

**Assessing the level of
implementation of the Hyogo
Framework for Action in
Kabokweni location, South
Africa;**
using a bottom-up approach

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Report 5343, Lund

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Lund 2010

Titel/Title:

Bedömning av implementationsnivån av Hyogo Framework for Action i Kabokweni, Sydafrika; ur ett underifrånperspektiv / Assessing the level of implementation of the Hyogo Framework for Action in Kabokweni location, South Africa; using a bottom-up approach

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Lund 2010

Report 5343 ISSN 1402-3504 ISRN LUTVDG/TVBB-5331-SE

Number of pages: 90

Chapter page and appendix illustrations: Tora Gustafsson and Mikaela Warberg Larsson

Keywords: Disaster risk reduction, natural hazard, Hyogo Framework for Action, Views from the Frontline, VFL LITE, disaster management centre, NETaRNRA, Kabokweni location, South Africa, bottom-up approach, implementation.

Abstract This thesis assesses the implementation of the *Hyogo Framework for Action* at local level of Kabokweni location, South Africa. The *Hyogo Framework for Action* is a framework, adopted by the United Nations, focuses on promoting proactive disaster management rather than reactive. This fairly new approach reached South Africa as early as in 2003, when the *Disaster Management Act 57 of 2002* was launched, and since then the country has begun implementing disaster risk reduction into all aspects of disaster management. This report is based on a case study using a questionnaire called the VFL LITE. The questionnaire is developed by the *Global Network of Civil Society Organisations for Disaster Reduction* as an alternative data collection method to the *Views from the Frontline* project. The case study results include questionnaire responses but also comments from the participants. This thesis therefore assesses, both in a qualitative and a quantitative way, how well *Hyogo Framework for Action* and disaster risk reduction has been implemented in Kabokweni location. The findings of this thesis can be compared and used in other assessments using the *Views from the Frontline* approach since the VFL LITE questionnaire has been used.

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Acknowledgements

We take this opportunity to thank all who helped us with our thesis.

Our supervisor Per Becker, visiting professor at Lund University. Thank you for introducing us to the most interesting thesis subject ever. Also, thank you for your guidance in the case study in South Africa and for your much appreciated inputs to our work.

Thank you Prudence Dlamini, Master student at North-West University, for your friendship and for making the case study in Kabokweni location possible. You have helped us with your valuable contacts, transportation, local knowledge and your proficiency in South African disaster management.

Furthermore, big thanks to everyone at the African Centre for Disaster Studies in Potchefstroom, South Africa, for having us during the two weeks of our case study start-up. Also, thank you Terry Gibson, Project Manager at the GNDR, for providing us with crucial VFL results and for answering our questions.

Finally, thank you all who participated in the case study and Björn Sildemark for your valuable feedback.

Tora Gustafsson and Mikaela Warberg Larsson

Lund 2010

Summary

Natural disasters affect a lot of people every year and the consequences are often severe. There is no way to prevent hazardous natural events from occurring but, with disaster risk reduction, human suffering and economic losses from these events can be reduced. The concept of disaster risk reduction is still not fully implemented in Kabokweni location and instead reactive approaches are presently more common in disaster management organisations.

In January 2005 the *Hyogo Framework for Action* was adopted as an outcome of a UN world conference on disaster risk reduction in Kobe Japan. The *Hyogo Framework for Action* is based around five focus areas called the *Priorities for Action*;

1. *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.*
2. *Identify, assess and monitor disaster risks and enhance early warning.*
3. *Use knowledge, innovation and education to build a culture of safety and resilience at all levels.*
4. *Reduce the underlying risk factors.*
5. *Strengthen disaster preparedness for effective response at all levels.*

In this thesis the main goal was to assess the implementation of the *Hyogo Framework for Action* in Kabokweni location, South Africa, from a bottom-up approach. To achieve this, a case study was carried out in Kabokweni location of South Africa during August and September 2010. Data was collected with the use of a questionnaire, called the VFL LITE, containing questions regarding the *Hyogo Framework for Action*. The respondents were chosen from local level government, civil society organisations and local community, all relevant for disaster management in Kabokweni location.

The case study results include questionnaire responses but also comments from the participants and notices from discussions about disaster management at local level in South Africa. In this thesis it has therefore been assessed, both in a qualitative and a quantitative way, how well *Hyogo Framework for Action* and disaster risk reduction has been implemented in Kabokweni location. The results show that the local level has not been sufficiently involved in the efforts of disaster risk reduction and the *Hyogo Framework for Action* is implemented only to a limited extent. The framework is mostly still “on paper” and has not yet been substantialised into accomplishments and actions. However, half of the implementation period of *Hyogo Framework for Action* remains and Kabokweni location still has a chance of reaching the expected outcome.

Another goal in this thesis was to identify the main features in the level of *Hyogo Framework for Action* implementation from the bottom-up perspective compared to a top-down perspective. The purpose of this was to put the case study results into a larger context. To achieve this a comparison was made between the case study results and results from a top-down approached assessment, called the NETaRNRA. A noteworthy trend was identified in the comparison, showing decreasing level of *Hyogo Framework for Action* implementation with descending societal levels.

Sammanfattning

Det finns inget sätt att förhindra att allvarliga naturfenomen uppstår, men med katastrofriskreducering kan mänskligt lidande och ekonomiska förluster från dessa händelser minskas. Begreppet katastrofriskreducering är fortfarande inte implementerat fullt ut i Kabokweni, i stället dominerar fortfarande i allmänhet reaktiva förhållningssätt.

I januari 2005 antogs *Hyogo Framework for Action* som ett resultat av FN:s världskonferens om katastrofriskreducering i Kobe, Japan. *Hyogo Framework for Action* bygger på fem fokusområden som kallas *Priorities for Action*;

1. *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.*
2. *Identify, assess and monitor disaster risks and enhance early warning.*
3. *Use knowledge, innovation and education to build a culture of safety and resilience at all levels.*
4. *Reduce the underlying risk factors.*
5. *Strengthen disaster preparedness for effective response at all levels.*

I detta examensarbete var det huvudsakliga målet att bedöma implementeringen av *Hyogