeenskappe ywerig om sulke interaktiewe verhoudings met die brandweardiens te vestig. Die data het getoon dat indien die beginsels en riglyne vir die vestiging van 'n kultuur van veiligheid oorweeg word, verskeie positiewe aspekte kom na vore kom. Indien hierdie aspekte op die korrekte wyse gebruik en fasiliteer word kan dit die proses om 'n kultuur van veiligheid te vestig, bewerkstellig. Om hierdie rede word aanbeveel dat die brandweardiens begin om met die gemeenskappe in die Maquassi Hills omgewing in interaksie te tree. Meeste van die kwessies wat in die verhouding tussen die gemeenskappe en die Maquassi Hills Brandweardiens bestaan kan toegeskryf word aan die feit dat die brandweardiens nie na die gemeenskap wat bedien word, uitreik nie. Interaksie met die gemeenskap moet gebaseer wees op die beginsels van deelnemende ontwikkelingskommunikasie wat verseker dat dialoog gevestig word en inligting uitgeruil word. Dit is ook noodsaaklik dat die gemeenskappe in die Maquassi Hills omgewing voorsien word van relevante, gereelde, korrekte en koherente inligting en vaardighede omtrent brandveiligheid. Mense in hierdie gemeenskappe benodig noodsaaklike inligting aangaande brandveiligheid om hul veiligheid te verseker. Die studie het ook getoon dat die insluiting van mense uit die gemeenskap by die beplanning en implementering van inisiatiewe wat gemik is op bewustheidsveldtogte en inligtingsessies, veral geskik sal wees in spesifieke gebiede. Dit beteken dat gemeenskappe inligting sal ontvang wat relevant tot hul situasie en omstandighede is en dat die inisiatiewe daarom ook meer effektief sal wees. Dit sal ook 'n geleentheid bied vir 'n kultuur van veiligheid spesifiek ten opsigte van brande.

Slutelwoorde: Kultuur van veiligheid, Ramprisikobestuur, Deelnemende Kommunikasie, Aandeelhouerbestuur, Maquassi Hills Brandweardiens, Nie-winsgewend, Verhoudingsbestuur

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Chapter 1: ORIENTATION AND PROBLEM STATEMENT

1.1. INTRODUCTION

Citizens in a number of provinces in South Africa have increasingly become more vocal about their unhappiness concerning poor service delivery by many departments of Government. Communities often display their unhappiness through violent protests (News Today, 2008; Anon, 2009; Sidney Morning Herald, 2010; SAPA, 2010). When violence and anger erupt, they are usually aimed at emergency responders, such as the police services, emergency medical services and fire services, thereby adding to various other challenges and difficulties these services experience in carrying out their responsibilities (News Today, 2008). These institutions are also directly involved in the Disaster Risk Reduction process and play a key role in building a culture of safety and prevention within their communities by distributing knowledge and teaching skills (Twigg, 2004:61-62). Twigg (2004:61) argues that providing communities with information is the only way in which the scale, frequency, and complexity of disasters can be addressed. This should be done, Twigg (2004) maintains, by following a multi-disciplinary approach.

To contribute to building a culture of safety, it is necessary for emergency planners and government institutions, such as the police services, emergency medical services and fire services to provide relevant information in a participatory and interactive manner (Twigg, 2004). The above statement may be regarded as contradictory, but much like the case in the health sector, there is certain technical information about hazards that communities need to have in order to be safe. However for them to be successful in this regard and therefore to successfully reduce disaster risks, a good relationship needs to exist between them and their stakeholders. According to the Hyogo Framework for Action, creating a culture of safety must be done by information management and exchange, education and training, doing research and creating public awareness (UN ISDR, 2005:14-15). It is important, however, to note that not only information distribution is mentioned in the above list but rather *information exchange*. This is important, because it shows that the process of creating a culture of safety will not be achieved by using one-way information dissemination. It should be done by establishing dialogue and an

exchange of information between emergency responders and government institutions and their stakeholders (Twigg, 2004:166). In other words, effective participatory development communication is needed in the process of creating a culture of safety. The term participatory development communication refers to communication between parties where information transfer is de-emphasised and the process of dialogue between participants is favoured (Jacobson & Kolluri, 1999:265).

Participatory Communication is characterised by a horizontal structure rather than a top-down way of communicating. This allows for solutions to problems to be identified in a collective fashion (Twigg, 2004:166; Jacobson & Kolluri, 1999:268). According to Jacobson and Kolluri (1999:269), participatory development communication is defined as the opening of dialogue, having continuous interaction, and identifying needs and problems, and thereafter, deciding what should be done to improve a certain situation and acting on the advice.

Twigg (2004:166) argues that the reason most risk-reduction initiatives are unsuccessful is that, in vulnerable communities, these communities are not understood in terms of their needs, priorities, indigenous knowledge, and capacity. Furthermore, the communication process is not informed by the perceptions or the experiences of the community (Twigg, 2004:166).

Seeing that emergency responders and government institutions play an important role in disaster-risk reduction and creating a culture of safety, it is necessary that communities trust these institutions and have a receptive attitude towards any efforts to reduce the risks within their communities. Effective stakeholder management and stakeholder involvement ensure continuity as well as a relationship where both parties benefit and thus contribute to a long-lasting relationship (Quero & Ventura, 2009:20). To achieve these objectives, effective stakeholder management and relationship management are necessary. Furthermore, if relationship management is done effectively with stakeholders, by using dialogue and participatory communication, it builds trust within a relationship (Servaes, 1995:45). This is a very important aspect for a relationship, as trust can reduce conflict, minimise uncertainty and lead to co-operative behaviour (Fill, 2005:235-246). Lewis, Hamel and Richardson (2001:6) argue that if organisations communicate consistently and effectively with their stakeholders, the ability of the organisation to maintain credibility and legitimacy will be influenced. The current

unhappiness of citizens is an indication that a new style in managing stakeholders in the non-profit sector is called for. Such a style should possibly manage relationships in a way that trust and credibility can be regained. Moreover in building a culture of safety it is necessary for the multitude of stakeholders involved in the process to have a good relationship to enable them to work effectively towards the common goal of establishing a culture of safety.

The Maquassi Hills Fire Service's relationship with the community has a major impact on the contribution the fire services make to building a culture of safety and also to what extent the community works towards building a culture of safety -- and therefore, reducing disaster risk within the community. This study, consequently, aims to investigate the current relationship between the Maquassi Hills Fire Services and the community they serve, as well as the role of participatory development communication in this relationship.

This study seeks to explore various guidelines and principles set out by the literature in terms of participatory development communication and culture of safety to establish to what extent the Maquassi Hills Fire Services adhere to these principles and guidelines in their day-to-day functioning.

1.2. RESEARCH QUESTIONS

The research aims to answer the following research questions:

1. What guidelines and principles of participatory development communication should be used to inform a culture of safety?
2. What constitutes a culture of safety according to the Hyogo Framework for Action, the South African National Disaster Management Policy Framework provisions and other relevant literature?
3. To what extent do the Maquassi Hills Fire Services adhere to the principles and guidelines of participatory development communication to build / establish a culture of safety?
4. To what extent do the Maquassi Hills Fire Services succeed in building / establishing / sustaining a culture of safety?

1.3. OBJECTIVES OF STUDY

The objectives of this study are to:

1. Determine the principles of participatory development communication necessary to inform a culture of safety;
2. Determine the guidelines given by the Hyogo Framework for Action, the South African National Disaster Management Policy Framework and other relevant literature for building a culture of safety;
3. Investigate to what extent the Maquassi Hills Fire Services adhere to the principles of participatory development communication in their relationship with surrounding communities;
4. Investigate to what extent the Maquassi Hills Fire Services adhere to the principles and guidelines for building a culture of safety.

1.4. CENTRAL THEORETICAL ARGUMENTS

The following preliminary arguments serve as the basis for the study:

Participatory development communication is defined as a two-way communications structure, whereby a situation for dialogue is created; and source and receiver have continuous interaction to identify specific needs and problems -- then finding solutions collectively and deciding together what should be done to improve the situation (Jacobson & Kolluri, 1999:268; 269).

The stakeholder-management theory suggests that an organisation or an institution cannot exist in isolation. Therefore, its stakeholders should support the organisation or institution and its strategy -- if it is to be successful (Fill, 2005:12; 19). Communication between an organisation or institution and its stakeholders can be regarded as a means of managing the relationship; and, a mutual understanding needs to be created by creating opportunities for effective participatory communication (Fill, 2005:686; 192). Therefore, stakeholder-management, and in effect successful relationship management, cannot be achieved without communicating in a participatory manner with the stakeholders (Fill, 2005:242). This is an important aspect to be considered in building a culture of safety as building such a culture as part of the disaster risk reduction process is a multidisciplinary approach including various sectors of society (Stanganelli, 2008:94; Vermaak & Van Niekerk 2004:556; Twigg, 2007:6; UN ISDR, 2004: 13,14;

UN ISDR, 2005:6,7, SA, 2004:1; 4; 8; SA, 2002:12-14). Servaes (1995:45) stated that in order to share information, knowledge, trust, commitment and to cultivate the right attitude towards development initiatives, participation is very important in any decision-making process.

Information management and exchange, education and training, doing research and creating awareness are all needed to create a culture of safety (UN ISDR, 2005:14-15). People will only respond to these activities if they believe in the information conveyed, and trust the people who convey the information (Twigg, 2004:169).

It can be argued that the mission of the Maquassi Hills Fire Services in disaster risk reduction is to create a culture of safety by information management and exchange, education and training, doing research and creating public awareness (UN ISDR, 2005:14-15). To do this effectively, it is necessary to have a good relationship with the community as one of the most important stakeholders; and for a good relationship to exist between the two parties, participatory development communication is needed.

1.5. RESEARCH DESIGN AND DATA-COLLECTION TECHNIQUES

The following section will firstly discuss the research design followed in this study. Thereafter a short overview will be given of the different research methods applied to gather the data in the study.

1.5.1. RESEARCH DESIGN

Answering the research questions and seeking to achieve the objectives of this study, a qualitative empirical research design was followed by utilising data from primary and secondary sources. This research design aimed to answer the questions raised via exploratory and descriptive research procedures. This research design made possible an in-depth understanding of the relationship between the Maquassi Hills Fire Services and the community.

The researcher took cognisance of the fact that the research design limits the extent to which the results of the study can be generalised. Furthermore, the collection of data and the analysis thereof may be time consuming.

1.5.2. DATA COLLECTION METHODS

Data were collected by, firstly, conducting a literature review of all the relevant literature concerning the guidelines and principles proposed by the Hyogo Framework for Action, the South-African National Disaster Management Framework and other literature regarding a culture of safety, as well as communication theory that specifically focuses on participatory development communication as well as stakeholder management and relationship management. To enhance the background information and to better understand the context of the Maquassi Hills area, newspaper articles relevant to the concerns with the local government were included in the literature study.

After conducting a thorough literature review, the data were then collected by doing five focus group sessions with members of the public. Community members taking part in the focus groups were selected by using the Simple Random Sampling technique. The aim of the focus groups with community members was to establish what the current state of the relationship is between the Maquassi Hills Fire Services and the community. It was necessary to examine the manner in which the Fire Services communicate with them as community members.

The total population of the study depended on who in the surrounding community were the most affected by a situation where the Maquassi Hills Fire Services cannot function. In effect, this includes all those communities that the Maquassi Hills Fire Services serve: Wolmaransstad, Makwassie, Leeudoringstad and Witpoort. The Maquassi Hills Fire Services, furthermore, serve the rural areas of Tswlelang, Lebeleng, Kgakala and Raeganyang, and in addition, the farming communities in those areas. It was decided that the focus would be on the rural communities of Tswlelang, Lebeleng, Kgakala and Raeganyang and not the towns of Wolmaransstad, Makwassie, Leeudoringstad and Witpoort. The reason was that the towns in the Maquassi Hills area are generally well serviced by the municipality and therefore have easy access to basic services such as water and electricity. The focus would therefore be on those that would be most at risk in the event of a fire incident.

A representative focus group discussion was held in each of these areas. The help of the local churches and NGO was enlisted in order to identify those relevant people in the community for the focus groups.

Semi-structured interviews were undertaken with all the staff of the fire station. These included three firemen and the fire chief. The aim of the interviews was to establish how the Maquassi Hills Fire Services experience the relationship with the community they serve, and how, what, and to what extent they communicate with the community. Key aspects highlighted in participatory development communication theory and theory on culture of safety, were used as guidelines for formatting the questions.

1.6. ETHICAL CONSIDERATIONS

The researcher took cognisance of the fact that every respondent participating in this study was asked to participate voluntarily. They were informed on every aspect of the study before they gave their consent to participate. Participants were not harmed in the gathering of information and the researcher agreed to be very sensitive to participants' social relationships. Their privacy, anonymity, and confidentiality were protected at all times. A consent form was given to each participant to sign before being included in this study.

1.7. PRELIMINARY CHAPTER LAYOUT

In this study Chapter 1 discusses the orientation and problem statement. Chapter 2 will continue with the detailed discussion of principles and guidelines found in the relevant literature on participatory development communication, building a culture of safety and certain relevant aspects of stakeholder management theory. In Chapter 3 the research methodology used in this study to answer the research questions is discussed and motivation given for the use of the specific research design. Chapter 4 will follow with the analysis and findings of the data collected. Finally in Chapter 5 conclusions and recommendations for the study will be presented.

Chapter 1: Orientation and problem statement

Chapter 2: Building a Culture of safety: Guidelines and principles for Participatory Development Communication

Chapter 3: Research Methodology

Chapter 4: Empirical Findings

Chapter 5: Conclusions and Recommendations

Chapter 2: BUILDING A CULTURE OF SAFETY: GUIDELINES AND PRINCIPLES FOR PARTICIPATORY DEVELOPMENT COMMUNICATION

2.1. INTRODUCTION

In the previous chapter, the problem under investigation in this study was discussed. It highlighted the fact that the Maquassi Hills Fire Services play a very important role as a government entity in building a culture of safety by information management and exchange, education and training, doing research and creating awareness (UN ISDR, 2005:14-15). By doing this, the community's vulnerability is lessened and risks to the community reduced.

Twigg (2004:169) notes that the community's participation in the process of building a culture of safety is crucial and argues that people are more likely to alter behaviour if they actively participate in generating solutions for problems. Also people are more likely to cooperate and respond to risk reduction initiatives if they believe and therefore trust the information that is being supplied. Furthermore and perhaps most importantly, people have to trust those supplying the information. This should lead to better cooperation in this case between the Maquassi Hills Fire Services and the communities they serve (Twigg, 2004:169; Jahansoozi, 2006:943). It is necessary, when building trust in a relationship, to communicate with stakeholders in a participatory fashion and create opportunities for true dialogue. Once a relationship with stakeholders is managed in this way, it ensures cooperative behaviour, reduces conflict and minimises uncertainty (Servaes, 1995:45; Fill, 2005:235-246). It can therefore be argued, that having a good relationship with the community is crucial for the Maquassi Hills Fire Services to be successful in building a strong culture of safety, and therefore reducing risks within the community.

This chapter will answer the first two research questions discussed in Chapter 1, namely:

- What guidelines and principles of participatory development communication should be used to inform a culture of safety?

- What constitutes a culture of safety according to the Hyogo Framework for Action, the South African National Disaster Management Policy Framework provisions and other relevant literature?

This will be done by firstly highlighting the principles for Participatory Development Communication that describe what the nature of communication should be to potentially contribute to a good relationship between the Maquassi Hills Fire Services and the community. As part of this discussion, time is spent explaining the importance of a good relationship between the Maquassi Hills Fire Services and the community as their stakeholder. This will be achieved by referring to stakeholder management theory used widely in corporate communication circles. Finally, it will be determined what guidelines are contained in the relevant literature on building a culture of safety and the how and why participation in this process is of importance.

2.2. DEVELOPMENT COMMUNICATION

Development communication is proposed to “support sustainable change in development operations” (Mefalopulos, 2008:5). Communication and development are very closely related and according to Sosale (2008:85), one determines the other. Development is a process aiming to bring about change and this change cannot be realised without communication that incorporates culture and the social circumstances of a society (Servaes, 2008:15). Communication’s function and role in development is seen as a necessary tool in supporting and helping the process of development along; it is part of any project or programme and specialised communication skills are essential if a project or programme is to be successful (Bourne & Walker 2005:657; Mefalopulos, 2008:4; 8). Since communication and development are so closely related, much of what was happening in development throughout the various approaches to development determined how communication was defined (Rogers, 1976:20). Development communication and how approaches used in development communication changed over the years correlate closely with what was happening in development. It is therefore important to understand firstly the history of development and to have some knowledge about some of the main approaches used in development.

2.2.1. HISTORY OF DEVELOPMENT

The concept of development has come to mean many things over the years and is often related to economic topics (Chambers, 2005:186). The concept of development, according to Chambers (2005:186), usually refers indirectly to good change, be it in an economic context or other context. Development is also defined by Gardner and Lewis (1996:3) as the process whereby certain actions bring about positive change, evolution, and progression. Moemeka (1989:4) defines development as a 'change for the better' in both individual and society in terms of socio-economic, cultural and political circumstances. He argues that this change is brought on when conditions are no longer appropriate for the individual or the society to achieve its purpose or ambitions (Moemeka, 2000:7). Other theorists agree when they define development as a process aiming to bring about social change within a society specifically referring to social and material advancement for people by allowing people to have more control over their environment (Rogers, 1976:19; Jacobson & Kolluri, 1999:267). It is also a process where something passes by degrees to a different stage specifically a more mature stage and refers to actions of improvement through expanding, enlarging, or refining (The American Heritage, 2000). Schramm (1964:114) argues that change as referred to in terms of development is rather complex because it involves significant changes in the behaviour, beliefs, skills and social norms of a society and individuals. Furthermore this change that is referred to in a development context is not intended to be forced on people but should rather be aimed at voluntary development which allows for the participation of people and creating opportunities for them to be a part of the development process (Schramm, 1964:115).

The concept and approach of development began as a mainly modernistic approach in 1945 up to 1965 and was defined purely in terms of economic growth within countries (Servaes, 1995:40; Servaes & Malikhao, 2008:159). After the devastation of World War II the idea of development was introduced as the main initiative in the form of the Marshall Plan. The Marshall Plan developed by the United States of America was intended to help war-torn countries in Western Europe back on their feet. The success in the European countries served as motivator to apply the idea of development in the form of economic and technological advancement to the 'Third World Countries' (Moemeka, 2000:1). In that context development referred to the role that 'rich' countries would play in helping 'underdeveloped' or poorer countries to become more ('developed') like them (Mefalopulos & Grenna, 2004:25; Gardner &

Lewis, 1996:3). Thus, the initial idea regarding development was that if technical knowledge was applied and better scientific methods implemented, production would increase, economies of underdeveloped countries would grow stronger and these poor countries would be well on their way to becoming developed (Coetzee, 1989:20-21; Moemeka, 2000:1-3; Mefalopulos & Grenna, 2004:25; Yoon, 1996:37).

At that time the assumptions of theorists like Rostow and others were mainly supported. They specifically argued that the developed West should be the goal of all societies in terms of development (Servaes & Malikhao, 2008:159). Rostow (1960) also depicted development as a linear process where a society moves through different stages of growth to become a modern society, stages he called 'the traditional society, the preconditions for take-off, the take-off, the drive to maturity and the age of high mass-consumption'.

Theorists also argued that underdeveloped countries should be developed by external experts from the West because it was the perception that people from underdeveloped countries were not able to bring on the developmental process themselves and become developed like the West (Servaes, 1995:40; Yoon, 1996:37). For these theorists development stood equal to the process of urbanisation, industrialisation and moving from subsistence farming to farming for income, adding to the economic situation of a country (Gardner & Lewis; 1996:12). All of these notions came down to the belief that if underdeveloped countries received sufficient financial and technological support, development would be inevitable, taking place as a result of the process that is put into motion when sufficient support is given. Therefore at the end of the day it was believed that a strong economy is the basis for development (Moemeka, 2000:2). This was after all how development came about in the West after World War II and therefore it was thought that it should happen in the same way in every country (Mefalopulos & Grenna, 2004:25; Moemeka, 2000:2; Servaes, 1995:40; Gardner & Lewis; 1996:13).

In terms of the specific approach to communication at that time it was believed that people could easily be persuaded to alter their behaviour and attitudes for which one-way mass media were utilised (Mefalopulos, 2008:6). It was the idea that 'rural backward' communities should be developed in specific areas such as agriculture, health, education and transportation to contribute to the economic development that formed the basis of Modernisation theory

(Servaes & Malikhao, 2008:160). In terms of communication this meant that new behaviour and technology should be adopted for development to follow. The perception was that this could be done by merely the distribution of these ideas and techniques through the mass media (Servaes & Malikhao, 2008:181). No distinction was made between information and communication during this period and therefore communication was seen to be simply the 'transfer of information' that originated from government and donor agencies (Moemeka, 2000:3). Modernisation theory saw development as a linear process; therefore change would happen according to set guidelines throughout the process with the end 'destination' being modernity (Coetzee, 1989:22,23; Servaes, 2008:159; Gardner & Lewis; 1996:12). Communication was also seen to work in the same way. A message would be predetermined to say what was needed to bring about change then by using mass media channels the message would be sent to the masses. Behaviour change and development would then be the intended outcome (Mefalopulos, 2008:6).

Although many development initiatives are still approached in a modernistic fashion today, the modernistic theories were later met with great criticism (Gardner & Lewis; 1996:12; 14). Critics stated that stimulating only financial growth and implying that the process of modernisation is the only way in which countries can be developed creates even more inequality and leads to these countries being more underdeveloped than before, in effect contributing more to the bad than doing any good (Servaes, 1995:41; Chambers, 1997:16). Furthermore modernisation theories were criticised for viewing societies as homogeneous and therefore not differentiating between different groups in society (Gardner & Lewis 1996:15). Information was as such forced onto the masses and direct behaviour change anticipated, so that these initiatives failed and had very little impact because aspects such as conflict, politics and other environmental factors were not taken into account (Bessette, 2004:81). The West was in fact using Western knowledge, technology, and mechanisms from the context of the West and trying to implement and apply them in developing countries. Modernisation theories were therefore mostly criticised for ignoring communities and societies' political and historical factors, not understanding these factors and inherently not understanding what had firstly contributed to the underdevelopment of countries (Gardner & Lewis; 1996:15; Servaes, 2008:181).

One other approach to development that followed the modernisation approach and developed as a result of the critique raised against the modernisation approach was dependency theory. The dependency theory was based on the notion that Western countries or developed countries tried to keep developing countries dependent on them by controlling their economic systems influencing the arrangement of the developing countries political structures (Servaes & Malikhao, 2008:161; Coetzee, 1989:56). Developing countries are then exploited by developed countries for their resources and therefore also provided a motivation for keeping developing countries dependent (Servaes & Malikhao, 2008:162). In terms of communication, theorists supporting this approach started to see the importance of the relationship between culture and communication although a one-way linear communication style was still followed. Issues also arose because of unequal exchange of communication, programming and information between rich and poor countries (Mefalopulos, 2008:6).

The critique and concerns raised about the modernistic approach to development and the dependency theory opened up the possibility of new approaches to be formulated -- approaches that do not only take financial and technological factors into consideration and that favour a two-way communication style. Additionally an approach that seeks to understand communities' history and contexts and also accepts the need for participation in decision-making and inputs from underdeveloped communities is indispensable if success is to be achieved (Servaes, 1995: 43). Such an approach should not create dependency by making persons involved in the process dependent on a certain entity for information or resources. To ensure dependency is not created, participation at all levels of the process is needed, thereby ensuring that initiatives are driven from inside communities and once the entity that initiated activities is no longer involved the process still continues (Moemeka, 2000:8). In order for development and disaster risk reduction initiatives to be successful or to make a difference, the communities these initiatives are aimed at need to be part of the process (Wisner *et al.*, 2004). These communities hold knowledge of issues and problems that practitioners cannot access or find effective solutions for without their input (See section 2.2.2.).

It is important to know and understand exactly what is meant by the concept of participation when referring to communities having a say or participating in the process of disaster risk reduction or development initiatives. Furthermore, if it is argued that this input from

communities can only be successfully achieved by two-way communication or successful dialogue; it is necessary to understand what so called participatory (development) communication entails. The next section will therefore focus more on these concepts in an attempt to clarify the use of participatory development communication in disaster risk reduction initiatives.

2.2.2. PARTICIPATORY DEVELOPMENT COMMUNICATION

Modernisation development initiatives have not been very successful at achieving their goal of bringing about change and changing traditional societies into modern societies (Rogers, 1976:13-15; Servaes, 2008:15). This led to the argument that it was time for a new approach to development and communication (Mefalopulos, 2008:6,7; Servaes, 2008:18; Rogers, 1976:20). Such an approach to communication was envisioned to be totally different from the sender-orientated, top-down communication style used in the modernistic approach to communication in development. Participatory development communication implies a two-way communication style and becomes a receiver-orientated process that is also analytical in nature and that is mainly concerned with the exchange of meanings (Serveas, 1999:83; Walker, 2007:102; Mefalopulos & Grenna, 2004:25; Servaes, 1995:45-46; Servaes, Jacobson & White, 1996:16). Participatory Development Communication refers to the application of communication principles in a developmental context, in other words the *dialogue-based* process of planning and applying strategies and processes in terms of communication with the goal of achieving development (Bessette, 1996: 9; Mefalopulos & Grenna, 2004:25; Moemeka, 2000:12). Servaes (2008:15) defines Development Communication –

. . . as the sharing of knowledge aimed at reaching a consensus for action that takes into account the interests, needs and capacities of all concerned. It is thus a social process. Communication media are important tools in this process but they are not the aim in itself.

It was not always the case that development communication took into account the context and the complexity of behaviour, social and cultural aspects in a society (Servaes, 2008:15-17), as was the case in the modernisation paradigm where it was thought the simple introduction and implementation of mass communication would have the needed effect for social change to ensue (Mefalopulos, 2008:6; Servaes, 2008:15-17). Therefore once communication aimed at a

certain development issue was introduced development would follow naturally through a linear process (See section 2.2.1.). This means that participatory development communication is not just concerned with the transmission and reception of messages as basic communication is defined (Doyle & Stern, 2006:250). It goes further to include the identification, investigation and analysis of problems and issues, through dialogue, as the function and goal for participatory communication in development (Mefalopulos & Grenna, 2004:25, Servaes, 2008:16). Bessette (1996:11) argues that there are various different definitions of the concept development communication built around the specific goal or function development communication is responsible for in different situations. At the core of all these different definitions of the concept participatory development communication, Bessette (1996:11) says there exists in all:

The need for an exchange of information to contribute toward the resolution of a development problem and improve the quality of life of a specific target group, as well as to implement needs analysis and evaluation mechanisms within the communication process.

Jacobson and Kolluri (1999:269) define participatory development communication as a dialogical process where the source and receiver of information interact continuously to identify and find solutions to development problems together by exchanging knowledge. Walker's (2007:102) definition of participatory development communication also supports this notion and defines it as a process characterised by its interactive, transformative and dynamic nature; it furthermore allows for dialogue between people, groups, and institutions which enables people to be actively involved in their own welfare and realise their own capacity. In addition, participatory development communication gives people more control over their surrounding environment and situation by allowing them to be actively involved in their own development process (Jacobson & Kolluri 1999:268; Rogers; 1976:19). Participation in development communication empowers people in their own development by allowing them to be actively involved in making decisions, evaluating outcomes and sharing in benefits concerning the implementation of projects, programmes and processes aimed both at development and risk reduction (Twigg, 2004: 114; Jacobson & Kolluri 1999:268). With these definitions in mind it is also important to note that this does not mean that external perceptions, information and knowledge are of no value; in any initiative external help can be useful to help along processes

but external perceptions, information and knowledge should never dominate (Rahim, 1994:118).

In terms of disaster risk reduction things do not differ much from the initial approach used in development. According to Twigg (2004:166), there is an obvious and definite need for communities to become more knowledgeable and educated about disaster risks, but this has been largely unsuccessful, one of the reasons being that people with whom these initiatives are concerned do not participate in the communication process. The information and ideas professionals come up with are often inappropriate for the groups concerned (Twigg, 2004:166). People in communities often have better information about their own community and surroundings than planners, but this knowledge is seldom accessed by development and disaster risk reduction practitioners (Gardner & Lewis, 1996:15; Servaes & Arnst, 1999:109). Therefore success is more likely to be achieved in either development or disaster risk reduction initiatives if the cultural identity and diversity of the groups at which these initiatives are aimed are understood and taken into account and not treated as constraints or barriers. This insight can only be gained through effective dialogue with these groups as well as full participation of these groups in the process (Servaes, 1995:46; Gardner & Lewis, 1996:15; Bessette, 1996: 9).

Communication applied in development cannot be successful if it is not characterised by the participation of the individuals at whom the initiatives are aimed in the process of bringing about change. Therefore without participation, solutions will most likely not be relevant to communities, development practitioners will find it more difficult to understand the context, and the background of the people they are trying to help, and initiatives could fail (Servaes, 1995:43-46; Gardner & Lewis, 1996:15; Bessette, 1996:9; Twigg 2004:166). Servaes and Arnst (1999:126) argue that development communication envisions the exchange of information (dialogue; two-way communication) between the practitioners and the communities they work in to develop effective solutions for development problems together. This is only possible if the communication process is participatory in nature. Participatory development communication affords people the opportunity to become the drivers of change in their communities instead of just passively being told what to do by outsiders, who might not fully understand their context, background and history (Bessette, 1996:9).

It is clear from the above that participatory development communication is not easily defined. Different people perceive participation differently and what actual participation entails is still not fully understood, or in most cases, is misunderstood (Servaes, 1999:92). Furthermore, one cannot separate development and the process of communication from the cultural context of the groups involved in development. The cultural context of a group is based on and determined by its cultural values and beliefs and is different from one group to the next (Steeves, 2000:7-12). However, some central elements do exist concerning what participatory development communication entails and how it should function within the context of development.

Consequently in the above definitions of the participatory development communication, various elements are repeatedly mentioned. The first of these is that of ***dialogue or two-way symmetrical communication***. In participatory development communication the emphasis is not on expert knowledge being transferred to communities involved in development initiatives, but on information and knowledge exchange, therefore enabling effective dialogue between all stakeholders (Bessette, 2004:81).

Successful dialogue or symmetric two-way communication enables both development practitioners and local communities to benefit in the development process. When development practitioners move from a one-way communication approach where they played the role of the expert that knows best, to a symmetric two-way communication approach they change to being facilitators. They then facilitate the development process by creating a favourable environment for people to participate in their own development (Moemeka, 2000:14).

Communities could have valuable information that development practitioners need for them to understand the communities' background, context and history to be able to facilitate the process of development (Servaes & Arnst, 1999:108). Development practitioners might not identify with the needs communities have in terms of development and disaster risk management, therefore by using a participatory approach to communication, practitioners are able to better understand the needs of communities (Servaes & Arnst, 1999:108). Local communities on the other hand stand to benefit because by engaging in two-way interaction with development practitioners, they are able to receive information which will assist them in

identifying relevant developmental needs and finding solutions for these issues (Bessette, 2004:81). Participation of communities where their perspectives, ideas for solutions and values are integrated into the solutions for their development problems will be possible if the interaction between the development practitioners and communities is based on effective dialogue and a two-way communication approach is used (FAO, 2007:9).

The aforementioned definitions of participatory development communication refer to people being able to control their environment in the process of development, in other words actively joining in this process. This would mean that communities actively take part in identifying needs in their own context and furthermore make decisions about what happens in terms of development. The second element that is emphasised is the necessity to distribute power **(power distribution and empowerment)** and inherently empower people.

Empowerment refers to ensuring that individuals involved in development are equipped with the necessary values, skills and knowledge to use these skills in taking action to solve their problems related to development (UN CDR Report, 2005:28; Servaes & Malikhao, 2008:16). When empowering people by allowing them to be involved in the process of development, it is important to note that participation in development is much more than merely including the people only when it suits the project team or authorities. So often the idea of participation is misunderstood and thought to be true to the concept if communities are merely consulted about plans for development or included in development activities to be undertaken (UN CDR Report, 2005:28; Servaes, 1995:45; Jacobson & Kolluri, 1999:268).

In most cases these plans, activities and initiatives are pre-developed by the development practitioners who, as argued previously, do not understand enough of a community's needs, context and background to come up with successful sustainable solutions. In an attempt to clarify the frequent misconception of participation, Arnstein (1969: 216-223) proposes eight levels of participation, starting with manipulation and therapy as non-participation levels, continuing with levels three to five as informing, consultation and placation and finally levels six to eight as more participatory levels, namely partnership, delegated power and citizen control. It is important to be aware of these levels of participation to ensure that 'participation' in the process of development is not just passing certain activities off as participation whereas in truth

it is only supporting the original power structures. As an example, if a community radio station only has local community members presenting the programmes on the radio station, community members are participating but they do not have the power of managing, planning and presenting the content of programmes and the functioning of the radio station itself. It might be that the radio station and content presented are for the most part controlled and managed by the government or an elite organisation. If communities are truly participating in the process of development, community members should be able to manage the functioning of the radio station, plan and decide what should be broadcasted and present this content themselves. Consequently members of the communities involved in development initiatives should be able to participate in various levels of the process such as discussion, goal setting, policy formulation, planning, decision-making, execution and evaluation of programmes and activities within the development process (Moemeka, 2000:13; Nsingo & Kuye, 2005:749). Once participation in these various activities and levels of the process of development is achieved only then can one start to refer to an initiative as truly participatory. Therefore second to having successful dialogue between communities and the development practitioners, for people to be able to truly participate in development they should be given the power to decide what is going to happen in their communities (Servaes, 1995:46).

Creating the opportunity for people to participate in the process of decision-making and inherently allowing people to take part in their own development ensures that knowledge, information, commitment, trust and the right attitude for development are shared by everyone involved (Servaes & Malikhao, 2008:4). To achieve this calls for the power to make decisions to be taken away from the project team and shared by everyone concerned. Moreover, in most cases it calls for a change in political power structures and hierarchies within the communities themselves (Servaes & Arnst, 1999:116-118). The truth is that in the existing structures and hierarchies which development practitioners need to work with it is very difficult to change the power structure, or try and redistribute power to certain groups. People in power are very happy to stay in power and do not like the idea of changing, mostly because they stand to benefit politically and economically by staying in power and in control of decisions being taken (Servaes, 1995:46; Servaes, Jacobson & White, 1996). This aspect of participatory development communication is seen often as a necessary but greatly idealistic element mainly because it is

usually very vaguely interpreted and explained and often misrepresented and distorted (Huesca, 2008:180).

Participation should directly challenge power structures or, as some authors (Escobar, 2000:163-166; Wilkins, 2000:197-199) warn, if the issue of power is not closely considered and challenged, development initiatives might end up reinforcing the unequal distribution of power. Participation in decision-making is therefore so much more important to ensure that structures that hold the power are indeed challenged in the process of development (Servaes, 1995:46). Also project teams experience some fear of letting go of the control in their projects or initiatives, which is understandable considering that endless money, time and effort are invested in these development projects (Del Castello & Bruan, 2006:42). Yet in terms of participation Servaes (1995:47) argues that self-management is the highest form of participation and should be the end goal of development. To achieve this it is necessary for people to take part in making decisions and be fully involved with the formulation of policies and plans for development which will allow them to take ownership of these development initiatives (Servaes, 1995:47).

Another aspect that also plays a role in participation is that of **trust**. Trust features in various areas of this study when one considers all of the theoretical angles of incidence. Firstly in Disaster Risk Reduction theory, those disseminating information should be considered as experts in their field and must therefore work to establish trust with those to whom messages are aimed. This is important because for people to use safety information to ensure their safety they need to trust the information supplied and if persons distributing this information are trusted and considered experts in their field trust of the information will follow (Twigg, 2004:169; Jahansoozi, 2006:943). If those who distribute the information needed for communities to be safe can be trusted for accurate and relevant information, communities will cooperate with greater ease (Twigg, 2004:169; Jahansoozi, 2006:943).

In stakeholder management theory trust is seen as a favourable outcome due to a good relationship between an institution and its stakeholders (Jahansoozi, 2006:943). Due to the trust originating from such a relationship together with mutual satisfaction and commitment from all parties concerned institutions will be able to reach their goals and achieve their

missions more successfully (Phillips, 2006:35). Finally in participatory development communication Servaes (1996:17) argues that establishing 'social trust precedes task trust'. In other words, in participatory development communication a practitioner envisions a solution for a development problem, but he/she firstly will have to understand the social context by building up a relationship of mutual trust with communities. Through building such a relationship with communities in development projects the practitioner is able to understand the context of communities better and he/she will be able to include communities more effectively to participate in the process of development. Communities will also be more willing to participate in development projects because the relationship involves mutual trust and projects will be informed by their opinions. In order to build a relationship of trust between the development practitioner and the communities, getting to know their needs, the knowledge they have and listening to their perspectives will take more time but is essential for true participation to take place (Servaes, 1996:15-17).

As the above discussion has shown, for development initiatives to be successful participatory development communication is a definite necessity, it should be no different in disaster risk reduction initiatives. In terms of building a culture of safety in a disaster risk reduction context specialised communication skills and strategies are needed due to the multi-disciplinary and multi-sectoral nature of disaster risk reduction to assist role players in the process of disaster risk reduction (Del Castello & Braun, 2006:46).

It has thus been established that participatory development communication can offer a wide variety of benefits enabling greater success when applied in the field of disaster risk reduction initiatives. There are however a great number of diverse role-players that are part of the process of disaster risk reduction and especially when building a culture of safety. One of the main ideas of participatory development communication is to include a variety of groups in the process of development and this should deliver the same benefits if applied in the context of disaster risk reduction: a process which without the inclusion of various groups could fail in its goal of reducing risk. The next section will therefore discuss the importance of the relationship between the various role-players by referring to relevant stakeholder management theory.

2.3. STAKEHOLDERS AND RELATIONSHIPS IN A DISASTER RISK REDUCTION CONTEXT

In order to achieve the goals in development and disaster risk reduction initiatives it is important that all role-players communicate in a participatory manner thus ensuring a good relationship between the numerous and complex stakeholders involved in the processes. Disaster risk reduction is a multidisciplinary approach that involves various sectors and role-players (See section 2.4.). Therefore to ensure that the initiatives and the process of disaster risk reduction is successful and includes all role-players participatory development communication could be used as a very useful tool in this regard. Disaster risk reduction aims furthermore at limiting people's vulnerability and minimising their disaster risk concerning hazards (Vermaak & Van Niekerk, 2004:556; Twigg, 2007:6).

Disaster risk reduction involves systematic initiatives, such as addressing political, social and environmental issues contributing to people's vulnerability, and systematically developing and implementing policies concerning disaster risk and building capacity in relevant areas to lessen risk to disasters (Wisner *et al.*, 2004:50-52; UNDP, 2004:135) . These steps are taken as part of the disaster risk reduction process to identify, assess and reduce the risk of disasters, but more so they reflect a way of thinking about development, vulnerability and disaster risk by various role-players such as development workers, government entities and citizens (Twigg, 2007:6). Due to the complex nature of disaster risk reduction, it is necessary to have a multi-sector approach to address vulnerability to disaster and consequently have various individuals involved in this process (Stanganelli, 2008:94; Vermaak & Van Niekerk, 2004:556; Twigg, 2007:6).

When it comes to stakeholder and relationship management theory, with reference to the study, fire services function in a non-profit context. This is in contrast with corporate institutions earning an income from consumers that make use of their services or buy their products. The corporate sector has relied greatly on stakeholder management theory since the early 1960s to ensure that stakeholders' needs are met, and by effectively managing stakeholder relationships, ensure a higher income for companies (Lewis, Hamel & Richardson, 2001:6; Freeman, 1984:25, 31; Payne, Ballantyne & Christopher, 2005:856). The for-profit sector has realised that an organisation does not exist in a vacuum and that stakeholders can greatly influence the extent to which a company is financially successful. In the same way organisations in the non-profit sector do not and cannot function in isolation (Fill, 2005:12; Hutt,

2010:182). Due to the fact that stakeholders can have such a significant influence on an organisation, it is therefore important to understand who exactly are considered to be the stakeholders of an organisation.

The term stakeholder refers to any individual or group who can potentially influence the extent to which an organisation achieves its goals, in other words, any individual or group that potentially influences the success of an organisation (Freeman, 1984:25; Daugherty, 2001:395; Fill, 2005:205; Lewis, Hamel & Richardson, 2001:6,16; Jahansoozi, 2006:942). Stakeholders in terms of development or disaster risk reduction refer to those groups who are recipients or targets of policy programmes, risk reduction or development initiatives (Rho, 2009:8; Petkus, 2008:27; Hutt, 2010:182.). For fire services these stakeholder groups can include local, provincial and national government, any other fire service in their vicinity and specifically the communities they serve. These groups as stakeholders greatly determine the success of the fire station as will be argued in the subsequent theoretical sections of this chapter.

In the non-profit sector, success is measured by the extent to which the institution achieves its mission and vision, or how successful it is in delivering a service (Lewis, Hamel & Richardson, 2001:7; Lewis, 2005:251). Therefore stakeholder relationships are very important in this regard as it is necessary that all stakeholders including community, staff, funders and government accept and value the institution's mission and supports its strategies (Lewis, 2005:250; Fill, 2005:12; 19).

As argued by various authors (Freeman, 1984:42; Jahansoozi, 2006:943), organisations need to be effective to be successful and to do this they depend upon the resources and support from stakeholder groups. Furthermore, it is the perceptions that stakeholders have of an institution or organisation that greatly influence how they will behave toward it (Luoma-aho, 2006:3; Hutt, 2010:182.). If stakeholders hold a negative perception of an institution they will behave negatively towards it, the opposite is also true; if stakeholders have a positive perception of an institution their behaviour towards the institution will be positive. A positive perception and behaviour - in effect a good relationship - allows the institution to enjoy the cooperation and support of their stakeholders, which gives the institution access to the resources these groups hold for them to achieve its mission successfully (Luoma-aho, 2006:3).

In order for an organisation to achieve this, it needs to understand how these stakeholder groups perceive the organisation, how they perceive their environment and understand what each stakeholder group's needs are (Freeman, 2010:26; Lewis, Hamel & Richardson, 2001:6). If the organisation gets to know their stakeholders and pays attention to their needs, a good relationship can flourish with attributes such as mutual satisfaction, commitment from both parties and most importantly, trust (Jahansoozi, 2006:943). Therefore an organisation that considers the relationship it has with its stakeholders as important, and nurtures this relationship, will be successful in achieving its mission (Phillips, 2006: 35).

It is crucial that a relationship is developed where an organisation understands its stakeholders and the stakeholders understand the organisation (Fill, 2005:192). In order to create such a relationship of mutual understanding it is necessary for an organisation to enter into dialogue with its stakeholders (Fill, 2005:192). Communication in the form of dialogue can therefore be used as a means to effectively manage and build a relationship. This can be achieved through constant interaction and dialogue (Fill, 2005:686, 242). In this way an organisation can also ensure and maintain its credibility and legitimacy (Lewis, Hamel & Richardson, 2001:6). Furthermore, it allows stakeholders to participate more easily in decision-making processes especially where their interests are concerned (Jahansoozi, 2006:943).

All the above benefits can be acquired if a good relationship exists between stakeholders and the institution or organisation. This can be ensured by effective stakeholder management and stakeholder involvement, thus ensuring continuity in the relationship where both parties benefit and share in a long-lasting relationship (Quero & Ventura, 2009:20). It is clear from the discussion of participatory development communication in the previous sections (See section 2.2.2.) that the use of participatory development communication in development also aims to use more or less the same principles to facilitate participatory development. Therefore using the principles of stakeholder and relationship management in combination with the principles of participatory development communication can be very effective within the process of development.

Consequently it is clear that organisations and their stakeholders need to work together to reach the organisation or institution's goal and mission. In order for that to happen it is necessary that stakeholder's perceptions and in effect behaviour are positive toward the institution or organisation. To ensure that the above is achieved, institutions need to have a

good relationship with their stakeholders: a relationship that is characterised by a communication style that allows for dialogue and two-way communication. This type of communication style should allow people to become part of the whole development and/or disaster risk reduction process by allowing them to make decisions in the process and by facilitating the process of identifying and analysing problems of a development or disaster risk reduction nature. By applying participatory development communication principles in order to establish a good relationship between stakeholders in a disaster risk reduction context, the process of building a strong culture of safety can be greatly facilitated. In order to know where participatory development communication and good stakeholder relations can play a very important role in disaster risk reduction and specially in creating a culture of safety, it is necessary to understand what is meant when referring to a culture of safety. Therefore the next section will explore the concept of a culture of safety, explaining what it is, how it functions and importantly what aspects are needed to build a good culture of safety.

2.4. BUILDING A CULTURE OF SAFETY AS PART OF DISASTER RISK REDUCTION

As argued in the previous section, disaster risk reduction is not something that can be only the government's responsibility; it should be the concern and a priority of all sectors of society including a multitude of sectors, disciplines and role-players (Stanganelli, 2008:94; Vermaak & Van Niekerk, 2004:556; Twigg, 2007:6; UN ISDR, 2004: 13,14; UN ISDR, 2005:6,7, SA, 2004:1,4,8; SA, 2002:12-14). In countries with limited resources and limited access to basic services, citizens in many communities have to rely on their own knowledge and coping strategies to minimise their vulnerability and reduce risks (Twigg, 2004:120). For instance in the Akwa Ibom region in Nigeria community members started to rebuild a pedestrian crossing over a river where a bridge had collapsed due to flooding after waiting for many years for the bridge to be repaired by the responsible authorities (GNDR, 2009:13). In the Himalayan region in the Kangara district in India studies have been done to investigate historic buildings and how these buildings have survived numerous disasters in the area's history when the secluded people from times past did not have the expertise to advise on building techniques and yet these buildings have remained (SEEDS, 2007).

In the complex process of disaster risk reduction different forms of expertise are needed from various sectors to address the multiple aspects of risk in the process (Stanganelli, 2008:94;

Vermaak & Van Niekerk, 2004:556; Twigg, 2007:6; Fill, 2005:12; Hutt, 2010:182). Secondly, the community are the people with the most information about the risks from various hazards in the area that they live in which in this case is particularly fire, making communities a valuable stakeholder in the process of disaster risk reduction (See section 2.2.2.). In doing so different resources are added together and collectively address the reduction of risk from disasters (Twigg, 2007:6). One way of achieving this is by building a culture of safety.

DeJoy (2005:107) argues that organisations like social groups have a culture that directs the behaviour of its members. The concept of a “safety culture” has been defined and discussed in the literature, focusing mostly on an organisational context. However, the terminology and concepts that safety culture is built on were originally borrowed and understood in an anthropological and ethnographic context (DeJoy, 2005:107). Guldenmund (2000:215,216) argues that safety culture is very similar to organisational culture and climate, with the focus being slightly shifted to safety. Safety culture, according to Cooper (2002:31), refers to the way in which people think and behave in terms of safety. Although all these authors describe and apply the concept of a safety culture in an organisational context, some of the aspects they elaborate on are very useful in understanding a culture of safety and how it is perceived in a disaster risk reduction context.

2.4.1. SAFETY CULTURE IN AN ORGANISATIONAL CONTEXT

Culture in an organisational setting is defined as a set of basic assumptions of a group that have been learned through problem-solving. It is seen to be effective enough to be carried over to new members as the correct way of thinking and behaving in handling and perceiving problems (Guldenmund, 2000:250-251). Organisational culture is defined as the way in which people in an organisation think about the organisation’s goals, problems and practices and the accepted norm for executing actions (Ek, 2006:10). Organisational culture is something that most members of this group or organisation abide by and should abide by if success is to be achieved and goals reached. Hudson (1999:2) argues that a safety culture is a special form of culture, where safety is a specific priority for the members of the group or organisation. According to Wiegmann, Thaden and Gibbons (2007:3), the term safety culture refers to the degree to which members of a specific group commit to their personal responsibility for safety, acts to preserve, enhance, and communicate safety concerns, and also refers to how people strive to actively

learn. Furthermore, Reason (1997: 192) argues that a safety culture is not to be viewed as a single entity but is rather made up out of elements in terms of thinking and ways of doing and managing things when it comes to safety. Wiegmann, Thaden and Gibbons's (2007:3) definition of a safety culture relates well to Guldenmund's (2000:250-251) description of an organisational culture when they state that a safety culture refers to how a group adapts and modifies behaviour based on lessons learned from mistakes.

It is important to understand that a strong safety culture is a process and cannot be instilled as a once-off action (Reason, 1997:192). It should be continually improved, maintained and built with step-by-step actions (Wiegmann, Thaden & Gibbons, 2007:3). Furthermore, a safety culture is part of a "culture superstructure" (Guldenmund, 2000:245). This means that (in an organisational context), an organisation's safety culture will be closely related to and determined by the general organisational culture, and the general organisational culture may in turn be shaped by the industrial and national culture (Reason, 1997:220; Guldenmund, 2000:245). In a community setting the community's safety culture will then be part of, and shaped and determined by the cultural superstructure. This cultural superstructure will include various entities, institutions and systems that have an influence on an individual's own culture.

According to Bronfenbrenner (1977:513-516), there are various influences that contribute to human development and these influences he describes on various levels. Firstly, the family along with schools, religious institutions, local neighbourhood as well as the culture, make out the first level influences on an individual in terms of human development in the environment. The second level of influences is made up of aspects in a person's society such as activities where a person interacts with systems and other institutions. The third and final influence that contributes to human development is that of global influence, and international and global changes. Each of these influences contributes in a unique way to people's development and the development of their culture and also their perception of the world (Bergh & Theron, 2009:59).

Figure 2.1: Levels of influences on an individual's human development (Source: Huitt, 2009)



Berg and Theron (2009:59) argue that a culture that is determined by the influence of these various levels shapes a person's beliefs, values, attitudes and behaviour. Therefore it can be argued that for a safety culture to shape behaviour it is necessary that safety be a priority throughout all of the levels that influence the development of a person. The underlying aim for building a safety culture is to develop and establish a culture, be it in an organisation or in a community context where everyone is personally involved in ensuring the safety of all concerned (Hudson 1999:1). Applying the safety culture concept to a community level can be more complex than in an organisational context because the boundaries of the system can be somewhat unclear. Members of the public are furthermore not directly employed as in an organisational setting (Wiegmann, Thaden & Gibbons, 2007:10). The industries in which a safety culture can be applied differ greatly, but apart from the context the principles stay the same, therefore some of the indicators used in an organisational setting to describe a strong safety culture can be directly applied to a community level (Wiegmann, Thaden & Gibbons, 2007:10; Höpfl, 1994:51). It should never be forgotten that compared with an organisation, communities are much more complex in their functioning and structure and are never truly united or to be seen as a totally homogeneous group (Twigg, 2007:6; Bessette, 2004:15-17).

Adding to the challenge of applying the concept of a safety culture to the complexity of a community context is the fact that a safety culture is a very complex phenomenon. It involves people's beliefs, values, and perceptions about safety (Hudson 1999:5). Therefore a culture that views safety as a priority is difficult to build because it requires a change in people's behaviour,

perceptions, values and beliefs, which is not easily achieved (Schramm, 1964:115; Hudson, 2007:701). Schramm had already in 1964 written about how important it is for people in development aiming to bring about specific social change to consider what effect the change would have in other areas of a community due to the interrelated whole that 'social organisations' form (Schramm, 1964:115-118). Therefore when it comes to changing people's values, beliefs and perceptions about safety, in other words influencing their safety culture, it can be a very intricate process within a social context.

2.4.1.1. Safety culture in a community context

Safety culture is something that has developed in an organisational context to reduce the occurrence of accidents due to unsafe behaviour (Ek, 2006:1). The need to promote safe organisational behaviour especially features in organisations such as air, sea and road transport, mining and organisations that face greater risks in their day-to-day functioning. In theory it should be possible to apply the characteristics and indicators of safety culture to different contexts and situations although more research in the area of safety culture is needed to shed more light on the field (Ek, 2006:2-3). The following discussion will focus more closely on these specific indicators or characteristics and investigate to what extent these indicators apply to a community context.

2.4.1.1.1. Indicators of a safety culture in a community

The first indicator in organisational literature is that of organisational commitment to safety. Organisational commitment to safety refers to the extent that top management considers safety as a priority and incorporates safety into decision-making as well as allocating the necessary resources to ensure safety (Wiegmann, Thaden & Gibbons, 2007:10; DeJoy, 2005:108). It is believed that in organisations senior and top management set priorities and allocate resources for safety and also determine the atmosphere surrounding safety in their organisation (Flin *et al.*, 2000:185-186). Therefore senior and top management need to support safe behaviour and safety as a priority in general (Hudson, 2007:705). This can directly be applied to the government on local, provincial, and national level. Wiegmann, Thaden and Gibbons (2007:10) state that the government is the responsible entity in allocating resources for safety and it is also responsible for developing policies and laws concerning safety.

Although communities are the first actors when it comes to safety culture and safe behaviour, government should make safety a priority and enable communities to develop a culture that views safety as a priority (UN ISDR, 2005:18). This is done by government creating policies and guidelines to give all role-players directive and by supporting the issue of safety and a safety culture (Benson, Twigg & Myers, 2001:205). Generally the Disaster Management Act of 2002 declares it a statutory responsibility for each organ of state (therefore national, provincial, district and local bodies) to make disaster risk reduction a priority, doing this by establishing a disaster management centre in each area of government (NDMC, 2008:6). In other words when it comes to disaster risk reduction, communities are usually the first actors because they are the first to deal with the risk and therefore we can say it is a 'community driven process' (UN ISDR, 2005:19). Although government is then tasked and has the responsibility to support communities in creating necessary structures that include policies and guidelines and enabling operational activities by giving the political will that is needed to support initiatives (UN ISDR, 2005:18-25). Therefore in terms of enabling the process the government is the starting point for an effective culture of safety. If the government does not consider safety a priority it will be more difficult for citizens in a community to build a strong safety culture without the necessary structural and political support as well as necessary knowledge, all of which the government is responsible for providing (UN ISDR, 2005; SA, 2002).

For a culture of safety in terms of disaster risk reduction to become a priority, South Africa has developed legislation (SA 2002, UN ISDR, 2005) and policy concerning disaster risk reduction and how disaster risk reduction should be incorporated into development initiatives, although in a report on research done on the implementation of this in municipalities in South Africa it was found that most municipalities still function with their focus being more on response than prevention and mitigation which the building of a culture of safety should fall under (Botha *et al.*, 2011:53,54). The world has also made safety in terms of disaster risk reduction a priority by developing the Hyogo Framework for Action. Frameworks and systems are therefore in place, but as studies like the Views from the Frontline Report of 2009 have shown, the process for implementation of legislation and frameworks and specifically the Hyogo Framework for Action is not what is necessarily needed to bring about an effective systematic change in risk reduction initiatives on the local front (GNDR, 2009: 36).

The second indicator is that of the formal safety system. This system in many organisations refers to the process for reporting and addressing safety hazards (Wiegmann, Thaden & Gibbons, 2007:10-11). When individuals report incidents this also relates to what attention is given to these incidents, to what degree does management or government in this case take incidents seriously (Ek, 2006:26). If a community has a strong safety culture then there will also be mechanisms for reporting hazards (Wiegmann, Thaden & Gibbons, 2007:10-11). A good reporting system also facilitates trust in that members of the group feel comfortable in reporting incidents (Ek, 2006:26). It is thus important that there are certain mechanisms in place for community members to report hazards and that everyone is aware of how this system functions.

Finally, the literature on organisational culture also indicates that as part of a strong safety culture an informal safety system should exist. Such a system refers to unwritten norms regarding safety in an organisation and specifically to what extent members of the organisation promote safe or unsafe behaviour (Wiegmann, Thaden & Gibbons, 2007: 11). In a community that consists of various diverse groups an informal safety system is an aspect that can be the least controlled. It also involves supporting networks and encouraging collaboration between various relevant groups such as scientific societies, practitioners and communities (UN ISDR, 2007:57). Wiegmann, Thaden and Gibbons (2007:10) suggest public awareness campaigns and education programmes as a means of strengthening a safety culture and ensuring that community members adhere to a culture where safe behaviour is promoted. To build such a culture it is important to ensure that communities have access to the correct information by incorporating the information in school curricula and creating programmes and training opportunities on a community level (UN ISDR, 2007:57).

2.4.1.2. Characteristics of an ideal safety culture

Reason (1997:191-220) introduces five characteristics to describe an ideal safety culture in an organisational context. Reason explains that an ideal safety culture is: a) an informed culture; b) a culture that favours a reporting nature; (c) a culture that is flexible and adapts easily in terms of structure; and d) it is just, in that everyone takes responsibility for distributing necessary information. Firstly, Reason (1997:196) is of the opinion that the ideal safety culture is a

learning culture. Four of these characteristics that are most relevant when applied to a community setting will now be discussed in more detail.

Firstly, a strong safety culture is an informed culture where members of the group are aware and informed about all factors such as the human, technical and environmental factors that determine the safety of everyone involved (Hudson, 1999:2). This implies that people are aware and knowledgeable concerning those factors that may put members of the community at risk. Each member of the community can therefore contribute directly to the safety of everyone concerned.

Secondly, an ideal safety culture is a reporting one, where people are willing to report incidents and give feedback on what they think went wrong and where procedure can be improved (Reason, 1997:195-197). This aspect of a safety culture ensures that each member of the community functions as an active member in building a culture of safety. It also implies that an opportunity is created for members to not only report specific incidents, but also, by being willing to give feedback in regard to procedures and activities, to ensure that procedures are constantly improved (Wiegmann, Zhang, von Thaden, Sharma & Mitchell, 2002:12,13).

Thirdly, Reason (1997:196, 213-218) describes an ideal safety culture as being a flexible one in terms of structure. This he argues refers to the decision-making structure of the organisation and this is usually centralised around upper management and head supervisors. What is proposed is that ,in a good culture of safety, management in organisations should increase the flexibility of organisations in such a way that once a situation demands it decision-making structures become more decentralised. This means ensuring that those who are at the forefront of a safety situation are able and capable to make the decisions to ensure safety in the situation (Reason, 1997:196). In a community setting and in terms of fire services a safety culture that is flexible refers to the fire services ensuring that members of the community are able and capable of handling a dangerous situation as the first actors in the situation. This can only be made a reality if fire services ensure that communities have the relevant training and information to do this (Reason, 1997:196). This characteristic of a safety culture relates directly to decision-making and empowerment addressed in participatory development communication (See Section 2.2.2.).

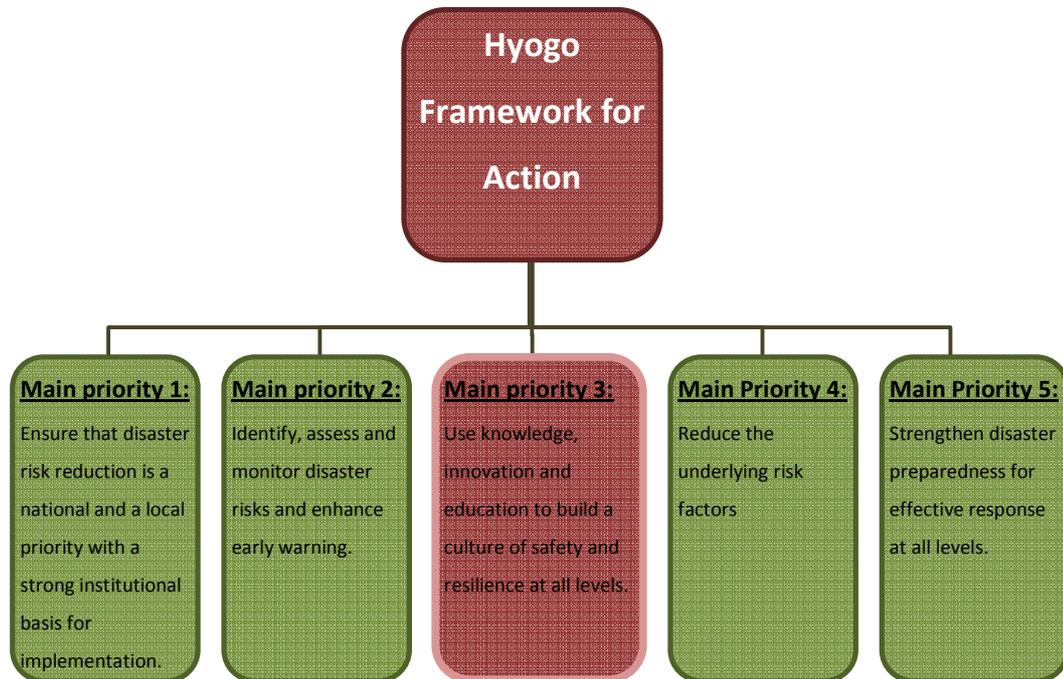
Lastly, a strong safety culture is a learning culture, where members are willing to learn and implement necessary changes that have to be made (Hudson, 1999:2; Reason, 1997:196). It is therefore a culture where the members of the community want to learn how to be safer in terms of specific risks and it implies that the members of the community are willing to take responsibility for ensuring safety.

It is therefore clear that in an organisational context a specific notion exists when it comes to a safety culture. Some of the aspects explaining a safety culture and how a safety culture should be established and maintained within an organisation are very specific and difficult to apply outside an organisation setting. Other aspects tend to be much more useful in describing a safety culture and how it should function in any context and can provide valuable insight when applied to a community context. Bearing this in mind the next section will take a closer look at the term culture of safety with a specific focus on disaster risk reduction.

2.4.2. CULTURE OF SAFETY IN DISASTER RISK REDUCTION

“Culture of Safety” is a term and a concept specifically referred to in the Hyogo Framework for Action 2005-2015 (HFA) (UNISDR, 2005). The HFA has as its main goal to promote the integration of disaster risk considerations and initiatives into sustainable development policies, planning and programming at all levels (Stanganelli, 2008:95; UN ISDR, 2007:1). By doing so, the Framework was developed in the hope that the main outcome would be to substantially reduced disaster losses in terms of lives and also economic, environmental, and social resources of countries and communities (UN ISDR, 2007:1). The HFA sets out five specific Priorities for Action. “Building a Culture of Safety” is given as the third of these priorities. This priority calls for knowledge, innovation, and education to be used to build a culture in communities that view safety as a priority and actively promote behaviour to reduce risk (UN ISDR, 2007:57).

Figure 2.2: The priority actions of the Hyogo Framework for Action (Source: UNISDR, 2005)



The publication by the UN entitled *Words into Action: A Guide for implementing the Hyogo Framework*, explains to some extent step-by-step actions as part of the third Priority for Action that should be followed to ensure that an effective culture of safety is developed in communities. When building a culture of safety, accurate information dissemination is one key aspect in minimising risks relating to hazards. People need information about hazards and risks that they face in their environment and community to be able to avoid and prepare for potential disasters. Without this knowledge people are unable to protect themselves (Twigg, 2004:165). According to McEntire (2001:191), the reason why vulnerability in communities is on the increase is the lack of education and knowledge about disasters and the risks of hazards. When one considers the above in terms of what has been discussed in the section on participatory development communication it may seem as though one contradicts the other. In reality, much like in the health sector, there is certain technical information about hazards that communities need to have in order to be safe. Therefore the ultimate goal should be to ensure that people are safe and practise safe behaviour relating to a specific hazard. In order to achieve this, the building of a culture of safety is proposed but more importantly the process of informing persons, communicating relevant, necessary and correct information should follow a participatory approach to ensure success.

Awareness and consciousness about risks and hazards enable members of communities to protect themselves and others in their everyday lives (UN ISDR, 2007:59). Thus apart from accurate information dissemination, raising awareness about disaster risk reduction in communities is crucial when building a culture of safety. Disaster risk reduction practitioners and Government's goal is to save lives and property and reduce the risk of loss of life or property, and therefore part of the responsibility lies with these entities to make the public aware of their risk to hazards (UN ISDR, 2007:59). The process of raising awareness among the public should be an interactive process where different groups engage in discussion with the aim to establish how risks are managed (UN ISDR, 2007:59). It is important to include all the role-players in the process of raising awareness. Including members of the community, the government role players, and the private sector in the process is important because each individual has a role to play. Also each role-player has a specific responsibility and different ways in which they can influence social change (UN ISDR, 2007:59). According to Tarrant (2002:5), the strength of risk management lies in the fact that everyone involved has a role to play in achieving safer communities. Furthermore, in order for government entities to be successful in raising awareness about disaster risks they need to include the members of a community in the development of solutions. Including the members of the community enables the practitioners to understand the perceptions communities have about the risks they face.

2.4.2.1. The importance of participation in disaster risk reduction

Essentially information exchange is necessary rather than a top-down communication style where "expert", scientific knowledge is forced on the masses (UN ISDR, 2007: 59). Development communication has made a similar transition. It was initially an entirely one-way mass media based process of the distribution of information as applied in the modernistic approach (See section 2.2.2.). That changed because it was found that the active participation of the people in development initiatives is aimed at the development process itself and is crucial to ensure validity and sustainability of these initiatives (Mefalopulos & Grenna, 2004:26). Furthermore, participation in development is based on the notion that ordinary people can consider their problematic situation and effectively find solutions to change it (Servaes & Arnst, 1999:107-112; Servaes, 1995:46)

The participation of the community in disaster risk reduction initiatives is therefore of absolute importance for a number of reasons. Firstly, it can be argued that the participation of the community is essential in building a culture of safety and for members of the community to take ownership of solutions (UN CDR Report, 2005:13; FAO, 2007:27). If communities are given the opportunity to participate in decision-making they are in effect taking part in creating solutions and controlling what happens in their communities (See section 2.2.2.). Secondly, by participating the community can ensure that initiatives fit their specific context and circumstances (See section 2.2.2.). Twigg (2004:166) mentions that one reason why so many development and disaster risk reduction initiatives had failed in the past is because specialists did not understand communities they were trying to help. In the light of this, for government entities to be successful when educating communities about risk and risk management, the communication process should be informed by the community's experiences and perceptions of risk through the process of participation (Twigg, 2004:166)(See section 2.2.2.).

It should always be remembered whenever dealing with development and disaster risk reduction issues that a change in behaviour is being sought and this can be a complex goal to reach (See Section 2.4.1.). It is argued that when knowledge clashes with beliefs, the more deep-seated will emerge as the driver of behaviour (Hudson, 1999:5; Hudson, 2007:701). People's behaviour is governed by their personal values which are in turn directly shaped by the cultural values of their society or social group that they form a part of (McKee, Manoncourt, Yoon & Carnegie, 2008:272; Wiegmann, Thaden & Gibbons, 2007:8). Bergh and Theron (2009:59) argue that the behaviour of a person is learned through repeatedly practising or experiencing the behaviour in their social or cultural environment. When scientific knowledge and beliefs clash it could mean that a project or programme aimed at reducing disaster risk will be rejected by the very people the initiative aims to help. Thus once the scientific external knowledge disappears with the external project team, initiatives are abandoned by the communities because they are in conflict with people's beliefs (SEEDS, 2009:6). Therefore scientific knowledge and indigenous knowledge or beliefs are important aspects for planners of disaster risk reduction and development initiatives to consider when planning programmes or projects and, for these initiatives to be sustainable, participation is needed in the entire process and in the decision-making (SEEDS, 2009:6; Servaes, 1995:47). Government entities in risk reduction initiatives have the specific task of communicating necessary information to

communities to ensure that risk within the community is reduced. Should this information then negatively influence or contradict a community's specific beliefs, values or perceptions about safety or any other aspect that might be related to their social context, behaviour change to ensure safer communities might not be achieved, which then renders risk reduction initiatives ineffective (Schramm, 1964:115-118).

A further consideration of importance for participation is that people are more motivated to implement their own solutions. In situations where people in the community participate in finding solutions and have a shared understanding or accept ownership of the problems in their area they are more motivated to implement their own solutions and in this way change behaviour to reduce risks of potential disasters (Tarrant, 2002:5). Finally, Twigg (2004:114) argues that having shared understanding and getting community members to accept ownership of problems are two of the reasons why a participatory approach to initiatives should be adopted and it also allows for more sustainability in risk reduction initiatives and helps to build communities' capacity.

2.5. CONCLUSION

In the preceding discussion it has been clear that participatory development communication can provide various benefits in development and the risk reduction process by including those targeted for these initiatives (See sections 2.2.2; 2.4.2.1.). Participation by all parties can be ensured by establishing dialogue and ensuring all parties have equal opportunity to communicate and give feedback on development initiatives (See section 2.2.2.). Furthermore once dialogue is established and initiatives are informed by the opinions, perspectives, beliefs and values of those at whom the initiatives are aimed, solutions for development and risk reduction problems are more suited to the social context in which they are planned to be implemented (See sections 2.2.2.; 2.4.2.1.). It is also clear that applying participatory development communication in such initiatives provides people with the opportunity to decide what should happen in their environment and therefore affords people the power to have control over what happens to them in the process of development or disaster risk reduction (See section 2.2.2.). People are therefore empowered when they are included and given the opportunity to participate in the process of decision-making. Trust is also viewed as a

favourable result where people are given the opportunity to participate in the process of development or disaster risk reduction (See section 2.2.2.).

Trust is furthermore established in a good relationship and therefore stakeholder and relationship management theory makes it clear that if a good relationship exists between an organisation or in this case the government and its stakeholders where trust between parties is achieved cooperation from stakeholders is more likely and favourable (See section 2.3.). This is important as disaster risk management is a multi-sector approach where different role-players work together toward reducing risk. Therefore in answering the first research question set out at the beginning of this chapter the principles of participatory development communication therefore proposed by the literature that should inform a culture of safety are those of dialogue and empowerment. By establishing dialogue, it can be expected that trust, exchange of information and feedback are also established and should be established to inform a culture of safety. Furthermore, to ensure success in initiatives aimed at disaster risk reduction dialogical communication enables practitioners to understand the needs and contexts of those involved in the process. Moreover to ensure empowerment in the process of disaster risk reduction people should be made part of the decision-making process

From the discussion it has been established that a culture of safety is one where safety is a priority for everyone involved (See section 2.4.). It is a culture where people commit to a personal responsibility in terms of safety. Establishing this proves to be challenging because a safety culture is something that includes people's perception, beliefs, and values about safety. In building a culture of safety, behaviour to reduce risks in communities is actively promoted. This should be done by exchanging knowledge, educating, disseminating information, and creating awareness amongst vulnerable communities about the risks they face relating to hazards and potential disasters in their environment.

Thus the ideal for at risk and vulnerable communities is to have a strong culture of safety within communities where safety is a definite priority for all concerned. The Fire Services are one of the role-players within this process that are responsible for helping to build such a culture of safety by managing and exchanging information, educating, and training, doing research, and creating public awareness about risks in terms of the hazards members of the public face (UN

ISDR, 2005:14-15; Twigg, 2004:61). In the discussion it was established that to build a culture of safety successfully, participation is needed from the communities involved in risk reduction initiatives. For communities to participate in this process it is essential that a good relationship exists between the Fire Services and the communities they serve. As mentioned earlier people need to trust the information that is supplied as well as the people supplying the information and if the relationship is strained it could be fairly challenging getting people to participate in building a culture of safety and therefore in reducing risks they face within the community (Twigg, 2004:169).

One aspect that was mentioned throughout the previous discussion as a means of ensuring that initiatives with the aim of reducing communities' vulnerability, reducing risk, and establishing a strong culture of safety are successful is that of participation of the different groups involved. This is where participatory development communication could be very successfully applied to aid in building a culture of safety. Using knowledge, education, information dissemination and creating awareness amongst people to build a strong culture of safety can therefore only be successful in reducing risk if the people these initiatives are aimed at are part of the process. People are more likely and willing to change behaviour and act if they are a part of identifying risks and problems and help find solutions for these problems (Twigg, 2004:169). Using participatory development communication as a means of establishing participation in this process can facilitate building a culture of safety and inherently facilitate and support the disaster risk reduction process. Therefore in an attempt to answer the second research question of what constitutes a culture of safety the literature proposes that a culture of safety must have an organisational commitment to safety. Furthermore, a formal safety system and an informal safety system are also important parts of a culture of safety. Lastly a culture of safety should be a reporting culture, an informed culture and a learning culture.

Chapter 3: RESEARCH METHOD

3.1. INTRODUCTION

In Chapter 1 a brief overview was given of the qualitative methods used in this study to collect the data. In this chapter the various aspects of the research methodology and research approach will now be discussed and explored in detail as they were applied in the process of collecting data in order to answer the research questions. Therefore the discussion in this section will include an explanation of the research design and motivations given for the use of a qualitative research design. Thereafter a detailed discussion of the research methods used will be given. Research methods for this study included focus group discussions, unstructured interviews and semi-structured interviews. Following the research methods a description will be given of how data were analysed and interpreted. An indication will then be given of the limitations of the study and finally issues relating to the reliability and validity of the study will be explored.

3.2. RESEARCH DESIGN

In each study there are specific questions the researchers should ask themselves. These questions direct the study and determine its outcome. One such question concerns the research design. Most researchers ultimately stand in front of a choice of either a quantitative research design or a qualitative design, although many researchers have settled on combining the two for the purpose of their study (Tesch, 1990:55). The choice of either qualitative or quantitative research design depends on the required result that the researcher would like to achieve as well as how to best ensure validity and reliability (Lowhorn, 2007: 484-488; De Vos *et al.*, 2007:268).

Design in research, according to De Vos *et al.* (2007:268), refers to all of the decisions a researcher makes during the process of the research project, for example what methods of analysis or collection of data to use.

When compared with the quantitative research design the qualitative research design is different in that it does not supply the researcher with a formal step-by-step plan of action to follow, the scope in most cases is more or less undefined and researchers tend to go about their research more philosophically (De Vos *et al.*, 2007:269; 357). This allows the researcher to have

a great number of methods and designs to choose from. Due to the fact that a qualitative research design encompasses such a variety of research methods it can be seen as an interdisciplinary, multi-paradigmatic and a multi-method approach to research (Struwig & Stead, 2001:11). Furthermore, using a qualitative research design would refer then to any information that is not expressed in numbers and statistics (Tesch, 1990:55). A qualitative research design allows for flexibility in that it allows the researcher the freedom to adjust the design to better suit the situation and also allows a much less structured approach (Struwig & Stead, 2001:13; De Vos, 2007:269).

Struwig and Stead (2001:12-13) highlight four aspects that they consider as characteristic of qualitative research design. In some instances it is specifically these characteristics that lead to the researcher selecting a qualitative research design for a study. Where relevant, how the characteristics motivated the current researcher to select a qualitative approach for the study of the Maquassi Hills Fire Services will also be discussed.

One aspect that motivated a qualitative research design to be chosen for this study was that a qualitative perspective allows for multiple realities to exist that are determined by the perceptions and experiences of the individuals or groups and therefore are context specific (Struwig & Stead, 2001:16,17). If the title is considered, this study specifically has as its objective to explain the nature of communication between the Fire Services and the community in the area of Maquassi Hills. In this way there are specific groups of people included in the research and it is necessary to understand the multiple realities that exist in terms of the nature of communication.

As a characteristic of this type of research design Struwig and Stead (2001:12) make mention of the relationship between the researcher and the participants and their perspectives. Researchers in qualitative research aim to grasp and understand the perspectives of those participating in the research with regard to the problem that is being researched (Struwig & Stead, 2001:12). In qualitative research the most important perspective is that of the research participants for the researcher to understand the problem through their eyes. This approach to the research problem was a good reason for choosing a qualitative research design for this specific study. To come up with any solution for the problems that might exist between the Maquassi Hills Fire Services and the communities they serve it was necessary for the researcher to understand how both parties view this relationship. It was also necessary for the researcher

to know what the fire services and the communities consider to be challenges in the relationship. Therefore the qualitative research design created the necessary platform for the researcher to understand the research problem from the participants' perspective.

Another characteristic of a qualitative research design is that of contextualism. In qualitative research various factors on a micro and macro level in the environment or social context of the research participants are taken into consideration. A reason for this is that researchers working with qualitative research argue that a human being lives in a specific environment and social context with various aspects and factors that influence and shape their reality (Struwig & Stead, 2001:12). If a researcher is to understand the research problem it is also necessary to understand what factors in the environment and social context have an impact on the situation. In the study of the Maquassi Hills Fire Services and the surrounding communities it would be very challenging answering the research questions without considering the environmental and social factors that influence the problem. Again in this way the qualitative research design was the most appropriate design to answer the research questions.

Furthermore qualitative research is more concerned and orientated toward the interaction of individual and contextual factors and seeks to allow respondents to give a more in-depth explanation on enquiries addressed by the researcher (Struwig & Stead, 2001:13). In the case of the Maquassi Hills Fire Services it was necessary for the researcher to understand how community members and firemen viewed their relationship with each other and for this they had to be allowed the freedom to voice their perspectives.

In addition to the above, the following guidelines presented by Leedy (1997:109) were considered as further motivation for deciding on which research design would best suit the study:

- The researcher believed that there were various created realities to be explored and taken into consideration if the situation with the Maquassi Hills Fire Services was to be understood.
- The research questions were exploratory of nature in that they aimed to explore the relevant literature to establish specific theoretical guidelines and also explore and interpret the reality of the Maquassi Hills Fire Services according to these guidelines.

- The research focus involved an in-depth study. This was necessary if the nature of communication between the Fire Services and the community was to be understood.
- The researcher furthermore aspired to understand the situation and therefore had a high desire to work with people and establish how they perceived the situation.
- The researcher wished to be guided by the research process and therefore it can be said that the researcher's desire for a formal structure was low.

Thus after careful consideration a qualitative research design was decided on. Such a design is best suited to reach the research objectives.

In a social context it is very often difficult to predict how a research project will develop because one is dealing with people and often context specific research. Therefore the flexibility of the qualitative research design allows for adjustments to be made as changes in the process may occur. Therefore the flexible nature of a qualitative research design served as another motivation for the researcher to choose that design as the most appropriate to answer the research questions.

In this study various disciplines are dealt with and amongst the main ones are those in Disaster Risk Reduction, Communication, Development and Organisational literature. Therefore a research design is needed that can easily be used with various disciplines and sectors and the qualitative research design allows for this.

3.3. RESEARCH METHODS

Consequently each research design, be it quantitative or qualitative is associated with specific research methods which produce particular types of data correlating directly with the research design (Blaikie, 2000:232). The qualitative research design in dealing more with explanations, descriptions, meanings and interpretations makes use of research methods such as unstructured or semi-structured interviews, focus group discussions and participant observation (Blaikie, 2000:233,234). In the case of the Maquassi Hills Fire Services it was necessary to determine the opinions and perspectives of both the Fire Services and those of the community members in the various towns served by the Fire Services. Therefore in this study aiming to stay true to the qualitative research design led to the use of focus groups and semi-structured interviews to collect the necessary data.

3.3.1. FOCUS GROUPS AS DATA COLLECTION METHOD

Focus groups are a specific type of discussion method that makes use of interaction between a group of persons to generate data (Struwig & Stead, 2001:99). This discussion-based method usually generates qualitative data (Millward, 1995:276). Focus group discussions are known to help the researcher gain insight into *why* a specific group hold certain perceptions, not just making clear *what* those perceptions are (Blaikie, 2000:234). Focus groups can be used in combination with other methods as in the current study or can act very effectively as the only data collection method. Either way the aim when using focus group discussions is to collect stories, perspectives and understandings from participants to add to the researcher's understanding of a situation (Millward, 1995:277).

Participants in focus group discussions are usually selected on the basis of some commonality that they share with regard to the topic under discussion (Greef, 2007:299; Struwig & Stead, 2001:99). Group sizes are usually between six to eight people, although this is merely a guideline, it is however recommended not to allow groups to be too big (more than 14) as this would cause some participants to remain unheard (Struwig & Stead, 2001:99; Byers & Wilcox, 1991:70; Bloor, Frankland, Thomas & Robson; 2001:26). A facilitator then helps the discussion along. The facilitator's main purpose is to mediate conversation between the participants, pulsing for participation from quieter members and gently guiding the conversation around the appropriate research topic (Flick, 2009:195; 199; Byers & Wilcox; 1991:65). Valuable skills or characteristics the facilitator should have for leading such discussions are that they must be flexible in their guidance, allowing conversation to flow naturally (Flick, 2009:195; 199; Greef, 2007:307). They should also be good at listening and as objective as possible, not allowing their own ideas and perceptions to become part of the discussion as far as possible (Flick, 2009:195; Struwig & Stead, 2001:100).

Questions for focus group discussions should be carefully considered as they should be developed in such a way that they do not just ask for a yes or a no but pursue discussion and conversation, in other words primarily open ended questions, they should form probes that guide the conversation (Struwig & Stead, 2001:100; Greef, 2007:303). Depending on the type and aim of the study, general questions should be asked first to allow the participants to become comfortable with the environment, facilitator, other participants and research situation (Kingry *et al.*, 1990:124; Struwig & Stead, 2001:100).

For the research conducted in the case of the Maquassi Hills Fire Services six focus group interviews were conducted, five with community members and one with the firemen working for the fire services.

3.3.1.1. Selection

The purpose of the study should be considered to assist in the selection of the participants (Greef, 2007:304). The Fire Services in Maquassi Hills serve a wide area that includes the towns of Wolmaransstad, Maquassi, Leeudoringstad and Witpoort. The rationale was used that these towns are well serviced by the municipality in that the residents in the towns have better access to basic water supply and electricity. Therefore the focus of the research and focus groups would rather be on the rural areas surrounding these towns as they would be most affected by the Fire Services not functioning properly. Therefore focus groups were conducted in each of the four rural areas, namely Tswlelang, Lebeleng, Kgakala and Rulaganyang. According to Greef (2007: 306), the first two focus groups present the most information and after about four group discussions saturation occurs.

It was decided that a faith-based leader in each of these areas would be asked to assist as gatekeepers with inviting the participants in each area. A pastor in the Tswalelang Township acted as local contact and assisted the researcher to come into contact with the other faith based leaders that helped invite the community members. The faith based leaders therefore acted as an intermediary in the various towns and in this way the snowball sampling technique was used to select participants (Bloor, Frankland, Thomas & Robson; 2001:31). Clear guidelines were given to each intermediary to ensure that an adequate number of participants would attend and that the participants were the correct age and gender. To ensure that enough participants arrived for the focus group each intermediary was given an ideal number of participants, namely at least 10 (no fewer than 10 are needed for the focus group and five women and five men) and a maximum number of participants of 15 (not more than 15).

3.3.1.2. Focus group respondent profile

The minimum criteria for the respondents communicated to the gatekeepers were: a) respondents needed to be resident in the areas under investigation, and b) had to have obtained a secondary school qualification. In total 62 community members attended five focus groups over a four-day period. Groups were an average size of 12 people and all groups had male and female representation except in the Lebaleng Township where men and woman were

split into two different groups. This was done due to the researcher's uncertainty of how women would respond to questions in a mixed group of men and women as it was thought that the culture groups from which they come favour male dominance.

It was found that the male and female representation in one group did not have any effect or impact on female respondents' answers and therefore the decision was made to continue with mixed gender groups. The ages of the participants varied. For instance, the profile of one group in Rulaganyang Township consisted of much younger community members, whereas the group in Kgakala consisted of much older people. This division helped the researcher in examining both innovative and creative ideas as well as historical fire-related events. Occupations of the participants also varied and included a number of people working or volunteering at local NGOs or youth initiatives. Nine respondents indicated that they were unemployed and a few others indicated that they were ward councillors and/or ward committee members.

3.3.1.3. Thoughts on adequacy of members of focus group

When relying on an intermediary to invite participants for a focus group discussion it is always important to primarily make sure that research guidelines are adhered to (Bloor, Frankland, Thomas & Robson; 2001:32). Firstly, members should receive adequate information about the research (Bloor, Frankland, Thomas & Robson; 2001:32). In all of the towns the researcher adequately informed the intermediaries and they were also asked to relay the goal of the focus group to the participants. To ensure that all participants were clear on this and on their role in the process, an explanation of the research and expectations from the researcher's side was shared with the participants before each session.

The issue of anonymity was explained and afterwards the participants were given the opportunity to leave if they felt they could not contribute to the discussion. The researcher did not limit the intermediaries in the choice of those they could ask to come to the focus group discussion; the most important aspect was that they should reside in the areas included in the Maquassi Hills Fire Services' service area.

3.3.1.4. Thoughts on language

This was probably the most challenging in conducting the focus groups, as the dominant language in most of the towns is Setswana. The researcher utilised an assistant who is fluent in Setswana and Xhosa and has had some experience in facilitating group discussions. The focus groups were therefore handled in a bilingual fashion where the researcher would ask the questions in English and participants were given the opportunity to indicate if it was necessary to clarify anything in Setswana. The help of the assistant as the translator in this regard helped immensely because in some instances participants would feel more comfortable replying in Setswana and answers would then be translated again into English. This is not the ideal situation because it is time consuming and the conversation was interrupted by translations. Furthermore, the situation became more complex when participants in Kgakala preferred Afrikaans to English as the second language to be used in the discussions. This resulted in the questions having to be translated into Afrikaans and then participants would reply in Setswana with the assistant translating into English. It is thus clear that the language issue is of great importance for accurate data collection and should be carefully considered in any further research.

3.3.1.5. Limitations of the method

One of the challenges when collecting data using focus group discussions is that the quality of the data relies very much on the skill of the facilitator (Bloor, Frankland, Thomas & Robson, 2001:48-50; Greef, 2007:312). Should the facilitator be unskilled or inexperienced bias may also be another challenge and the perceptions of only some of the participants might be expressed (Greef, 2007:312). The nature of the method makes it difficult to predict what will happen and this makes preparing for the discussion, guiding the group in the discussion and determining the quality or amount of the data collected difficult (Flick, 2009:201).

3.3.1.6. Advantages of the method

Focus groups produce concentrated and large amounts of data in a relatively short time (Greef, 2007:312). According to Greef (2007:300, 301), focus groups are very helpful in situations where various opinions or viewpoints need to be heard on a topic and also work quite well where 'complex behaviour and motivation' are explored. Another advantage is that the method is focused on creating an understanding of the participant's perspective and experience of their reality relating to a specific topic and that it creates the most natural way for participants to

explore by means of discussion with others a given topic or issue (Bloor, Frankland, Thomas & Robson, 2001:48-50; Greef, 2007:4-7).

The structure of focus group discussions gave a much needed platform for the researcher to prepare relevant questions related to the literature while allowing for additional questions to be asked, and in return allowing the researcher to gain a clear understanding of the participants' perspectives and perceptions of the relationship between the community and the fire services while also allowing the freedom to enquire further if any uncertainty existed. Using focus groups to collect data allowed for various opinions, perceptions and experiences of reality to be considered.

3.3.2. UNSTRUCTURED AND SEMI-STRUCTURED INTERVIEWS AS DATA COLLECTION

METHOD

In qualitative research design, interviews are the most popular method of collecting data (Greef, 2007:266). Interviews can be done in such a way that interviewees feel very comfortable and as if they are engaging in normal conversation. This is especially true when using semi-structured or unstructured interviews as they are characterised by open ended questions and allow the researcher and interviewee to engage more or less freely without a very rigid interview schedule (Flick, 2009:150). One aspect noted when doing qualitative research is that one needs to be interested and enjoy working with people and when it comes to interviews it is people's stories, opinions and history that form the researcher's data (Leedy, 1997:109; Greef, 2007:287). The decision however about what interviewing method to utilise when collecting data during a qualitative study relies heavily on the purpose of the research and therefore this must guide the researcher (Greef, 2007:266).

It is also important to note that the researcher's role as the interviewer is one of great importance that determines the quality of the interview and ultimately both the interviewer and interviewee are involved in the process of 'meaning-making' (Richards & Morse, 2007:113; Greef, 2007:287). Depending on the type of interview this role differs but the interviewer should always be a good active listener and should be responsive and interested but not interrupt the interviewees when they are replying (Richards & Morse, 2007:113). There are various types of interviews but of these the types utilised in this study were the *unstructured interview* and the *semi-structured interview*.

3.3.2.1. Unstructured interview

This type of interview is described as 'a conversation with a purpose' and is said 'to formalise basic conversation' (Greef, 2007:292). The unstructured interview is used to uncover some facts and is very flexible and usually the researcher only has a broad aim for the unstructured interview (Greef, 2007:293; Leedy & Ormrod, 2005:146). Three of these interviews were held in the study. The aim of all of these interviews was to gain some insight into the practicalities of doing the research and some facts as background information for the researcher. Aspects that were established included the area that the Maquassi Hills Fire Services cover, how many fire fighters exactly work at the fire station and because a certain Mrs Sethogani was familiar with the surrounding community members she provided some information on the social and cultural environment.

3.3.2.2. Semi-structured

In qualitative studies the atmosphere of an interview is more relaxed, informal and friendly, very different from that of an interview in quantitative research, which is more formal (Leedy & Ormrod, 2005:184). The semi-structured interview combines two other types of interview techniques, the unstructured interview and the structured interview (Struwig & Stead, 2001:98). When conducting a semi-structured interview the researcher prepares open-ended questions and organises them to follow logically (Richards & Morse, 2007:114). As in the semi-structured interview held during this study with the fire chief, questions were prepared around the main theoretical basis and were then further arranged in such a way that they flowed from one issue to the next as far as possible.

The semi-structured method gives the researcher the freedom to arrange the topics as he deems necessary and therefore various participants might be interviewed and all will be asked the same questions but they might not be in the same order (Richards & Morse, 2007:114; Greef, 2007:296). Also this type of interview is especially flexible and allows the researcher to explore interesting avenues that might emerge during the interview and also allows the interviewee to be more elaborate with details (Greef, 2007: 296). This type of interview is normally utilised when an unfamiliar subject is explored or insight is needed into a specific event or behaviour and into a participant's belief, perception or account of this (Greef, 2007:293,296). It is however still important that, even though questions have been prepared beforehand, the interviewer must still allow conversation to flow as naturally as possible as in the unstructured

interview and also to ask questions in such a way that they encourage in-depth and detailed answers (Richards & Morse, 2007:114). Also probing questions must be developed to go with each main question planned to be asked in the interview. These probing questions give the researcher related options which he/she can use to question the interviewee further should responses lack the depth or detail the researcher requires (Greef, 2007:293,293).

The reason the semi-structured interview was used in the study about the Maquassi Hills Fire Services and the surrounding community was that it was necessary to find out how the Fire Chief experiences the situation from an oversight point of view. Therefore the fire fighters themselves were interviewed in a focus group setting and a one-to-one semi-structured interview was conducted with the fire chief.

3.4. QUALITATIVE DATA ANALYSIS AND INTERPRETATION

In a qualitative research design there are various techniques that can be chosen to collect the necessary data. The analysis and interpretation part in the process is where so called 'order' and 'structure' are now given to the raw information collected by using certain collection techniques (De Vos *et al*, 2007:333). This part of the research process involves reducing the huge volume of unstructured information by distinguishing the significant aspects from the unimportant, identifying groupings of ideas and ultimately revealing in a concise manner to the reader what the data say (De Vos *et al*, 2007:333).

Various sources propose ample ways for conducting the analysis and interpretation part of the process but all propose mostly the same steps in bringing the unstructured information to mean something. One idea is to create an organising system to prepare the data for analysis. An organising system brings structure or order to a body of material that does not flow logically or arranges naturally to make analysis possible. Such a system can also help in the structure and presentation of the research report (Tesch, 1990: 139-140).

In the study of the nature of communication between the Maquassi Hills Fire Services and the community the eight 'steps in developing an organising system for unstructured qualitative data' proposed by Tesch (1990:142-143) were used to analyse and interpret the data collected in the focus groups and semi-structured interviews.

These eight steps are as follows:

a) Become familiar with the background

Here the researcher should use some of the very first data available, a first interview, the first of transcriptions etc. It is not necessary to memorise any of this, it purely helps the researcher become familiar with the data. Information from the unstructured interviews was used to become familiar with the Maquassi Hills area and the situation between the fire services and the communities.

b) Distinguish between topics and content

Here the researcher should start going through the data and listen/read for topics in the data and these should be noted. It is important not to trouble oneself with what is said but only with what the topic is. The researcher then listened through the various recordings of the focus groups and interviews and noted the topics mentioned by the respondents.

c) Cluster similar topics

At this stage the researcher should write all the given topics down on one page and group those together that are similar. If topics are encountered whose significance cannot be remembered it is important to refer back to the original data to determine what was said. All the topics were then grouped together by using the notes made in the initial listening to the recordings.

d) Go back to the data

The researcher refers back now to the data and uses the list of topics as an organising system. New topics might be discovered and must then be added to the list.

e) Categorise and compare

Determine a descriptive word to suit the clustered topics and consider now the different groupings while trying to relate them to one another. All the groupings of the topics were then named with one heading that describes all of the topics in that group. It was however found that some of the topics could fit under more than one heading.

f) Make final decisions about the abbreviation functioning as a code for each category and list them.

Review all of the data by adding the codes created. Coding was then done.

g) Group the data according to categories

Here the researcher groups all of the relevant data under the specific categories and performs a preliminary analysis of the content under each category. This is done by paying attention to things like commonalities in the content, uniqueness in content and confusion and contradiction in the content. After this is done the researcher must review the categories as part of the organising system and decide how useful they are to continue with.

From this step the researcher referred then to the theoretical themes that were identified in Chapter 2 and the similarities and differences were then analysed and discussed in Chapter 4 as findings of the research.

h) If necessary, recode the data.

3.5. LIMITATIONS OF THE STUDY

Limitations in this study were identified as the following:

3.5.1. Single area

Firstly, the study was done only in the Maquassi Hills area. Although this is a rather big area including various towns the study was still done in only one area with a specific social, political and environmental context. Therefore the social, political and environmental factors in this area are to some extent exclusive to this area only. It could be that in other areas the social, political and environmental factors differ and would therefore influence the society in another area differently.

3.5.2. Research Design

The research design followed in this study was a qualitative research design. This specific research design yielded various benefits to the researcher and to the study. The benefits and motivation for deciding to follow a qualitative research design are explored in detail in Chapter 3. However a qualitative research design does not allow for wide generalisation.

3.5.3. Single department

A further matter relating to the limitations of the study is that of only the fire services being involved. In this study only the fire department was included in the research conducted. This is one of three sub-departments of the Department of Public Safety and all discussions focused

only on the functioning of this sub-department. It is important to consider that some of the aspects and factors influencing the functioning of the fire services may fall outside the focus of this study. Therefore it could be that some of the issues addressed in the research are caused by factors not considered in this study which could be seen as a blind spot in the research. To some extent some of the issues falling outside the focus of this study did present themselves in the research, for example fire men indicating problems with power distribution and political will in higher levels of management. However this was not really explored as the research focus was only on the fire services and did not extend to the overall power structure in the Department of Public Safety and the rest of the municipal structures.

3.5.4. Timing of research

The research was conducted in the year 2010 and the year leading up to elections at national, provincial and district level (2011). This is an important aspect to consider as this might have influenced the opinions and perspectives of the respondents taking part in the discussions. To what extent or even whether the perspectives and opinions of the respondents were influenced was not determined in the research and can furthermore be seen as a blind spot in the research.

That concludes the discussions of the limitations of the study. The next section will continue with a discussion of the research questions and the recommendations relating to each question.

3.6. RELIABILITY AND VALIDITY

Validity and reliability are two aspects that should never be underestimated or neglected in a study, since failing to consider these aspects carefully could render a study's findings worthless (Struwig & Stead, 2001:130). Reliability is defined as to what degree results are consistent, accurate or stable, and validity on the other hand is defined again as to what degree one can rely on the theories and the concepts in a study (Struwig & Stead, 2001:130-143).

In this study the researcher tried in all aspects to stay true to the qualitative research design in terms of techniques and methods. Also the researcher tried at all times to be as objective as possible and not to influence either the participants or the data to adhere to her own bias or prejudice. Moreover in an effort to ensure the validity and the reliability of the findings data were collected from various sources which differ in their role in the community and also in the

structure of the Maquassi Hills Fire Services and by using different methods for collecting the data.

Inviting adequate participants to join in the focus groups furthermore ensured validity; these are credible members of the community. This study also relied on a sound theoretical foundation from various credible and respected sources in the literature to further guide the study and ensure that findings are theoretically well based.

3.7. CONCLUSION

In the above discussion the research methods used in this study were discussed. In summary, for the research conducted in the Maquassi Hills area to determine the nature of communication between the Maquassi Hill Fire Services and the community they serve, the researcher made use of a qualitative research design. As methods to collect the data semi-structured and group interviews were utilised. Lastly to analyse and interpret the data eight steps for developing an organising system for qualitative data proposed by Tesch (1990) were used as guide. The next chapter will present the findings of the research done and interpret these findings by comparing them with the relevant theoretical statements.

Chapter 4: EMPIRICAL FINDINGS

4.1. INTRODUCTION

The theory presented in Chapter 2 was used to describe and evaluate the current situation between the Maquassi Hills Fire Services and the surrounding communities to whom they provide the service of fire fighting. The two main areas of theory addressed were that of Participatory Development Communication and that of a culture of safety as it presents in the Disaster Risk Reduction field. These were also the two main areas investigated in the empirical phase of the study. From the literature various guidelines and principles of participatory development communication as well as a culture of safety were identified. These formed the central themes used in the inquiry and various indicators of the theoretical guidelines and principles were then tested (*See Table 4.1.*).

In the following discussion the data and therefore themes identified from the data will be discussed in terms of how they relate to the theory and themes identified from the theory, thus answering the fourth and fifth objective of the study, namely to investigate to what extent the Maquassi Hills fire services adhere to the principles of participatory development communication in building a culture of safety. Although to provide some additional information about the context a concise discussion about the risk of fire in the Maquassi Hills area will be presented. This is only done to give a general indication of the risk of fire in the context of the Maquassi Hills area.

4.2. FIRE AS A RISK IN MAQUASSI HILLS

To establish some idea of the perception the respondents have about the risk of fire and to what extent the risk of fire is a reality in the Maquassi Hills area respondents had to indicate their involvement as a victim or whether they knew victims of fire events. In the Maquassi Hills area fire seemed to pose the greatest risk in the Kgakala Township and most respondents have had contact with someone who was a victim or were themselves victims of fire events. This was the oldest group of participants and it could be that they in their years had had more opportunity for such incidents to occur, although the incidents were very recent and very serious. Incidents were much more serious here than in other areas and Kgakala is also the furthest from

Wolmaransstad where the Maquassi Hills Fire Services are situated. Fire seemed to pose the smallest risk in Rulaganyang and veld fires (also called wild or bush fires) were more prevalent in the area revealing a unique relationship between that community and the farmers who would assist with fire fighting in the absence of the fire services. Other areas closer to the fire services in Wolmaransstad proved to have a more moderate risk of fire incidents.

In the next section the findings of the empirical phase of the study will be discussed following the structure presented in Chapter 2. The two main areas of theory under investigation and therefore the two main sections in the following discussion are, firstly, Participatory Development Communication and secondly, Culture of Safety. In the Participatory Development Communication section the themes that will receive attention in the findings are: Dialogue; Understanding the needs of communities; Trust; Exchange of information; Feedback; Empowerment; Decision-making and Accessibility. In the Culture of Safety section themes under discussion will include: Organisational commitment to safety; Formal safety system; Informal Safety System; Reporting Culture; Informed Culture and Learning Culture.

4.3. FINDINGS

In the following discussion the findings and the analysis of the data collected will be presented as they relate to the theory covered in Chapter 2. In Figure 4.1 below a concise overview of the theoretical principles and guidelines is given to indicate how this chapter is structured and what indicators were used in the empirical phase of the study to test the identified themes from the literature.

Table 4.1: Theoretical principles and guidelines

<u>Theoretical Principle/Guideline</u>	<u>Indicator of theoretical principle/guideline</u>
4.3.1. Participatory Development Communication	
4.3.1.2. Dialogue	<ul style="list-style-type: none"> • Understanding needs of community • Trust • Exchange of information • Feedback
4.3.1.3. Empowerment	<ul style="list-style-type: none"> • Decision-making

	<ul style="list-style-type: none"> • Accessibility
4.3.2. Culture of Safety	
4.3.2.1. Organisational commitment to Safety	<ul style="list-style-type: none"> • Commitment to safety • Personal responsibility • Perception of fire safety
4.3.2.2. Formal safety system	<ul style="list-style-type: none"> • Procedure followed in reporting incidents
4.3.2.3. Informal safety system	<ul style="list-style-type: none"> • Responsibility in ensuring safety • Sharing safety information
4.3.2.4. Reporting Culture	<ul style="list-style-type: none"> • Reporting system • Communicating method of reporting
4.3.2.5. Informed Culture	<ul style="list-style-type: none"> • Adequate information
4.3.2.6. Learning Culture	<ul style="list-style-type: none"> • Willing to make changes • Willingness to address issues • Enquiring how to take action

4.3.1. PARTICIPATORY DEVELOPMENT COMMUNICATION

Participatory development communication is purposed in supporting sustainable social change (See section 2.2.). Communication is part of any project or programme aimed at the process of development. This communication should follow a participatory communications style to ensure that initiatives are informed and based on the specific social context of those parties involved in initiatives and those the process of development is aimed at (See section 2.2.2.). This is the situation the study attempts to investigate in the relationship between the Maquassi Hills Fire Services and the communities they serve. Frequent and participatory communication could allow communities and the fire services to align their activities with regard to fire and work towards a common goal for a good culture of safety. The next section will explore the communication relationship between the Maquassi Hills Fire Services in more detail by discussing responses from respondents to various communication-related questions.

4.3.1.1. Dialogue

Dialogical, two-way communication is one important aspect mentioned in definitions of participatory development communication (See section 2.2.2.). It is based on the premise that information and knowledge will be exchanged between stakeholders in development and disaster risk reduction initiatives and allows experts in the field to facilitate the process of development and disaster risk reduction rather than determine it (See section 2.2.2.), therefore creating an environment that allows people to determine and participate in their own development or risk reduction process. In a situation where dialogue is favoured all parties have equal opportunity to give feedback and communicate their opinions and concerns.

In general it was established that the fire services did not communicate in any way with the community and also did not use any means of communicating necessary safety information for example billboards, newsletters, community meetings, etc. One group did however indicate that the fire services had attended community meetings in their area but no feedback about issues and enquiries raised at the meeting were ever given. Therefore even when community members had the opportunity to raise their opinion or make known their requests the fire services did not follow up on these. Thus, once more community members were left to feel unheard and disregarded.

In discussions with the fire services it could be discerned that the fire services expected members of the community to come to them for information and to raise their opinions about issues concerning fire. Therefore should the community approach them for information they would be happy to provide it and in the opinion of the fire services they do have a system in place for this. Visits by school learners and other scholars to the fire services to request information for assignments etc. are frequent occurrences that the fire services viewed as their way in which they communicate with the 'community'. In terms of helping individuals, the fire services were more than willing to assist them with information when visiting the fire services personally, although this was seemingly the only way in which the fire services communicated anything to the community members.

The fire services perceived themselves as easy to access by the community but the communities they serve in their perspective are much harder to reach with communication and information.

It would seem that the fire services are willing to provide information and communicate with the communities. The concern is that in the fire services' opinion they should be invited by the community to appear at community meetings, assuming that communities know how to do this or individuals in higher power should follow protocol to approach communities.

In whatever way this is done the fire services, especially the firemen, do not seem to feel that they have the mandate or the authority to interact with the community in other ways except tending to fires. Therefore the fire services are not facilitating dialogue between themselves and the communities they serve because in their opinion they do not have a mandate and therefore wait for communities to come to them. Communities on the other hand are unsure of how to approach the fire services to invite them to community meetings. Should they have an infrequent opportunity to raise their opinions and concerns, these are not taken into account. It is not always easy for people to travel to Wolmaransstad where the fire services are situated to go and see the fire services personally. As far as the responsibility of the fire services is concerned community members should not have to travel to them to go and see them personally, but the fire services have a responsibility to establish communication lines and bring information to the community (See section 2.4.2.).

Consequently by not having a dialogical, two-way communication relationship established and mechanisms to facilitate this in place between the fire services and the communities they serve, communities cannot take part in the process of risk reduction in terms of fire. Initiatives, solutions and activities the fire services envision to ensure fire safety in the area are not informed by the perspectives, ideas and values of the communities they serve. This can only be made possible by establishing two-way, dialogical communication between the two parties (See section 2.2.2.).

4.3.1.1.1. Understanding the needs of community

It is argued in theory that once dialogical communication such as in development communication is established between parties the exchange of information and interaction allows for better understanding (See section 2.2.2.). This understanding is then utilised and made part of strategies to contribute to a common goal or solution for a specific problem (See section 2.2.2.). It is thus through interaction and two-way communication that parties become

aware of each other's needs to develop solutions better suited for the problem at hand (See section 2.2.2.).

In general, respondents in discussions indicated that in their view the fire services could not understand their needs, as there were no mechanisms in place for them to find out what the communities needed. Respondents' perceptions were based on the behaviour of the fire services in arriving late at fire incidents, not giving feedback on requests that had been made and not taking time to approach communities to investigate what it is that communities needed by engaging with community members. Respondents relied on the needs they had identified such as that of safety information and the fact that most respondents did not know the emergency number to reach the fire services. This is information they need to protect themselves against the risk of fire in the event of an emergency. The respondents thus perceived the fire services as not being familiar with their needs as a community. As no means of two-way, dialogical communication could be established between the fire services and the communities in the Maquassi Hills area the fire services had no way of understanding what communities may need. As a respondent remarked: 'How can they help us because they don't know our problems'. Another supporting the notion that they as communities have the information the fire station needs to understand regarding what communities need, said: "They don't know the disasters here in the area, the community knows the disasters".

If they did have regular and continuous contact with communities by utilising two-way dialogical communication, they would have been aware of these needs. It was clear from the discussions that no effort had been made by the fire services to build a relationship with the communities they serve. Generally it was clear that the fire services as an entity in the community did not have a visible, identifiable image and many members of the community were left to wonder what their function really is. Therefore with regard to understanding what the needs of the communities are it is necessary for them to engage and interact with communities. However, if the community members do not even know what their function is, how can they understand what communities need.

Besides the responsibility that the fire services have to come to communities with information and to establish a relationship that favours dialogue about what they need and whereby the

communities' opinions are included and made part of the functioning of the fire services, members of the community also have to some extent a responsibility. However, it should not be expected of the communities to establish such a relationship. Communities do realise this as some of the respondents did indicate that they could not expect the fire services to know what they need if they have never approached them to inform them about their needs. However, the means for community members to do so should be established by the fire services. Consequently it might lead to a situation where the fire services are waiting on the community to engage with them and the community might not know how to do so.

A different side to the argument is also valid in that the fire services by the nature of their duty to keep communities safe from the risk of fire already know what communities need from them to make this possible. As a result respondents felt that for the fire services to understand the needs that they as communities have it is necessary for them to engage in some or other communication relationship with communities, realising that the initiative could come either from the community to indicate to the fire services what they need or from the fire services to find out what communities feel their needs are.

From discussions with the fire services the situation seemed to be accurately described by the respondents in the focus groups. They did not make an effort to get information from communities about what they need in terms of fire safety, although they felt that it is indeed necessary to get information from communities to ensure fire safety. The fire services acknowledged that by interacting with communities the necessary information could be gathered. Therefore the argument would then be if communities and the fire services see it as necessary for the fire services to interact in a participatory way with communities and therefore establish a relationship that favours dialogue in order to understand the needs of communities, why is it not being done? In a discussion with the firemen, the operational officers of the fire services, the reason became quite apparent. Supposedly top-management obstructs interaction with communities as management are of the opinion that activities to get such information are misusing the resources of the municipality. An issue with political support from the higher levels of management of the fire services was observed in this regard.

From the research it is clear that the fire services and the community consider it necessary for the fire services to engage with the community to ensure that they know and understand what the communities need when it comes to fire. This can be achieved effectively by applying the principles of development communication in such a way that ensures two-way dialogical communication. However, the fire services need the support of their superiors to have time and resources made available for them to do so.

4.3.1.1.2. Trust

One of the benefits of establishing dialogue between stakeholders is that trust is built in the relationship (See section 2.2.2.). Therefore if the fire services do not react to requests of community members at community meetings, or give any feedback in this regard, it has a negative impact on building trust in the relationship between the fire services and the community. It might also demotivate members of the community to make their opinions heard as nothing ever comes from these attempts. In general, however, respondents did indicate that they trusted the fire services to provide them with information. Therefore as a source of relevant, accurate information the fire services were seen as the experts in what they do. This is clear from the following statements made by respondents: "If ever they take the steps and come to us, yes we do trust them because they are the experts, they know everything about fires".

"We will trust them because it will be for the first time they come to us, they will come in as people who will train us to be safe with fire so definitely we will trust them."

"Yes, because I think they have experience. I think that we can trust that information and I think it would be helpful. We have to accept that information and use it."

"It is their job, they won't give us false information."

The following section will consider the issue of exchange of information as an indicator of dialogue.

4.3.1.1.3. Exchange of information and feedback

Generally in all discussions it was clear from respondents that communication as well as the flow of information between communities and the fire services is limited to none at all. It seemed as if the only time when there was an opportunity for communication or exchange of information between the two parties was when incidents occurred and then only victims had

contact with the fire services thus barely qualifying as one-way communication and furthermore in reality very far from the ideal situation of two-way communication.

Respondents further away from the fire services generally made the assumption that the flow of information and the communication relationship between the fire services and the communities were better in the areas closer to the fire services; this however was not the case. Overall it seemed as if the fire services did not communicate frequently or on a regular basis with any communities at all. Due to this situation respondents expressed a feeling of being excluded when decisions are made and generally felt left out where changes are made without considering them. Furthermore from the discussions it could be discerned that because of the lack of communication people were not familiar with the fire services and what their duty and activities entailed. The feeling communities have of exclusion has a serious impact on their attitude toward the fire services and willingness to collaborate with the fire services to ensure the safety of communities. If not attended to, this feeling may escalate to communities perceiving the fire services as working against them and may cause serious damage to the relationship between the two parties. Moreover it may cause the fire services to not accomplish their mission of keeping the community safe, as they need the cooperation of the people to do this.

No continuous exchange of information between the fire services to the communities or from communities to the fire services could be recognised from discussions with respondents. This is a very troubling aspect as there is no means whereby important safety information about for example the emergency numbers to call, what to do in case of fire etc. could be communicated to communities. No feedback or information from communities is received to ensure that initiatives and information are relevant to the specific communities in Maquassi Hills or to ensure that the function of the fire services relates to and is informed by the needs these communities have.

The fire services firstly realise that they would like to change the communication relationship between themselves and the communities and generally shared the view that they function separately from communities. Importantly the fire services are aware of the fact that to build trust with community members communication plays a vital role in this regard, although from the discussions it was established that the fire services wish to be invited to communities and

for communities to approach them for information or communication opportunities at various events such as community meetings. This perspective indicates that the fire services would be willing to communicate should they receive an invitation to do so. The concern here is that most respondents were unsure of how to get in touch with the fire services to request any form of communication opportunity. This creates a situation where the members of the community and the fire services both are waiting for each other to take the initiative in order for one to approach the other.

4.3.1.2. Empowerment

In theory it is argued that once dialogue is established for practitioners and communities to communicate with each other freely, solutions for issues are already more suited because understanding of the communities' context is better (See section 2.2.2.). The next step in the process for communities to participate in their own development and change is that of participation in the process of decision-making (See section 2.2.2.). Through participatory development communication people are given the opportunity and the power to decide what is going to happen in their communities (See section 2.2.2.). People are therefore empowered by taking part in their own development or disaster risk reduction. Secondly, once members of the community are viewed as partners in the process of disaster risk reduction or development and people are given the opportunity to participate in this process, access to the fire services is gained by the community. This would mean that all parties have an equal opportunity to communicate with each other and the opinions of those involved are regarded as influential.

4.3.1.2.1. Decision-making

Respondents were very clear that the fire services do not take the opinions of the community into consideration when making decisions. From the discussions it was established that the fire services function on their own and respondents felt that they decided on the communities' behalf. The final say lies with the fire services although respondents made it clear that their contribution could be extremely valuable as their perceptions are not those of the fire services and they live in these communities (See Sections 2.2.2.).

In addition, decisions are made at the higher levels without any advances to approach the communities for input on decisions that need to be taken. The fire chief has both the position

of fire chief and traffic safety top official and, due to this, respondents argued that political influence plays a big role in the fact that they are not considered in the decision-making process. This is not adequate for the area that the fire services are serving. Put differently, because they as a community are not included and do not participate in the decision-making process or are not in any way included in the fire services' functioning, this arrangement is not adequate for the big area the fire services need to serve. This emphasises that the structures and how the fire services functions are not informed by the communities' opinions and are not meeting the needs of the community.

Members of the community feel unheard and ignored and indicated that for the fire services to take them as communities into consideration when decisions are made, they need to protest and revert to aggressive behaviour so that they will be taken seriously. The fact that members of the community feel that they have to act in a destructive manner to be heard is very alarming and could damage the relationship between the fire services and the communities, as has been the case in the past. Respondents did recognise that they have a responsibility to ensure that people such as the councillors that could realistically influence the decision-making process do their part, offering this responsibility as an alternative for acting in a destructive manner.

Generally, respondents all agreed that the decisions the fire services make should be informed by their opinions and perspectives because they as the members of the community know exactly what is going on in their communities (See Sections 2.2.2). The fire services exist to offer a service to the community, and to ensure that that service is relevant and suited to the communities in the Maquassi Hills area they should be included in any decisions that are made (See Section 2.2.2.). The fire services would also have the opportunity to better understand the community in terms of their beliefs and values and this would allow them to make better decisions in general (See section 2.2.2.).

Overall respondents believed that the fire services would not be able to help communities with the risk of fire if communities are not included in this process, as they would not know what communities needed. This will ensure that solutions for issues are suitable for the communities the fire services work with. Also, this is a very important component when trying to build a good culture of safety and will ensure that initiatives to improve fire safety in communities will

be sustainable as these initiatives are then informed by the communities' solutions for the various problems. By being a part of the decision-making process the fire services would know what information is relevant to different communities and also what their needs are in terms of fire safety as well as what means would be the best way of delivering the information to the communities.

Self-management, according to Servaes (1995:47), is the highest form of participation. Although this element in participation demands much from the fire services it should be the goal of the fire services to create an environment where communities decide what will happen in their communities, teaching the communities skills to empower them to manage themselves and in this way ensuring that communities are safer when it comes to fires. The fire services should start acting as an enabling body providing skills and information and assisting with situations that communities cannot handle by themselves.

Once again as in the previous discussion (See section 2.1.3.) the fire services did see the need for communities to be involved in the decision-making process. The following comment from one of the fire fighters made this clear: 'government is the government of the people and the inputs and opinions of communities are very important'. The fire services did however indicate that communities should not be involved in all of the decisions taken, thereby indicating that the decision in terms of when the community participates in decision-making and when not is still left to the fire services, the implication being that the power stays with the fire services. This is not in line with true participation to ensure that members of communities are empowered by deciding what happens in their communities. The reason for this could be that participation and especially participation in decision-making is mostly misinterpreted and is usually a time-consuming process (See Section 2.2.2.). From the discussions it seems as though the fire fighters do not see themselves influencing decisions being taken with regard to how the fire services function.

As revealed in the above discussions on understanding the needs of the communities (section 4.3.1.5.) and communicating with communities (section 4.3.1.1.) the firemen feel that they cannot approach the community. Although they viewed it as a definite need for them to do so, for some reason they felt that management overseeing the functioning of the fire services did

not view interaction with the community as a necessity. Furthermore, they would not allow the fire services to facilitate the process of participation by the community. In some way it almost appears as if the firemen are disempowered, not having the political support to do what is needed to establish and develop a good relationship with communities they serve.

4.3.1.2.2. Accessibility

This section serves as an important indication of and insight into the communication relationship between the fire services and the communities they tend to with regard to the risk of fire. Firstly, in an ideal situation where a dialogical, two-way communication relationship is established, both parties would have an equal opportunity and means to engage in dialogue. This would mean that not only would the fire services utilise specific mechanisms to communicate and share information with communities, but communities would also have access by means of certain mechanisms to communicate with the fire services.

Consequently should members of the community disagree with something the fire services are doing they would be able to raise these matters with the fire services and in return receive some feedback about this. Therefore it would be a relationship where information is constantly exchanged between the different parties and the community would therefore participate in the functioning of the fire services in this manner. By posing the question of how respondents would react should they disagree with something the fire services are doing, the researcher gained valuable insight into firstly the communication relationship between the fire services and the community. Secondly, the researcher gained insight into the attitude of the fire services in terms of the participation of the community in the functioning of the fire services.

Most of the respondents were unsure of how they would report disagreement with the fire services. Opportunities did exist for people to address unhappiness at, for example, imbizos held by municipalities; however, no feedback was ever given or followed up after these opportunities, making these opportunities very inefficient. In some areas the police served as intermediaries between the community and the fire services and communities did not in their opinion have the liberty to communicate with the fire services directly. It also seemed, judging from some reactions by respondents, that the fire services were quick to pass any complaints on to the district municipality. No mechanisms were in place for members of the community to

report or communicate despondency with the fire services and in general a proper structure is lacking to do so.

The fire services attitude toward the issue of community members disagreeing with their practices revealed that community members, according to them, should follow procedure to report unhappiness, again assuming people in communities know what the procedures are. The fire services were also of the opinion that the fact that community members disagreed with what they were doing should not hinder them in performing their duty. Members of communities must just go ahead and lodge a complaint. The response from the fire services also indicated that they do not include the community in the things they do, and were adamant that in most cases they just go ahead and do things their own way. If the people disagree with it, they can contact the municipal manager to report the matter. It seems as though the fire services' perception of the role that communities play in their activities is as yet not one that perceives the community as working with the fire services or as a partner.

In questions about decision-making (See Empowerment, section 4.3.1.5.), understanding the needs of the community (See section 4.3.1.4.) and questions about whose responsibility it is to be fire safe (See section 4.3.2.3.) the fire services did to some extent indicate that they do think that communities should be a part of what they do. Although when it comes to real participation whereby communities are a part of all aspects related to the fire services they perceive members of the communities not to be included on such a level. Therefore, when asked directly if communities should be included in the workings of the fire services or should the activities of the fire services be informed by the opinions of the communities the fire services would answer 'yes'. However, should one talk about communities communicating unhappiness and not agreeing with how they perform their function the fire services will easily say that community members should not interfere in the fire services performing their duty.

This may be the case due to the fire services' perception of the community and their role in the process of fire safety. It could be that the fire services believe that communities should become partners in the process of keeping the community safe and therefore work with the fire services but they do not know how to establish such a relationship. However, it can also be associated with the fact that for full participation to be established the power that the fire services have

must be dispersed to include the communities' opinions and ideas (See section 2.2.2.). This might not sit very comfortably with people in positions of power and they might feel that it is difficult to control a situation where people are empowered by the process of participation (See section 2.2.2.).

This concludes the discussion of the findings in terms of participatory development communication. It was clear from the preceding discussion that specific principles concerning participatory development communication are not adhered to in terms of the interaction between the fire services and the communities they serve. These issues can have a major effect on the effectiveness of the initiatives of the fire services and furthermore can influence the image they have with the community in a very negative way. Moreover the implications of the limitations the fire services have in terms of participatory development communication may delay the process of building a culture of safety severely in the Maquassi Hills area. The next section will continue with the findings as they relate to the literature in terms of a culture of safety.

4.3.2. CULTURE OF SAFETY

Building a culture of safety is set out by the Hyogo Framework for Action 2005-2015 as one of five main priorities and indicates that a culture of safety should be built by using knowledge, innovation, and education within communities (See section 2.4.2.). In the next section the concept of a culture of safety in terms of fire will be discussed as it was explored during the empirical phase of the study.

In light of the theoretical guidelines and principles what will be discussed in the next section are: Organisational commitment to safety; Formal safety system; Informal safety system; Reporting Culture; Informed Culture and Learning Culture. All these theoretical guidelines and principles were recognised from the literature as being specific indicators or characteristics of a culture of safety.

4.3.2.1. Organisational commitment to safety

An organisational commitment to safety refers firstly to the government as the enabling entity for a culture of safety and how they, perceived as the top management, commit to safety as a priority and accept their responsibility to ensure safety (See section 2.4.1.1.1.). Secondly it

refers to communities, regarded as the organisation, and to what extent they commit personally to safety and furthermore promote safe behaviour as well as accept their responsibility as active members in the process of building a culture of safety (See section 2.4.1.1.1.). When aiming at building a better or stronger culture of safety in a community it is first necessary to understand what people's perceptions are about the issue. One of the objectives of the research was to determine how the respondents perceived the concept of fire safety as part of their organisational commitment to safety and if there was a common way that safety is viewed when it comes to fire risk. More specifically, do they think they as a community should work together on a culture of safety and do they realise the responsibility they have in the process.

In the literature a culture of safety is seen as something that the whole community works towards (See section 2.4.1.). All actions pertaining to a culture of safety in terms of fire for example are synchronised and all parties involved work toward the common goal of keeping people safe (See section 2.4.1.). However, it was clear from the discussions that people do not perceive fire safety in such a way. There are certain things that are done to contribute to keeping families and community members safe but this is not coordinated nor is information about fire safety streamlined and easily accessible. Respondents explained their needs, what should be done, before they can be fire safe instead of describing fire safety and what they experience as fire safety in their communities. This indicates that there is no uniform coherent set of behaviours in terms of fire safety that all role-players refer to and abide by to contribute to a culture of safety when it comes to fires. Many respondents were unsure if the things they were doing in terms of fire safety were correct and contributed to a safer community.

The research indicated that people are generally acting out of what little knowledge they have. Since respondents all came from rural communities that do not have easy access to most basic services, people often rely on what little information and knowledge they have to minimise risks (See section 2.4.). Consequently in general most respondents expressed the need for information about aspects such as what materials cause fires and what to use to put out different types of fires, information they need before they can regard themselves as fire safe therefore indicating the role information plays in keeping people safe and ensuring a good culture of safety (See sections 2.4.1.1.1., 2.4.1.2., also see section 4.3.2.5.). Indicated by the responses in the research the fire services did indeed realise and accept that they are the

experts who are responsible for educating people and distributing necessary information to communities. The issue of staff shortages in the fire services could be regarded as one reason why information is not distributed to the communities. However, in later discussions issues about political will and support became apparent (See Section 4.3.2.5.).

Furthermore, people think of fire safety only in their immediate surroundings, only in their family for instance and mostly fail to quantify activities relating to fire safety to the rest of the community. The fire services, on the other hand, perceive fire safety mostly as something only they as the fire services must establish. They do this by offering their services to keep the community safe and also distributing valuable information to communities about fire safety. For the then three firemen who worked at the Maquassi Hills Fire Services this was a very daunting task to be taken up only by them with no help or collaboration from the community. Therefore from the research it seemed as if there was no collaboration between the fire services and the communities to realise the goal of ensuring fire safety and in effect contributing to a culture of safety.

4.3.2.2. Formal safety system

A formal safety system refers to how safety hazards are addressed and the formal process of reporting incidents (See section 2.4.1.1.1). Enquiries in terms of the process of reporting when faced with the risk of fire aimed at establishing what respondents perceive the fire services role is in the process of fighting and reporting fires. This would indicate to what extent respondents felt their reports are taken serious by the fire services (See section 2.4.1.1.1). It also gave the researcher some insight into how the respondents perceive their own role and responsibility in terms of fire safety and fighting the risk of fire in their communities. From the discussions it was once more quite clear that people acted on the basis of the little information they had (See section 2.4.).

Respondents were firstly concerned with the safety of people should they encounter a risk of fire. Respondents agreed that after it has been established that no human lives are in danger they would start extinguishing the fire. Only after these activities would they turn to the fire services for assistance by reporting the fire incident. It was clear from the responses that calling the fire services to come and assist with fires was low in priority. It almost seemed that only

once the situation was more under the control of the community members would they turn to the fire services for further assistance. Such a reaction is very understandable because, and this was mentioned in the responses, the fire services arrive late. From the research it could be established that the fire services regard the manner in which the community reports fire incidents to be the main cause for their arriving late at the scene. In the literature a safety culture is considered a strong culture in terms of a formal safety system where there are effective mechanisms for reporting hazards (See section 2.4.1.1.1). A contributing factor is also that incidents are reported to the police and the police first go out to verify that there is indeed a fire, after which the fire services are only then called to the scene. Therefore it would seem as if the mechanisms for reporting incidents in Maquassi Hills are not very effective. The issue of reporting incidents will be discussed in greater detail later in the chapter (See Section 4.3.2.4.). Consequently the fire services arrive about 20 minutes after receiving the call out but the initial call from the community could have been made several hours earlier.

The issue of reporting of incidents and having a better reporting system will be discussed in the next section in more detail. For now it is important to note that currently there is a period of time from the moment someone notices the fire to the point where the fire services arrive in which people are at the scene and certain actions are necessary sometimes even to save lives. It is in this specific period of time before the fire services arrive that people need to have had correct training and information to know what to do and how to do it. Respondents came up with various scenarios during discussions to indicate what they would do when faced with the risk of fire.

Generally the research indicated as discussions progressed that most respondents were unsure about various safety actions in terms of fire, as for example what types of fires should be extinguished by what means and how to know what type of fire it is. What seemed as a question with a straightforward answer suddenly became a big debate of 'what ifs'. This just shows again that information is the key to keeping people safe (See sections 2.4.2.; 2.4.1.1.1.). Respondents had never been informed about how to handle situations where fires threatened property and/or human life. A comment by one of the respondents made this very clear: "we have never been told what we should do in case of fire". In light of the confusion observed in the discussions about certain information and procedures it is also very important that people

receive the information firstly from a trusted source and secondly from a united source (See section 2.4.1.1.1.).

4.3.2.3. Informal safety system

According to the theory (See section 2.4.), in a strong culture of safety people realise that they have a role to play. In such a culture that considers safety a priority the government cannot be the only ones with a responsibility and all parties should realise that they have a specific responsibility to ensure safety and help build a culture of safety (See section 2.4.). In a strong culture of safety in terms of fire all role-players share the responsibility of promoting safe behaviour and abiding by various unspoken rules to ensure safety in a community (See section 2.4.1.1.1.). This is known as the Informal Safety System and to ensure that such a system is established the responsibility lies with the fire services to ensure that communities have access to correct relevant information (See section 2.4.1.1.1.).

From the research it was clear that respondents accepted their responsibility as community members to ensure fire safety in their communities (See section 2.4.). Some considered institutions like NPOs as well as schools also playing a part and being responsible for educating and distributing safety information. In the literature these are also indicated as a means to strengthen an informal safety system and a culture where safe behaviour is promoted (See section 2.4.1.1.1.). In addition, in areas where electrical fires are more prevalent, respondents expressed that they felt that the companies involved in installing electricity and electrical appliances for people should also be responsible for educating people about the dangers, indicating that respondents viewed the other public sector entities and the private sector as having a responsibility in a culture of safety and being accountable for the risk they create by making their services available to communities.

Generally, from the research it was clear that in the respondents' view they had the biggest responsibility for keeping the members of their community safe as the incidents that occur are in the areas that they live in. Echoing what is said in the literature, community members are always the first actors, they are always the first on the scene (See section 2.4.). From the discussions it could be discerned that the government or more specifically the fire services were merely seen as an enabling body in terms of the responsible party in ensuring safety in

communities. The fire services are viewed as the entity that should provide information and education to the communities to enable them to realise their responsibility to keep the community safe (See section 2.4.).

In theory it is stated that safety culture is part of, determined and shaped by a 'cultural super structure' (See section 2.4.1.). Although the respondents generally argued that they themselves are the responsible ones for ensuring fire safety, the impact an unmotivated fire department may have on a community's perception of fire safety as a priority and of importance may be severe. One of the respondents made this clear by saying: "that is why our people are not interested in fire and fire safety, because the (Fire) Department themselves don't do anything". It could also be due to the fact that the fire services are not very visible in the communities in the Maquassi Hills area that some people may regard fire safety not to be such a priority or of such importance. In effect, a negative 'cultural super structure' can influence their entire approach to a culture of safety and building such a culture. When one would like to determine how to strengthen a community's culture of safety the impact the 'cultural super structure' has on communities' perceptions must not be overlooked.

Interestingly enough the fire services did not view the community as having such an important responsibility in keeping communities safe. They saw themselves as having the most responsibility. As is evident from one of the fire fighters' statements: 'our duty here is to save lives, that is *our* responsibility', in this way virtually excluding the community entirely from the process of keeping them safe. The only instance when the fire services referred to the role and responsibility of community members was that when information is shared the communities should be willing to learn.

This is a big difference in perception, which unfortunately determines the actions and planning of the fire services. In this way communities are not included in plans or activities of the fire services because they are perceived by the fire services as not having a very big responsibility in ensuring safety or a culture of safety for that matter (See section 2.2.2.). Consequently, there are communities on the one hand wanting and waiting to learn from the fire services the necessary information to fulfil their responsibility in their view, while on the other hand, there are the fire services that do not do very much with communities concerning education and

spreading of information because they do not view the communities as having a very big responsibility. In this way the community and the fire services are not at all aligned in activities to reach their goal of keeping the community safe.

Another aspect indicating to what extent an informal safety system exists is that of sharing safety information. Through the sharing of safety information with neighbours and friends community members are inadvertently promoting safe behaviour in their communities as well as accepting their responsibility for being active community members contributing to an informal safety system (See section 2.4.1.1.1.). It can then be argued that if a member of the community sees a neighbour or friend acting in a way that might potentially cause a fire and an informal safety system exists they would correct them. In general respondents indicated that they do not feel very comfortable sharing information, as people do not take well to others correcting them. Although once an incident has occurred people do share information with each other, this does not happen frequently enough to keep incidents from happening.

Incidents were said to occur even though people may have received information but other factors came to light influencing the situation such as alcohol use. This might be an indication of other underlying social problems that may need attention or should be included in solutions before safety information about fires can actually be effective. From the research church ministers seemed to be the ones who are in the position to correct people without being questioned. As some of the respondents working as church ministers shared how they were the ones in the past communicating safety information about health during house visits throughout the communities, they could be valuable contact persons for the fire services to pass on information to households in the community and should be approached for this function in the future.

4.3.2.4. Reporting culture

According to the literature a culture of safety is a reporting culture (See section 2.4.1.1.1.; also section 2.4.1.2.). A reporting culture as one of the characteristics of a culture of safety refers to how fire hazards are addressed and to what extent reports are taken seriously by the fire services. The reporting culture allows all role-players to become active members in building a culture of safety. Members of the community feel comfortable in reporting incidents and there

exists also a system whereby people can report incidents that everyone is aware of and knows how it functions. An effective reporting system can also facilitate trust between the fire services and the communities they serve.

In the Maquassi Hills area such a system does exist but judging from the responses from the community members as well as the fire services this is not a very successful and effective system. The reporting system for members of the community works as follows. The police mostly get the calls for assistance with fires, which they then respond to by driving out to the scene in order to verify that there is indeed a fire. Only once the police station has verified that there is a fire, are the fire services contacted and then attend to the call. Obviously this is a lengthy process and can take up valuable time.

In the opinion of the fire services this is the case due to community members attempting to control the fire themselves before they make a call for assistance. The reaction of the community members is, however, in their view justified as valuable time passes before the fire services arrive. Also generally in the fire services' view the community should rather contact the fire services directly instead of first contacting the police, thereby assuming that the community knows what the emergency number is for the fire services. Supposedly members of the community only remember the 10111 number of the police even though the fire services number has been added to the municipal accounts and all ward councillors and ward committee members are in possession of these numbers.

It is thus clear that the communication channels that the fire services are using for valuable safety information are not suited for community members as it could be discerned from the discussions that respondents do not have a direct number for the fire services. The fire services ideally wish that the fire services had their own toll free number that communities can use, indicating that the direct numbers for the fire services at this time are not toll free and this therefore makes the number inaccessible to a big portion of the communities in Maquassi Hills. The respondents participating in the focus groups reiterated this procedure of reporting a fire to the fire services but brought to light an entirely new set of problems and reasons for reporting incidents in this way.

No single way or number could be identified in the group discussions for reporting fires except calling the police to the scene. Interestingly enough very little mention was made of the police's number of 10111 and most of the debating featured 112 as the emergency number. This number is called in any emergency and works in a call centre manner. Respondents expressed general frustration because calling this number directs one to a call centre, which is not necessarily close to Maquassi Hills, and therefore this takes up valuable time, which leaves the fire to cause further destruction. It was clear from the research that for some of the members of the community like the elderly for instance, this number is not accessible because the language does not accommodate them. Respondents shared the view of the fire services about having a direct number to the fire services specific to the area of Maquassi Hills.

It is thus clear from the research that the reporting system currently used by the fire services is firstly not suited to the communities of the Maquassi Hills area as the direct numbers at this stage are not toll free and the existing 112 number does not accommodate all people in the area. Secondly, the methods used to communicate the direct emergency numbers to people are not effective and people in Maquassi Hills do not use these channels as a source of safety information. Finally, the fact that the reports of incidents are first handled and verified by the police takes up valuable time that force members of the community to react first to the threat of a fire before considering requesting assistance from the fire services.

It is clear that a more effective reporting system needs to be established, a reporting system that allows members of the community to report incidents of fire directly to the fire services and ideally does not cost the community anything to use. Consequently if such a system were established information and communication would be the key to the success of the reporting system. The fire services would first have to investigate and establish what communication channels would be most suited to communicate the numbers to communities. This could only be done by consulting with communities to establish what they would prefer. The fire services would have to ensure that community members know what to do in the event of fire and they must make sure that everyone is aware of the number that they should use to reach them. However, even if the community members were able to report fire incidents directly to the fire services there would still be a period of time in which communities are the ones at the scene.

Therefore not only is there a need for information about how to contact the fire services in emergencies but also what to do while waiting for them to arrive.

4.3.2.5. Informed culture

A prominent issue noted throughout the discussions with respondents and the fire services is that of information in terms of fires and fire safety. Repeatedly participants expressed their need for such information and in most questions the lack of correct and coherent information was not only apparent but mentioned and spelled out by the respondents in this study. Relevant and correct information when it comes to hazards like fire is one of the most important characteristics of a good culture of safety (See section 2.4.1.2.) and therefore, one of the most valuable building blocks in the process of building such a culture. The literature is clear in this regard in saying that a strong culture of safety is an informed one (See section 2.4.1.1.). As a result, communities need to have access to the correct information to build a good culture where everyone views safety as a priority (See section 2.4.1.1.1.).

In addition to the lack of information mentioned throughout discussions, respondents were specifically asked if they felt they were adequately informed in terms of fires and fire safety. Respondents indicated that communities have some information about fire as a hazard but, in general, this information was not enough to keep their community safe in terms of fire (See Section 2.4.2.). Generally respondents argued that if the information they had about fire was enough, correct and relevant there would not be so many incidents where people lose their property or lives in fires. No source such as training sessions, workshops and information sessions, to acquire such information could be identified. Respondents generally viewed it as the responsibility of the fire services to provide this information to them. Essentially respondents viewed the fire services as experts in terms of fires. Therefore the fire services can by means of public awareness in the form of workshops, training and information sessions provide the necessary information and skills communities need to keep themselves safe when it comes to fire (See section 2.4.2.).

From the research it was established that the fire services had done awareness campaigns with schools and crèches in the area and mostly relied on the learners to share this information with their peers and community members, although no follow up with schools had been done and

furthermore nothing was being done to keep up a constant flow of information to the learners. However, the fire services did think that it was necessary to do so. Generally the fire services did realise that it was necessary to educate and inform the entire community, considering it their duty to inform communities as most fires happened because of carelessness and people being uninformed. However, even though the fire services acknowledged that the communities in the Maquassi Hills area needed information, they as the fire fighters could not approach the community themselves. For this a certain process has to be followed, for example to go and give an information session at a ward council meeting or at a church. Councillors should be approached and asked for an opportunity and according to the fire fighters they do not have the power to request this. From the research it was established as a matter of concern that those supervising the fire services question the efforts that are made in terms of public education and information and that should the fire fighters go out to do public awareness and education sessions there is no one at the station to tend to emergency calls.

It seems as though the fire fighters themselves are disempowered and discouraged in realising their responsibility with regard to public awareness and education as a result of a lack of political support and will. They do recognise the role they have to play in informing the communities and educating people on how to be safe and to a certain extent realise the needs the community has in terms of fire safety information. In an interview with a senior fire officer this issue became quite apparent as in his opinion people did not need safety information so much in terms of fire safety, regarding the lack of formal fire safety information that he had received as a child as proof that it is not needed. This was one of the key role-players in decision-making and enabling the functioning of the fire services. Should he as part of the supervising body of the fire services regard it as unnecessary to do public awareness and information dissemination to communities this might have a very serious effect on the very important function and responsibility the fire services have in terms of enabling an informed culture and furthermore building a culture of safety.

4.3.2.6. Learning culture

Finally, an important characteristic of a culture of safety in the literature is that a strong culture of safety is a learning one where members are willing to learn and implement changes that need to be made (See section 2.4.1.2.). It was clear throughout all of the discussions that

respondents accept their responsibilities in ensuring people are safe when it comes to fires. Furthermore respondents were very willing to act and assist in changing the current situation, realising what is necessary for them to be fire safe and indicating that they are willing to accept information and advances from the fire services to include them in this process.

A further indication from the research that communities were in fact willing to actively learn and participate in building a culture of fire safety was that in most discussions, once the focus group discussion had concluded, respondents were anxious to hear from the researcher and team members what they could do to address the situation. Respondents enquired about how they could ask the fire services for the things they need to make themselves safer in terms of fire safety, indicating that there exists a need for members of communities to address the issues surrounding fire in their communities. Furthermore this showed that they agreed and accepted that changes in behaviour and how issues of fire are approached were necessary to make them safer communities in terms of fire.

A further indication that respondents indicated a willingness to address the situation, was that in some of the areas respondents proposed that those attending the focus groups should form what can be called 'discussion groups' that can meet at certain times and discuss the topics touched on in the focus group discussions. If these groups were to be established, discussion and conversation about fire safety issues could be encouraged and awareness about fire safety in general in communities would be promoted. These self-established groups would also be excellent groups for the fire services to communicate with and would be the ideal place where the fire services could distribute the necessary fire safety information. These groups could act as the very important necessary link to the communities that the fire services need. The members of such a group would act as active members in the communities distributing necessary information to the rest of the community and also communicating specific issues, specific fire safety information needs and strategies for disaster risk reduction in terms of fire from the community to the fire services. If these links are utilised and followed up on, this could be a very important step towards establishing dialogue and two-way communication between communities and the fire services.

Therefore, it is clear that respondents were eager and willing to take matters further. If the fire services were to buy into a partnership with these groups, supplying them with information and potentially some skills, it could create a very effective platform for change and even make efforts at spreading information more successful. In terms of the above discussion, it is clear that in the Maquassi Hills area the potential to build a strong safety culture is there, people in communities are willing and know what they need to be fire safe.

4.4. CONCLUSION

In conclusion, it is clear from the research and the above analysis that there are various advantages that participatory development communication can add to the functioning of the fire services and ultimately the building of a culture of safety. From the discussions in this chapter it has become apparent in terms of research questions 3 and 4 to what extent the fire services firstly adhere to the principles of participatory development communication; and secondly, to what extent they do adhere to the theoretical principles for a culture of safety. Throughout the discussions of the findings a positive attitude toward potential initiatives could be discerned among the respondents. People are ready to help, learn and teach fire safety in conjunction with the fire services. This is something that will help the fire services in starting to address the issue of fire safety and a culture of safety in the communities surrounding the Maquassi Hills Fire Services. The following chapter will conclude the study by discussing the recommendations as they relate to the research aims set out at the start of the study.

Chapter 5: CONCLUSIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

The Maquassi Hills Fire Services are one of the main enabling role-players in reducing risk when it comes to fire in the surrounding communities. One way in which this can be achieved is by building a culture of safety with regard to fire. Communities' role in this process is very important, as they are valuable stakeholders of the fire services. Using participatory development communication in this process can yield various benefits. The goal of the study was therefore to determine to what extent the Maquassi Hills Fire Services adhered to the principles of participatory development communication to inform a culture of safety in the Maquassi Hills area.

This was done by firstly establishing what are the theoretical principles and guidelines for participatory development communication. Furthermore in order to determine how these principles and guidelines for participatory development communication could inform the process of building a culture of safety it was necessary to establish what a good culture of safety entails. This was achieved by looking at the theoretical principles, guidelines and characteristics of a good culture of safety. All the above was done in an extensive literature review presented in Chapter 2.

In Chapter 3 the research methodology was explained and motivation given for the use of a qualitative research design. Chapter 4 continued with the presentation of the empirical phase of the study by presenting the findings of the research done.

This final chapter will now present in conclusion the recommendations as they align with the research questions of the study. This will be done by firstly giving an overview of the research aims set out in Chapter 1. As part of this the recommendations will be given as they relate to each research question and to the various components of the research questions highlighted in Chapters 2 and 4. The recommendations in this chapter will be given to ensure that the Maquassi Hills Fire Services gain positive insights from this study into the process of building a culture of safety as part of disaster risk reduction initiatives in the Maquassi Hills area.

5.2. RESEARCH QUESTIONS AND RECOMMENDATIONS

This study aimed to determine to what extent the Maquassi Hills Fire Services adhere to the principles of participatory development communication as a means of informing the process of building a culture of safety.

In Chapter 1 the research questions were outlined for this study as:

1. What guidelines and principles of participatory development communication should be used to inform a culture of safety?
2. What constitutes a culture of safety according to the Hyogo Framework for Action, the South African National Disaster Management Policy Framework provisions and other relevant literature?
3. To what extent did the Maquassi Hills Fire Services adhere to the principles and guidelines of participatory development communication to build / establish a culture of safety?
4. To what extent did the Maquassi Hills Fire Services succeed in building / establishing / sustaining a culture of safety?

In this section each of these research questions will now be discussed and a summary of the specific theory relating to each and the findings will be given. The section will discuss the first and the third research question together and then the second and the fourth. To conclude the discussion recommendations relating to each theoretical guideline and principle including the various indicators discussed in Chapters 2 and 4 will be given.

5.3.1. THEORETICAL GUIDELINES AND PRINCIPLES FOR PARTICIPATORY DEVELOPMENT COMMUNICATION

In theory the two main principles for participatory development communication were identified for this study as dialogue and empowerment. As indicators for these principles the following were identified: Understanding needs of community; Trust; Exchange of information and feedback; Decision-making and Accessibility. Each of these will now be discussed individually followed by recommendations relating to each specific principle and indicator.

5.3.1.1. Dialogue

In theory (See section 2.2.2.) it was said that one of the key principles in participatory development communication is that of dialogue. Given the history of communication in development and the progression made from the modernisation paradigm to that of participatory development, communication in participatory development should allow for dialogue to be established. In effect the communication style utilised in participatory development should allow for exchange of information between parties and not be a style where expert knowledge is imposed on the masses. Once a dialogical communication style is established in a relationship between development practitioners and communities involved in development initiatives, practitioners are able to understand the context that they are aiming to work in much better (See sections 2.2.2; 2.4.2.1.). There are various factors and aspects such as social, political and environmental factors to be taken into consideration, that they might not have insight into if dialogue is not established. This allows for initiatives being better planned and implemented due to initiatives being informed by the perspectives, ideas, beliefs and values of the communities involved. Communities also stand to benefit from a dialogical communication style in development, as they are able to receive information that can assist with developing solutions for development needs and problems in their communities. They also have the valuable opportunity to be part of the process of development in their own communities and in effect drive the process from the inside of communities.

In terms of the findings in the Maquassi Hills area the fire services seemingly do not communicate in any way with communities. No communication channels are used by the fire services that allow for dialogue to take place. The fire services do however sometimes attend community meetings in some areas but even then no feedback is given to communities about enquiries or concerns. This leaves the communities of the Maquassi Hills area feeling disregarded and unheard. The fire services on the other hand feel that they are very accessible to members of the communities and that communities are welcome to approach them for information about fires. The fire services furthermore were of the opinion that for them to be able to speak at community gatherings they should be invited to do so or persons in higher positions should approach communities to request such opportunities. In some sense the fire services seemed to feel as though they do not possess the necessary mandate to approach communities to distribute information or to facilitate dialogue between them and the community.

Recommendations:

- ✓ If the fire services would like to improve their interaction with the communities surrounding them and thus facilitate dialogue there are a few issues they will have to consider. Firstly they will have to decide to what extent they view dialogue as a necessary and important part of how they function before trying to implement various practicalities. If they are not committed to truly establishing dialogue and two-way communication the mechanisms they implement and the initiatives they plan will not be effective. Thus it is firstly necessary to establish what the ideal would be that the fire services are aiming to achieve in terms of establishing dialogue, enabling two-way communication and ultimately ensuring participation in the functioning of the fire services.
- ✓ The second aspect to consider is that of power structures. Before any practical changes can be made the fire services within their own power structure should be clear on what each person's role is within the fire services. There should also be agreement on what power lies with different management and operational levels to make decisions about the functioning, initiatives and activities of the fire services. It does not help the functioning of the fire services in achieving goals if all members involved are not clear on what they can do and what they may not do. Therefore the above-mentioned aspects of internal structuring and organising have to be sorted out before any practical strategies can be implemented.

From the literature the following were identified as indicators for dialogue: Understanding needs of community; Trust; Exchange of information and feedback. These constructs were used to guide the evaluation of the communication between the fire station and community.

5.3.1.1.1. Understanding the needs of the community

Once dialogue has been established the contexts of communities involved in development initiatives are better understood. Various authors (See section 2.2.2.) are of the opinion that once dialogue is established and the context, in effect the needs, of communities involved are understood initiatives can be much more successful and sustainable.

In general respondents in the Maquassi Hills area felt that the fire services did not understand what they as communities needed in terms of the risk of fire. Generally specific needs were

discussed that the fire services clearly do not address in the initiatives they plan and in terms of the functioning of the fire station. These were needs such as the lack of safety information and the fact that so few people were sure of the correct contact number in case of an emergency. Moreover due to the fact that the fire services do not facilitate dialogue the respondents argued that there was no way for the fire services to understand their needs.

Generally communities cannot be expected to initiate and facilitate the dialogical communication relationship between them and the fire station; however communities have to a certain extent also a responsibility to make their needs known. In order for communities to be able to communicate and give feedback to the fire services, the fire services should initiate such a relationship and develop and implement the necessary communication channels to allow communities to communicate with them and give feedback.

Recommendations:

- ✓ The fire services can only know what the reality is in the communities they serve, by approaching communities and interacting with people in communities facing the risk of fire. It is therefore recommended that the fire services do a needs analysis of their area. The researcher has been cognisant of the fact that the fire services are strained in terms of manpower, however, this is important and various community based institutions can help with the initiative (for instance NPOs). These institutions have great access to communities and could help coordinate such an initiative. The fire services have an open field here to determine whatever they should know to specifically address the needs in various communities. The needs analysis process could be a very time-consuming, labour-intensive activity but it could be a very effective means of gaining information to enhance the functioning of the fire station.
- ✓ An alternative to the above can be to ensure that representatives of the fire services attend regular community meetings or organise such community meetings focusing only on fire-related issues, apart from the ones held by the municipality. During these meetings members of the community should be allowed to voice their opinions about what they need and how they would like to see those needs attended to. Most importantly, the requests and opinions given at these meetings should be taken seriously and addressed by the fire services and if necessary

feedback about these issues must given to communities (See sections 4.3.1.1; 4.3.1.1.3.).

- ✓ Furthermore the ward councillors in the different communities are a very important link to the communities which the fire services should focus their attention on. This group is already a structured group and a communication structure with councillors is already in place. Therefore, aside from attending or arranging regular community meetings, interaction with the community can be divided into smaller portions by including the ward councillors in the process.

5.3.1.1.2. Trust

The element of trust is addressed by various parts of the theory in this study. Importantly however in terms of participatory development communication the process of participation is necessary to establish trust within a relationship between development practitioners and communities involved in development. Once people participate in terms of decision-making and having opportunities for dialogue therefore enabling feedback, trust is gained.

Once a foundation for trust has been put in place in this way people are more willing to participate in initiatives because they feel that their situation is understood, they have the opportunity to participate in the development process and solutions for problems are informed by their perspectives, ideas and beliefs. It is thus so much more important that the Maquassi Hills fire services establish a relationship between themselves and the communities they serve that favours dialogue and gives people the opportunity for feedback, a relationship where the fire services open communication channels to ensure that information is exchanged in order for them to understand the needs of the community etc. If this is not done no level of mutual trust is likely to exist and both groups will continue to work against each other rather than with one another to ensure fire safety in the Maquassi Hills communities.

Recommendations:

- ✓ Trust is something that is built and achieved over time; the fire services will first have to prove by various interactions and initiatives that they have the best interests of the community in mind. The only way to achieve this is to deliver on promises given, ensuring that commitments made are kept and follow ups are done

when initiatives are implemented (Servaes, 1995:46). The golden rule here is that, if one is not entirely sure that one can deliver on a promise or a commitment, one should not indicate that one will. Moreover the saying 'seeing is believing' applies here and the fire services should be more visible and transparent in their actions and activities in communities.

- ✓ To achieve mutual trust between the fire services and the communities they serve various public relation activities can be undertaken to develop the image the fire services have in communities. Awareness campaigns in schools or opportunities created and planned by the fire services to promote awareness in the communities are good ways to build their image, create awareness of the fire services themselves, as well as creating awareness about certain important information with regard to fire safety.

5.3.1.1.3. Exchange of information and feedback

In participatory development communication Bessette (1996:11) argues that there needs to be an exchange of information between parties involved in the development process to ensure that solutions are based on relevant and correct information from all parties. Furthermore participatory development communication favours a communication style where two-way communication is possible (See section 2.2.2.). This means that feedback opportunities are created and communication channels for messages are selected to allow feedback from the receiver. By ensuring the aforementioned conditions for participatory development communication communities involved in development initiatives are afforded the opportunity to ensure that their perspectives, ideas for solutions and values are integrated into the solutions for their development problems (FAO, 2007:9).

In the research no regular continuous flow of information from the fire services to the community could be discerned. Moreover, only very limited means of communicating valuable safety information exist and those used such as sending out emergency numbers with the monthly municipal bill are not suited for the communities to ensure reception of the message. Furthermore no means exist of engaging with communities to enable feedback opportunities, and communication channels such as the previously mentioned monthly municipal bills do not allow for feedback. Therefore the fire services have no way to determine if the functioning of

the fire services relate in any way to the needs of the community or to ensure that initiatives are relevant to the communities of Maquassi Hills. The fire services did however indicate that they would like to change this aspect of their communication relationship with the communities.

Recommendations:

- ✓ Community meetings and a needs analysis were mentioned in the above discussion as a way to ensure information is gathered from communities. However, as no suitable means exist for the fire services to communicate necessary safety information to the communities the development of such channels is very important. Respondents in the research specifically mentioned workshops and training sessions as ways in which they would like to receive information from the fire services. Initiatives such as these cannot be successful if the fire services attempt to do them alone. It is therefore important that they identify certain partners within the communities to help with such initiatives. The respondents taking part in the focus group discussions for this research have already indicated that they are willing to take part in activities aimed at addressing fire safety in their communities. These groups should be focused on in terms of conveying fire safety information and training skills for fire safety. Sessions with these groups can be held outside of the fire season and these groups can then also be trained to render community-based fire assistance. In terms of distributing the necessary safety information the fire services can also provide the various groups in the communities with relevant literature on safety information that they can then distribute throughout the community.

5.3.1.2. Empowerment

Empowerment was seen as the second main theoretical principle for participatory development communication in this study. Various authors (Jacobson & Kolluri, 1999:268; Rogers, 1976:19; Twigg, 2004: 114; Servaes, 1995) have argued that through participation in development initiatives people involved in development gain more control over their environment and by participating people are empowered to make decisions concerning their communities (See Section 2.2.2.). However to ensure that people involved in development are truly empowered by the process participation needs to be established at various levels throughout the process of

development. This aspect of participatory development communication is very often misunderstood or distorted and therefore seen as participation, which it is very often not as people are only made part of and allowed to take part in certain phases of the process (UN CDR Report 2005:28; Servaes, 1995:45; Jacobson & Kolluri, 1999:268). In this study the two main indicators of empowerment as principle were identified as: Decision-making and Accessibility. These two indicators will now be further explored as they presented in the study.

Recommendations:

- ✓ Once again before anything can be done to empower communities in the Maquassi Hills area, the fire services firstly have to decide how and what they perceive as empowerment and participation in terms of decision-making. No activities or plans will be effective or successful if the fire services are not committed to achieving participation at all levels of the process and engaging communities in each aspect of the fire services' functioning. Also the fire services should first establish to what extent power structures will be restructured or distributed. If this is not done before activities and initiatives are implemented and the fire services are not committed to establishing true participation and therefore truly empowering people, initiatives could come across as insincere. This could affect the fire services' image very negatively.

5.3.1.2.1. Decision-making

In order for people to be able to truly participate in development they should be given the power to decide what is going to happen in their communities (See section 2.2.2.). Therefore people involved in development initiatives should be given the opportunity to participate in the decision-making process. This is a very challenging aspect in the process of participatory development communication because centralised power usually held by the development practitioners or the government should be distributed to those the initiatives are aimed at (Servaes & Arnst, 1999:116-118). Moreover power structures are usually organised in such a way for a reason, mostly because those in power stand to benefit politically and economically by staying in power and in control of decisions being taken (See section 2.2.2.).

Therefore changing power structures and redistributing power is a challenging but very important task in participatory development communication if true participation is to be achieved. Another aspect important in development initiatives relating to decision-making and empowerment is that of ownership. Once people involved in development initiatives are involved in identifying problems and developing the necessary solutions for issues and in effect get to decide what happens in their communities it is likely that an increased level of ownership is taken of such initiatives (See section 2.2.2.). In the research it was established that respondents perceive the fire services as functioning in isolation, not taking their opinions and perspectives as communities into consideration, and deciding on behalf of the community what should be done. The respondents indicated that they have valuable opinions and insights that could help the fire services in their goal and functioning.

Issues of political support and influence also came to light as the respondents indicated that the functioning of the fire services does not address their needs for the very reason that they do not take communities into account when making decisions. This according to the respondents was the result of political influence aiming to exclude the communities that the fire services serve. Another worrisome aspect indicated by the research is that respondents indicated that to be taken into account they need to protest and behave aggressively to ensure that the fire services take notice of what they need as communities when it comes to fire safety. Nevertheless respondents did recognise that they as members of the community have a responsibility to ensure that the right people are elected as ward councillors to ensure that their opinions are represented in the existing structure. From the fire services' point of view they did see the need for communities to be involved in the decision-making process although according to them communities should not be involved in all decisions taken.

Power distribution in the fire services themselves seemed to be problematic as fire fighters did not perceive themselves as having an opportunity to influence decisions being made in the fire services. Including the communities the fire services serve in decision-making will ensure that solutions for issues are suitable for the communities with which the fire station works. Also, it is a very important component when trying to build a good culture of safety and will ensure that initiatives to improve fire safety in communities will be sustainable as these initiatives are then informed by the communities' solutions for the various problems. By being a part of the decision-making process the fire services would know what information is relevant to different

communities and also what their needs are in terms of fire safety and also what means would be best for delivering the information to the communities.

Self-management, according to Servaes (1995:47), is the highest form of participation. Although this form of participation asks a lot from the fire station it should be the goal of the fire station to create an environment where communities decide what will happen in their communities. Teaching the communities skills to empower them to manage themselves and in this manner ensuring that communities are safer when it comes to fires. The fire station should start acting as an enabling body providing skills and information and assisting with situations that communities cannot handle by themselves.

Recommendations:

- ✓ In order to get community members involved in the decision-making process the development of a carefully considered structure is necessary. Obviously not all of the members of the communities the Maquassi Hills Fire Services deal with can for instance attend a meeting to make their opinions known. Therefore the fire services should firstly plot out all of their stakeholders in the communities. By grouping the various groups in the communities together they can make sure that each stakeholder group has an opportunity to make their opinions known about what should happen in their communities. Then by using the groups identified in the research as a basis, various community forums can be established in each of the communities. Each community may have as many of these groups as there are wards within the community, making sure to include also the political role-players of each ward such as the ward councillor as well as community leaders such as pastors and members of local NGOs. These groups will then represent the bigger communities and in effect create a network throughout the various communities making sure that in this way the opinions of the members of the communities are included in the decisions that the fire services make. The fire services therefore partner with these groups in planning various initiatives for communities on fire safety. These initiatives may include various awareness campaigns to be held throughout the year, information sessions, workshops and so forth.

5.3.1.2.2. Accessibility

In a communication relationship where dialogue is favoured and mechanisms created for all parties to communicate in a way that allows for feedback as part of dialogue, all parties have equal opportunities to communicate. One of the ways of testing if this is possible is to determine if a group like the communities of the Maquassi Hills area disagree with the fire services in terms of how they function or how they implement initiatives and how they communicate this to the fire services. In establishing this it can be determined if there exist mechanisms enabling communities to gain access to the fire services to communicate unhappiness or give feedback about certain issues.

In the study it was found that respondents are not sure how to communicate unhappiness or disagreement to the fire services. Some mechanisms do exist such as imbizos, however even if community members raised their opinions and issues at these opportunities no feedback was ever given. Moreover no reporting mechanism according to respondents existed and no structures were in place to accommodate and enable feedback and dialogue from the communities. Accessibility as an indicator to empowerment reveals much about the power distribution in the Maquassi Hills area. The fire services hold the power to make decisions about how they function, how they serve the community and how and what initiatives they implement. By not making ways available for communities to communicate their opinions should they be unhappy about this they are ultimately making themselves inaccessible, thereby hindering the process of participation immensely and ensuring that the power of making decisions about how they function stays in their own hands. The research found that the fire services do not include the community in the things they do, and were adamant that in most cases they just go ahead and do things their way. Therefore it would seem as though the fire station's perception of the role that communities play in their activities is as yet not one that perceives the community as working with the fire station or as a partner. It is important also to consider that it might be that the fire services are not doing this consciously as they might just be trying their utmost best to reach their goal of ensuring safety in communities. However making themselves accessible in terms of communication mechanisms, getting communities involved in their function and allowing communities to share in decisions being taken would assist them in reaching their goal more effectively and efficiently.

Recommendations:

- ✓ One way of ensuring that the fire services are accessible to the communities is to establish some form of communication channel for community members to make issues known to the fire services or for community members to in some way make suggestions about certain things. This can be achieved by developing a toll free phone line, although this will be discussed in more detail later in terms of a reporting system. The ideal would be to have something like a 'complaints and suggestions box'; however for communities situated far from the fire services this will not be effective. This is where the community forums recommended previously come in again. The fire services can arrange an annual or seasonal feedback session in the different communities by making use of the previously established network they have throughout the communities - much like a community meeting held to talk about specific things that community members feel can change or should be done differently in the future. Such a meeting can be held every six months to evaluate various projects and initiatives implemented by the fire services. What is important, however, is that these meetings must be taken seriously by the fire services and they must make sure that they pay attention to comments made at these sessions. The ideal would be that as more time goes by and mutual trust is strengthened and changes are continuously made to improve activities, these sessions will be less like an interrogation session in terms of everything that the fire services are doing wrong and more a session highlighting successes.

5.3.2. THEORETICAL GUIDELINES AND PRINCIPLES FOR A CULTURE OF SAFETY

The six main guidelines for a culture of safety were addressed in this study. Firstly for a good culture of safety to function well there should exist *Organisational commitment to safety*. Secondly a *Formal safety system* should exist. Then thirdly, an *Informal safety system* should exist. Furthermore theory suggests that a good culture of safety should be a *Reporting Culture*. Moreover a culture of safety should be an *Informed Culture* and finally a good culture of safety should be a *Learning Culture*. Various indicators were identified in theory and these indicators were used to guide questions in the focus group discussion held in the empirical phase of the study. These indicators are however integrated in the various theoretical guidelines and will now be discussed as part of the different guidelines mentioned above.

5.3.2.1. Organisational commitment to safety

In order for a culture of safety to function well it is necessary that the organisation that drives the process is committed to ensuring safety by viewing it as a definite priority (See section 2.4.1.1.1.). This is necessary to ensure the allocation of enough resources and to motivate and enable all parties involved to adhere to safe behaviour. Although literature is mostly concerned with a safety culture in terms of an organisational context these principles can be applied to a community context where the government (and in this study the fire services) are viewed as the organisation. Therefore the fire services should make safety a priority and promote safe behaviour as well as enable communities to develop a culture that views safety as a priority. An organisational commitment to safety also refers to the members of the culture to realising their own individual responsibility to ensure safety. In this regard members of the community can also be seen as having a responsibility to ensure safety and actively participate in building and maintaining such a culture.

A culture that views safety as a priority and that is committed to safety also perceive it as something that is everyone in the culture has to work towards therefore once again realising each individual's responsibility and realising that everyone should work together at achieving such a culture. In discussions with respondents it became clear that a safety culture when it comes to fire safety is not perceived to be something that everyone should work together to achieve.

Respondents did however indicate that each person has an individual responsibility to ensure safety in terms of fire in the community. There is therefore no uniformed coherent set of behaviours in terms of fire safety that all role players refer to and abide by to contribute to a culture of safety when it comes to fires. This is something that the fire services should enable and motivate. Also as in other discussions the lack of information was quite apparent, people are generally acting out of what little knowledge they have to ensure that families are safe from the risk of fire. Moreover people think of fire safety only in their immediate surroundings, only in their family for instance and mostly fail to quantify activities relating to fire safety to the rest of the community. The fire station, on the other hand perceive, fire safety mostly as something only they as the fire station must establish and did see themselves as the experts responsible for equipping communities with relevant, necessary and correct information. Thus when it comes to the fire services (organisational) commitment to safety in terms of fire it did not seem as

though the fire services was realising this commitment and ensuring they fulfil their responsibilities they have to communities to ensure a good culture of safety.

Recommendations:

- ✓ In terms of an organisational commitment to safety recommendations follow somewhat the same idea that was proposed in terms of Dialogue and Empowerment. The fire services firstly have to decide what their level of commitment would be in terms of making fire safety a priority. Therefore a detailed discussion between everyone involved with the fire services is proposed. Such a discussion will ensure that everyone in the fire services know what the goals of the fire services are. This will ensure a much more aligned strategy to reach these goals.
- ✓ Furthermore the fire services commitment to safety should be apparent to the communities they serve. This links well with the activities recommended to establish and build on mutual trust between the fire services and the communities. Therefore the more visible the fire services are in the communities the more they will be regarded as making fire safety in communities a priority and awareness surrounding fire related issues will increase. Activities aimed at achieving this include awareness campaigns, information sessions and general public relation activities.
- ✓ A further activity that can be considered is to determine what mass media channels are mostly used by the communities in the Maquassi Hills area and then for the fire services to ensure that fire safety issues are featured in these media channels. Such channels may include local radio stations or local newspapers for instance. As an example a regular insert in the local newspaper can be arranged where the fire services publish a small article about fire safety issues every month or every week. In this way awareness is raised about the fire services and their function as well as safety information and safe behaviour is thus promoted.

5.3.2.2. Formal safety system

A formal safety system refers to the process of addressing and reporting safety hazards. It refers to how severely are the reports of incidents considered by management, government or in this case the fire services and what level of attention is given to reported incidents

(Wiegmann, Thaden and Gibbons, 2007:10-11; Ek, 2006:26). In a safety culture where a formal safety system exists effective mechanisms for reporting incidents are also established and developed facilitating the reporting nature of a safety culture. From the discussions with respondents the researcher gained valuable insight into how the respondents viewed the role of the fire services as well as their own in the formal safety system.

Reporting fire incidents to the fire services was found to be low in priority, only after these activities by community members themselves, they would turn to the fire station for assistance by reporting the fire incident. It almost seemed that only once the situation is more under control of the community members they would turn to the fire station for further assistance. Such a reaction is very understandable because fire services arrive late. The mechanisms for reporting fire incidents in the Maquassi Hills area were also found to be problematic and contribute to the issues relating to the reporting of fire incidents and the response time of the fire services to the scene. Currently reports are routed through the police station and from there the fire services are alerted. Therefore the reporting mechanisms in place currently are not very effective. This results in communities perceiving the fire services as not taking their reports seriously enough and therefore reporting fire incidents to the fire services are not seen as a priority. Once more the issue of information came to light as respondents were unsure what to do in case of fire. This issue was underlined by a respondent making it very clear that no attempt has ever been made to inform communities on what the procedure are that should be followed in the case of a fire.

Recommendations:

- ✓ A more effective reporting system for fires in the Maquassi Hills area can be developed by establishing a toll free emergency number. This number should direct calls directly to the fire services themselves rather than following the current procedure of routing the calls through the police station. The toll free number to the fire services will address various frustrations that respondents mentioned with the current system such as the time it takes relaying the number to the Maquassi Hills station from the national call centre. The toll free number will specifically accommodate persons staying in the Maquassi Hills area and will therefore be much more suited for the context of the area in terms of language etc.

- ✓ There can also be made use of an emergency sms number as well in addition to the toll free number. Importantly once these numbers have been established an intense awareness campaign should follow ensuring that everyone in the area should know what the numbers are that they should call in case of a fire emergency.
- ✓ The above activities could take some time setting up and various recourses would be needed to establish such a reporting system. An aspect that can be immediately implemented is to train the community forums (previously mentioned) in basic fire safety and fire fighting skills. The training sessions can be done outside of the fire season and this will ensure that people in the communities have knowledge to some extent about what to do while they wait for the fire services to arrive. Therefore addressing the issue of persons first trying to get a fire incident under control before contacting the fire services for assistance.

5.3.2.3. Informal safety system

An informal safety system refers to what extent members of the organisation promote safe or unsafe behaviour this would mean that there are certain unwritten norms and guidelines that members of the group abide by (Wiegmann, Thaden & Gibbons, 2007: 11). In a strong culture of safety in terms of fire all role players share the responsibility of promoting safe behaviour and abide by various unspoken rules to ensure safety in a community. In such an informal safety system various entities such as scientific societies, practitioners and communities collaborate to enable, motivate and encourage safe behaviour forming supporting networks to enhance and establish safety (See section 2.4.1.1.1.). In order to establish such a system Wiegmann, Thaden and Gibbons (2007:10) propose that public awareness campaigns and education programmes can be developed to promote safe behaviour and thus strengthening a culture of safety. In the research it was found that respondents did accept the individual responsibility they have of ensuring fire safety in their communities. Respondents viewed NGO's and NPO's as entities that can play a valuable role in educating about fire safety and distributing relevant and necessary safety information. Public and private sector companies were also viewed as having a responsibility to promote safe behaviour and contribute to a culture of safety as these companies install and sell equipment that can pose as risks in terms of fire.

Respondents viewed themselves as having a very big part to play and therefore having a big responsibility in insuring safety and promoting safe behaviour. This relates well to theory stating that communities are the first actors when incidents occur. The fire services were merely seen as an enabling body, supporting communities in their effort in ensuring fire safety. However in discussions with the fire services communities were not perceived to have great responsibility and this has various implications on how the fire services plan and implement initiatives. Firstly due to the fact that the fire services do not view communities as having such a big responsibility, they do not see the value of including communities in their plans. Moreover, this could also be a reason why the fire services do not view engaging with communities as such an important priority.

Another aspect indicating an informal safety system is that of sharing information. In sharing relevant and necessary safety information with one another community members are promoting safe behaviour when it comes to fires. It was however found that respondents did not feel comfortable share safety information with neighbours and friends. Nevertheless church ministers seemed to be the ones who are in the position to correct people without any scrutiny. As some of the respondents working as church ministers shared how they were the ones in the past communicating safety information about health during house visits throughout the communities.

Recommendations:

- ✓ The fire services firstly have to except the communities as partners in the process of building a culture of safety. If they do not buy in to such a partnership it will be much more difficult to establish an informal safety system and ultimately a culture of safety.
- ✓ For communities to promote safe behaviour in their communities and also share necessary safety information it is firstly necessary that they know what is safe behaviour when it comes to fires and also they need relevant and correct information to share it. Therefore the distribution of safety information and what behaviour is wishful in emergency situations is very important. All of the above recommendations of training sessions, information sessions, awareness campaigns and facilitating communication and dialogue between the fire services and

communities will ultimately contribute to people promoting safe behaviour and sharing relevant information.

- ✓ Also a specific focus should be on church ministers to share relevant and correct fire safety information with communities as they were indicated as those in the communities that have done this in the past in terms of health issues. Therefore in terms of distributing information an initiative specifically working with church ministers can be developed.

5.3.2.4. Reporting culture

Reason (1997:195-197) argues that a good culture of safety is a reporting culture. This refers to culture where people are willing to report incidents, give feedback about incidents and are willing to evaluate what went wrong as a means make certain improvements. This insures that procedures and activities are constantly improved. This aspect of a culture of safety also allows members of the community to actively take part in building a culture of safety and allows people to take part in the functioning of the fire services. In effect working alongside the fire services to reach the overall goal of ensuring fire safety in the communities. The aspect of a reporting culture also calls for an effective well functioning reporting system to be in place. In the discussion about a formal safety system the issue of a reporting system has already been touched on to some extent. From the research it was found that in the Maquassi Hills area a reporting system does in fact exist although from the responses of the respondents it was clear that the current reporting system is not effective and working as it should. From the research it was established that the reporting procedure is a lengthy and time-consuming process as calls for assistance are firstly received by the police and then police go out to verify that there is indeed a fire. Once the fire is verified by the police only then is the fire services notified, in the process allowing valuable time to go by.

The fire services on the other hand is of the opinion that fires cause so much more damage as the communities firstly try to control the fire themselves and secondly do not contact the fire services directly. It is however understandable that communities first try to get the situation under control (see section on Formal safety system). Moreover in the discussion it was found that the respondents did not know the direct numbers for the fire services and generally the 112 number was used for emergencies. There are various issues to consider only in terms of the

emergency number used as well as with the direct numbers that the fire services would like communities to use.

Firstly the direct numbers are not toll free, this makes the emergency number inaccessible to a large part of the communities in Maquassi Hills due to the cost of a call. Furthermore the means used to communicate these numbers to community members are not appropriate for the people of Maquassi Hills. The fact that none of the respondents knew what these numbers were, is proof of this. Then secondly respondents expressed frustration in terms of the 112 number that is more generally used in case of emergency. This number directs callers to a call centre that then takes more time to get to the right fire services in the right area. Moreover language used with the automated reply posed a barrier to some of the community members such as the elderly. Importantly respondent expressed that they feel it is the responsibility of the fire services to provide communities with information about emergency numbers for the fire services as well as how to contact and report fire incidents to the fire services.

Recommendations:

- ✓ Recommendations with regard to the reporting culture of communities in a culture of safety follows the same lines as recommendations given in the discussion on a Formal safety system.

5.3.2.5. Learning culture

A good safety culture is one where the members of the group are willing to learn and implement changes necessary to improve the culture of safety (See section 2.4.1.2.). Therefore a learning culture is one where members are also willing to accept their responsibility of ensuring safety.

Throughout discussions with respondents it was clear that respondents did realise that they have a responsibility in ensuring safety and therefore accepting their responsibility in building a culture of safety. Furthermore, respondents were very willing to engage with the fire services and learn about fire safety. Respondents were especially willing to act, assist and participate in ensuring safety in their communities. Once most discussions had concluded respondents wanted to find out from the research team how they should go about changing the current situation. Therefore it is clear that there is a definite need to address the risk of fire and the situation in the Maquassi Hills area.

Interestingly in some areas respondents proposed that the group present at the focus group discussions should form what could be called 'discussion groups' that meet on a regular basis and discuss issues surrounding fire and the risk of fire. These groups over a lot of potential for community based initiatives and should it be supported by the fire services, would be very effective units functioning in the communities.

Recommendations:

- ✓ The community forums have been mentioned in various recommendations as part of the solution for specific issues. It's important to remember that the respondents indicated themselves in this capacity. The fire services should therefore utilise and engage this attitude of willingness in the communities to further the process of building a culture of safety. People are willing to participate and take action when it comes to fire safety and the fire services should use this in the functioning of the fire services.

5.3.2.6. Informed culture

Hudson (1999:2) states that a good culture of safety is an informed one, where all the members of the group are informed about all factors such as human, technical, and environmental factors that determine the safety of everyone involved. Therefore everyone involved are informed and familiar with all factors that may put members of the community at risk. The knowledge of these factors enables each individual to be actively involved and contributes directly to ensure the safety in the entire community. The issue of information about the risk of fire and fire safety is something that can be noted throughout the empirical phase of the study. Repeatedly respondents expressed their need for such information and in most questions the lack of correct and coherent information not only was apparent but mentioned and spelled out by the respondents of this study.

Relevant and correct information when it comes to hazards like fire is one of the most important characteristics of a good culture of safety. From the research it was clear that the respondents did have some information about fires and fire safety although they did not view the information to be enough and adequate. No source or opportunity for community members could be discerned to acquire the necessary safety information such as regular workshops,

information sessions etc. Respondents perceive the fire services to be experts in terms of fire and trust them for information therefore, viewing it as the responsibility of the fire services to provide them with relevant and correct information. Although the fire services had done awareness campaigns in the past with school learners and crèches no follow ups had been done and furthermore no attempts have been made to ensure a constant and regular flow of information for these learners.

The fire services did recognise that it was necessary to inform and educate communities about the risks of fire and how to be safe when it comes to fires. Motivating by saying that the lack of awareness and education of issues relating to fires were probably the causes of fires, because people were careless and uninformed. Reasons given by the fire services for the few attempts that have been made to inform and educate the communities about fire safety and the risk of fire was that should they want to have such opportunities there is a process that is to be followed by the superior management of the fire services to gain access to the communities. Importantly however in a discussion with one of the senior fire officers it was detected that in his opinion communities did not need that much information about fire safety and the risk of fire. He is one of the key role players in decisions being made about the fire services and how they function and if he considers it as unnecessary to do public awareness and information dissemination to communities it might have a very serious effect on the very important function and responsibility the fire station has in terms of enabling an informed culture and furthermore building a culture of safety

Recommendations:

- ✓ The lack of relevant, coherent and correct information was probably one of the most pressing issues noticed in this study. Some recommendations have been given in terms of disseminating information and supplying communities with information. It is however important to remember that in the absence of a reliable source of information people tend to use the information that they have. This may put individuals more at risk in terms of fire. The fire services should therefore insure that they supply communities with relevant information and the necessary skills on a regular basis by using the various aforementioned strategies and techniques. It is in fact a legislative responsibility they as the fire services have.

- ✓ It is therefore proposed that the fire services set up a year plan for awareness and information initiatives they would like to implement in the communities in the Maquassi Hills area. This will require the fire services to sit down and develop various activities in each of the different towns they serve. In such a year plan the following aspects should be considered:
 - What information will be distributed in each session? This will obviously not be the same for all the communities, as each would have specific information needs. Also interaction with the communities will determine the focus of the information.
 - What stakeholder groups should be targeted in that year? It is not possible or necessary that all the stakeholder groups be involved all in one year therefore they should be prioritised.
 - How will information be distributed? Here it must be decided what form the information sessions will take on, will a workshop be presented, and will the information be distributed at church sermons. This aspect will also depend greatly on the group it is aimed at.

5.4. CONCLUSION

Throughout the study it has been clear that there are definitely various issues in the Maquassi Hills fire services and the surrounding communities that needs to be addressed in order for a culture of safety to be established. Three important recommendations can be summarised that need be focused on should the aim be to improve the functioning of the Maquassi Hills fire services as well as facilitating a culture of safety. To follow is a short discussion of each and the above discussion of all of the recommendations relating to the theoretical principles fall somewhere under each of these final recommendations.

Firstly the fire services should start interacting with the communities in the Maquassi Hills area. Most of the issues experienced in the relationship between the fire services and the communities can be to some extent ascribed to the fact that the fire service do not reach out to the communities they serve. Interactions with the community should be based on the principles of participatory development communication and will ensure that dialogue is established and information is exchanged. Furthermore by using the principles of participatory development communication the process of empowering those in the surrounding communities are

facilitated. Interaction with communities in a participatory fashion will also allow the fire services to better understand the context of the communities they work with. Thus by starting to interact with the communities in Maquassi Hills, the fire services will be much more effective in achieving their goal of keeping communities safe from the risk of fire.

The second recommendation is that the fire services should start building a relationship with the communities they serve. Therefore building mutual trust and ensuring that they become visible in the communities are very important. The fire services may consider developing a strong organisational identity, much like corporate organisations develop a corporate identity. They should be visible and well known in the communities and this can be done by utilising various communication strategies. If the fire services are well-known in the communities, if people know what their function is it could facilitate the process of establishing trust and also ultimately motivate people in the communities to get involved in initiatives because they know who the fire services are and what they do.

Lastly and most importantly for the Maquassi Hills area is supplying the communities with relevant, regular, correct and coherent fire safety information and skills. People in these communities need necessary fire safety information to ensure their safety in terms of fire. By allowing people in these communities to partake in planning and implementing initiatives aimed at informing people, awareness campaigns and information sessions will be suited for the specific areas. This will mean that communities receive information relevant to their situation and circumstance and ultimately initiatives will be more effective.

In conclusion from the study it was clear that as part of disaster risk reduction in terms of fire one important aspect is to build a culture of safety. Theory on culture of safety gives various guidelines for establishing such a culture. It has become quite apparent that to build a culture of safety participatory development communication can be potentially be very successfully utilised to ensure that a culture of safety has organisational commitment to safety, that a formal and in formal safety system exists and to ensure that such a culture is a reporting, informed and learning culture.

In closing, in the preceding chapters the research objectives have been achieved as set out in Chapter 1 by firstly determining what the principles of participatory development communication necessary to inform a culture of safety. These were found to be Dialogue and

Empowerment. As part of these two main principles understanding needs of community, trust, information exchange, feedback, accessibility and decision-making were found to be crucial elements that need to be established in the process of participatory development communication to truly enable people's participation in the process.

The second objective was to determine the guidelines set out by various relevant literature for building a culture of safety. This was established as a culture that has an organisational commitment to safety. Furthermore this is a culture that has established a formal safety system as well as an informal safety system. Lastly a culture of safety is characterised by being a reporting culture, an informed culture and finally a learning culture.

In the empirical phase the third objective was achieved by investigating to what extent the Maquassi Hills Fire Services adhere to the principles of participatory development communication. It was found that various elements of participatory development communication are lacking in the functioning of the Fire Services and their interaction with the communities they serve. In terms of the final research objective it was investigated to what extent the Maquassi Hills Fire Services adhere to the guidelines for building a culture of safety. It was established that in the building of a culture of safety there are also various aspects lacking in terms of the functioning of the fire services. The failure of the fire services to apply the principles of participatory development communication certainly has a great effect on the development and building of a culture of safety. However some of the findings gave a positive indication for the potential of a good culture of safety to be developed.

If the fire services start applying some of the very important participatory development communication principles it will benefit the process of building a culture of safety in the communities of the Maquassi Hills area. These communities are ready to work with the fire services as partners to ensure fire safety in their communities and if the fire services make use of this enthusiasm a good culture of safety could be established and ultimately the process of disaster risk reduction in the Maquassi Hills area can be greatly facilitated.

Bibliography

ANON. 2009. Municipal workers strike over service delivery. <http://www.jacarandafm.com/kagiso/content/en/jacaranda/jacaranda-news?oid=583911&sn=Detail&pid=6182&Municipal-workers-strike-over-service-delivery> Date of access: 04 Mar. 2010.

ARNSTEIN, S.R. 1969. A ladder of citizen participation. *American Institute of Planners Journal*, 35(4):216 – 224, Jul.

BENSON, C., TWIGG, J. & MYERS, M. 2001. NGO initiatives in risk reduction: an overview. *Disasters*, 25(3): 199 - 215.

BERG, Z. C. & THERON, A. L. 2009. Psychology in the work context. Cape Town, South Africa: Oxford University Press.

BESSETTE, G. & RAJASUNDERAM, C.V. 1996. Participatory development communication: a West African agenda. IDRC, Ottawa, Canada: Southbound. <http://web.idrc.ca/openebooks/306-2/> Date of access: 1 Nov. 2011.

BESSETTE, G. 2004. Involving the community: A guide to participatory development communication. International Development Research Center. Ottawa, Ontario, Canada: Southbound Penang.

BLAIKIE, N. W. H. 2000. *Designing social research: the logic of anticipation*. Malden, MA : Blackwell.

BLOOR, M., FRANKLAND, J., THOMAS, M. & ROBSON, K. 2001. *Focus groups in social research*. London : SAGE.

BOTHA, D., VAN NIEKERK, D., WENTINK, G., TSHONA, T., MAARTENS, Y., FORBES, K., ANNANDALE, E., COETZEE, C. & RAJU, E. 2011. *Disaster risk management status assessment at municipalities in South Africa*. Pretoria, South Africa: SALGA.

BRONFENBRENNER, U. 1977. Toward an experimental ecology of human development. *American Psychologist*, 32(7):513-531.

BOURNE, L. & WALKER, D.H.T. 2005. Visualising and mapping stakeholder influence. *Management Decision*, 43(5). p. 649-660.

BYERS, P. Y. & WILCOX, J. R. 1991. Focus groups: A Qualitative opportunity for researchers. *The Journal of Business Communication*, 28(1):63 - 78.

COOPER, D. 2002. Safety Culture: A model for understanding and quantifying a difficult concept. *Professional Safety*, 47(6):30-36. <http://www.b-safe.net/articles/bsms12.pdf> Date of access: 3 Jun. 2010.

CHAMBERS, R. 1997. *Who's reality counts? Putting the first last*. London: Intermediate Technology Publications.

CHAMBERS, R. 2005. Ideas for development. London,UK: Earthscan.

COETZEE, J.K. 1989. Development is for people. Johannesburg: Southern Book.

COLLINS ENGLISH DICTIONARY. 2009. Complete and Unbridged 10th Edition. William Collins. 1979,1986.

DAUGHERTY, E. L. 2001. Public relation and social responsibility. (*In* Heath, R. L. & Vasquez, G. M. Handbook of Public Relations. Thousand Oaks, Calif. [u.a.]: Sage. Chapter 31.)

DEL CASTELLO, R. & BRUAN, P.M. 2006. Framework on effective rural communication for development. Rome, Italy: FAO.

DE VOS, A. S., STRYDOM, H., FOUCHÉ, C. B. & DELPORT, C. S. L. 2007. Research at grass roots: For the social sciences and human service professions. Pretoria: Van Schaik.

DEJOY, D. M. 2005. Behaviour change versus cultural change: Divergent approaches to managing workplace safety. *Safety Science*, 43(2): 105-129. Elsevier.

DOYLE, P. & STERN, P. 2006. Marketing management and strategy. New York: Financial Times Prentice Hall.

Ek, Å. 2006. Safety culture in sea and aviation transport. Lund, Sweden: Lund University. (Thesis - Doctoral).

ESCOBAR, A. 2000. Place, power and networks in globalization and postdevelopment. (*In* Wilkins, K. G., *ed.* *Redeveloping communication for social change: theory, practice, and power.* Lanham, Md.: Rowman & Littlefield. Chapter 12.)

FAO (Food and Agriculture Organisation of the United Nations). 2007. *World Congress on Communication for Development: lessons, challenges and the way forward.* Washington DC: World Bank. <ftp://ftp.fao.org/docrep/fao/010/ai143e/ai143e00.pdf> Date of access: 20 Aug. 2011.

FILL, C. 2005. *Marketing Communications: engagement, strategies and practice.* Harlow, England: Pearson Education.

FLICK, U. 2009. *Introduction to Qualitative research.* London: SAGE.

FLIN, R., MEARNS, K., O'CONNOR, P. & BRYDEN, R. 2000. Measuring safety climate: Identifying the common features. *Safety Science*, 34(1-3): 177 - 192. Pergamon.

FREEMAN, R. E. 1984. *Strategic management: A stakeholder approach.* Boston, Mass.: Pitman.

GARDNER, K. & LEWIS, D. 1996. *Anthropology, development and the post-modern challenge.* London, UK: Pluto Press.

GNDR (Global Network of Civil Society Organisations for disaster reduction). 2009. *Clouds but little rain - Views from the Frontline: A local perspective of progress towards implementation of the Hyogo Framework for Action.* UK: GNDR.

GREEF, M. 2007. Information collection: Interviewing. (In De Vos, A. S., Strydom, H., Fouché, C. B. & Delport, C. S. L. Research at grass roots: For the social sciences and human service professions. Pretoria: Van Schaik. Chapter 20.)

GULDENMUND, W. F. 2000. The nature of safety culture: a review of theory and research. *Safety Science*, 34(1-3): 215-257. Pergamon.

HÖPFL, H. 1994. Safety culture, corporate culture: Organisational transformation and the commitment to safety. *Disaster Prevention and Management*, 3(3): 49 - 58. MCB UP.

HUDSON, P. 1999. Safety culture - Theory and practice. (Paper presented at the RTO HFM Workshop on The Human Factor in System Reliability - Is Human Performance Predictable? held in Siena, Italy from 1-2 December, 1999. p. 1-12.)

HUDSON, P. 2007. Implementing safety culture in a major multi-national. *Safety Science*, 45(6): 697 - 722. Elsevier.

HUESCA, R. 2008. Tracing the history of participatory approaches to development: A critical appraisal. (In Servaes, J., ed. Communication for development and social change. New Delhi, India: SAGE. Chapter 8.)

HUITT, W. 2009. A systems approach to the study of human behaviour. Valdosta, GA: Valdosta State University. <http://www.edpsycinteractive.org/materials/sysmdlo.html> Date of access: 15 Aug. 2010.

HUTT, R. W. 2010. Identifying and mapping stakeholders: An Industry case study. *Corporate Communications: An International Journal*, 15(2): 181-191.

JACOBSON, T.L. & KOLLURI, S. 1999. Participatory communication as communicative action. (*In* Jacobson, T.L. and Servaes, J., eds. *Theoretical approaches to participatory communication*. Cresskill: Hampton.)

JAHANSOOZI, J. 2006. Organisation-stakeholder relationships: exploring trust and transparency. *Journal of Management Development*, 25(10): 942-955.

KINGRY, M. J., TIEDJE, L. B. & FRIEDMAN, L. L. 1990. Focus groups a research technique for Nursing. *Nursing Research*, 39(2):124 - 125.

LEEDY, P. 1997. *Practical research: planning and design*. Upper Saddle River, N.J.: Merrill.

LEEDY, P. D. & ORMROD, J. E. 2005. *Practical research: planning and design*. Upper Saddle River, N.J.: Prentice Hall.

LEWIS, L. K., HAMEL, S. A. & RICHARDSON, B. K. 2001. Communicating change to nonprofit stakeholders models and predictors of implementers' approaches. *Management Communication Quarterly*, 15(1): 5-41. August. SAGE.

LEWIS, L. 2005. The civil society sector: A review of critical issues and research agenda for organisational communication scholars. *Management Communication Quarterly*, 19(2): 238-267. SAGE.

LOWHORN, G. L. 2007. Qualitative and Quantitative research: How to choose the best design. (Paper presented as part of the Academic Business World International Conference held in Nashville, Tennessee on 26 - 28 May 2007.) p. 484 - 488.

LUOMA-AHO, V. 2006. From stakeholders to faith holders: Reputational advantage of frequent contact and high trust. <http://research.jyu.fi/orgevolution/researchpapers/luoma-ahoICCRIC06.pdf> Date of access: 14 Oct. 2011.

McENTIRE, D. A. 2001. Trigger agents, vulnerabilities and disaster reduction: towards a holistic paradigm. *Disaster Prevention and Management*, 10(3): 189-196. MCB University Press.

McKEE, N., MANONCOURT, E., YOON, C. S. & CARNEGIE, R. 2008. Involving people, evolving behaviour: The UNICEF Experience. (In Servaes, J., ed. Communication for development and social change. New Delhi, India: SAGE. Chapter 12.)

MEFALOPULOS, P. 2008. Development communication sourcebook: broadening the boundaries of communication. Washington D.C.: World Bank.

MEFALOPULOS, P. & GRENNAN, L. 2004. Promoting sustainable development through strategic communication. (In Hamu, D., Auchincloss, E & Goldstein, W., eds. Communicating protected areas, commission on education and communication. IUCN. Gland, Switzerland: UK. p.24-31.)

MILLWARD, L. J. 1995. Focus groups. (In Breakwell, G. M., Hammond, S. & Fife-Schaw., eds. Research methods in psychology. London: SAGE. Chapter 18.)

MOEMEKA, A.A. 1989. Perspectives on development communication. *Africa Media Review*, 3(3):p.1-24. African Council on Communication Education. http://archive.lib.msu.edu/DMC/African_Journals/pdfs/africa_media_review/vol3no3/jamr003003002.pdf Date of access: 28 Sept. 2011.

MOEMEKA, A.A. 2000. Development communication in action: building understanding and creating participation. University Press of America. Chapter 1.

NDMC. (National Disaster Management Centre). 2008. Establishing foundational institutional arrangements for disaster risk management. Pretoria: NDMC. (South African Disaster Risk Management Series, Handbook 2) http://web.ndmc.gov.za/WebDocuments/Guidelines/Provinces/frame_index2.html Date of access: 12 Mei 2011.

NEWS TODAY. 2008. South African News: Protesters shoot at firemen. <http://www.newstoday.co.za/index.php/news/sanews/3248-protesters-shoot-at-firemen.html> Date of access: 26 Feb. 2010.

NSINGO, S. A. M. & KUYE, J. O. 2005. Democratic participation for service delivery in local government in Zimbabwe: Humanising structural configurations and legal provisions. *Journal of Public Administration*, 40(4):744 - 760, Dec.

PAYNE, A., BALLANTYNE, D. & CHRISTOPHER, M. 2005. A Stakeholder approach to relationship marketing strategy: The development and use of the "six markets" model. *European Journal of Marketing*, 39(7/8): 855 - 871.

PETKUS, E. 2001. A customer value perspective in the non-profit marketing context: Expanding the means-end chain for multiple stakeholders. *Journal of Non-profit and Public Sector Marketing*, 18(3):27.

PHILLIPS, D. 2006. Relationships are the core value for organisations: A practitioner perspective. *Corporate Communications: An International Journal*, 11(1): 34-42.

QUERO, M. J. & VENTURA, R. 2009. The role of stakeholders in the management of cultural organisations: The case of performing arts organisations in Spain. *Journal of Relationship Marketing*, 8(1):17-35. Routledge.

RAHIM, S. A. 1994. Participatory development communication as a dialogical process. (In White, S. A., Nair, K. S. & Ascroft, J. R., eds. *Participatory communication: working for change and development*. New Delhi u.a.: SAGE. Chapter 6.)

REASON, J. T. 1997. *Managing the risk of organisational accidents*. Aldershot Ashgate.

RHO, E. 2009. The impact of organisational communication on public and non-profit manager's perception of red tape. (Paper prepared for delivery at the 10th National Public Management Research Conference in Hyatt on Capitol Square, Columbus, Ohio. October 1-3, 2009.)
<http://www.pmrnet.org/conferences/OSU2009/papers/Rho,%20Eunju.%20%20The%20Impact%20of%20Organizational%20Communication%20on%20Public%20and%20Nonprofit%20Managers%27%20Perception%20of%20Red%20Tape.pdf> Date of access: 23 Sept. 2011.

RICHARDS, L. & MORSE, J. M. 2007. *Readme first for a user's guide to qualitative methods*. Thousand Oaks, Calif.: SAGE.

ROGERS, E.M. 1976. Communication and development: The passing of the dominant paradigm. www.cf-hst.net/unicef-temp/Doc-Repository/doc/doc478697.PDF Date of access: 23 Oct. 2011.

ROSTOW, W.W. 1960. The stages of economic growth: A non-communist manifesto. Cambridge: Cambridge University Press. p.4-16.

SAPA. 2010. Special Reports: S.A. Politics. http://www.news24.com/Content/SouthAfrica/Politics/1057/56216ec1ff594accb770ac35b43ed79f/12-03-2010-07-03/Minister_warns_of_more_protests Date of access: 13 Mar. 2010.

SCHRAMM, W. 1964. Mass media and National Development. Stanford: California University Press.

SEEDS. 2007. Kanga District Historic Building Research: Preliminary Study. www.seedsindia.org/pdf/panhimalayan.pdf Date of access: 20 Mei 2011.

SEEDS. 2009. Community as first responders: Building CBDM capacity at a district Level. New Delhi, India: SEEDS.

SERVAES, J. 1995. Development communication – for whom and for what? *Communicatio*, 21(1): 39-49. Routledge.

SERVAES, J., JACOBSON, T.L. & WHITE, S.A. 1996. Participatory communication for social change. New Delhi, India: SAGE.

SERVAES, J. 1996. Introduction: participatory communication and research in development settings. (*In* Servaes, J., Jacobson, T. L. & White, S.A., eds. Participatory communication for social change. New Delhi, India: SAGE. Chapter 1.)

SERVAES, J. 1999. Communication for development: one world, multiple cultures. Hampton Press. (The Hampton Press Communication Series: Communication, culture and social change. 1999.)

SERVAES, J. 2008. Communication for development and social change. New Delhi, India: SAGE. p.15; 17; 18.

SERVAES, J. & ARNST, R. 1999. Principles of participatory communication research: Its strengths and weaknesses. (*In* Jacobson, T. L. & Servaes, S., eds. Theoretical approaches to participatory communication. Cresskill, N.J. : Hampton Press. Chapter 4.)

SERVAES, J. & MALIKHAO, P. 2008. Development communication approaches in an international perspective. (*In* Servaes, J., ed. Communication for development and social change. New Delhi, India: SAGE. Chapter 7.)

SIDNEY MORNING HERALD. 2010. New protests in South Africa as thousands strike. <http://www.smh.com.au/world/new-protests-in-south-africa-as-thousands-strike-20090729-e0es.html> Date of access: 28 Feb. 2010.

SOSALE, S. 2008. The panoptic view: a discourse approach to communication and development. (*In* Servaes, J., ed. Communication for development and social change. New Delhi, India: SAGE. Chapter 5.)

STANGANELLI, M. 2008. A new pattern of risk management: The Hyogo Framework for Action and Italian practice. *Socio-Economic Planning Sciences*, 42(2): 92-111. Elsevier.

STEEVES, H. L. 2000. Gender agendas: Dialogue and impasse in creating social change. (*In* Wilkins, K. G. *Redeveloping communication for social change: theory, practice, and power*. Lanham, Md.: Rowman & Littlefield. Chapter 2.)

SOUTH AFRICA. 2002. Disaster Management Act 57 of 2002. Pretoria: Government Printer.

SOUTH AFRICA. 2004. A policy framework for disaster risk management in South Africa. *Government Gazette*, No. 27534. Pretoria: Government Printer.

STRUWIG, F. W. & STEAD, G. B. 2001. *Planning, designing and reporting research*. Maskew Miller Longman.

TARRANT, M. 2002. Disaster risk management. Regional workshop on total disaster risk management . AUS.

TESCH, R. 1990. *Qualitative research: analysis types and software tools*. Routledge.

THE AMERICAN HERITAGE. 2006. *Dictionary of the English language, Fourth Edition*. Houghton Mifflin Company.

TWIGG, J. 2004. *Disaster risk reduction: Mitigation and preparedness in development and emergency programming*. London, UK: Overseas Development Institute.

TWIGG, J. 2007. Characteristics of a disaster-resilient community: A guidance note. Department of International Development. PreventionWeb. <http://www.preventionweb.net/english/professional/publications/v.php?id=2310> Date of access: 01 Nov. 2011.

UN ISDR (United Nations, International Strategy for Disaster Reduction). 2004. Living with risk: A global review of disaster reduction initiatives. Volume 1. Geneva, Switzerland: UNISDR.

UN CDR REPORT (United Nations Communication for Development Round Table Report). 2005. 9th United Nations Communication for Development Roundtable held on the 6–9 September 2004, Rome, Italy. Rome, Italy: FAO.

UNDP (United Nations Development Programme). 2004. Reducing Disaster Risk: A Challenge for Development. New York: UNDP.

UN ISDR (United Nations, International Strategy for Disaster Reduction). 2005. Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters. In: World conference on disaster reduction, Kobe, Japan. January 2005.

UN ISDR. (United Nations, International Strategy for Disaster Reduction). 2007. Words into action: A guide for implementing the Hyogo Framework. Geneva, Switzerland: UNISDR.

VERMAAK, J. & VAN NIEKERK, D. 2004. Disaster risk reduction initiatives in South Africa. *Development South Africa*, 21(3): 555-574. Carfax.

WALKER, G.B. 2007. Public participation as participatory communication in environmental policy decision-making: From concepts to structured conversations. *Environmental Communication: A Journal of Nature and Culture*, 1(1): 99-110, January.

WIEGMANN, D. A., ZHANG, H., VON THADEN, T., SHARMA, G. & MITCHELL, A. 2002. Safety culture: A review. (Report prepared for the Federal Aviation Administration Atlantic City International Airport in May 2002.)

WIEGMANN, D. T., THADEN, T.L. & GIBBONS, A. M. 2007. A review of safety culture theory and its potential application to traffic safety. AAA Foundation for Traffic Safety. <http://www.aaafoundation.org/pdf/WiegmannvonThadenGibbons.pdf> Date of access: 6 Jun. 2010.

WILKINS, K. G. 2000. Redeveloping communication for social change: theory, practice, and power. Lanham, Md.: Rowman & Littlefield. p. 197 - 199.

WISNER, B., BLAIKIE, P., CANNON, T. & DAVIS, I. 2004. At risk: natural hazards, people's vulnerability and disasters. New York: Routledge.

YOON, C.S. 1996. Participatory communication for development. (In Bessette, G. & Rajasunderam, C. V., eds. Participatory development communication: A West African agenda. ON, Canada: International Development Research Centre. p.37 – 65.) <http://web.idrc.ca/openebooks/306-2/> Date of access: 01 Nov. 2011.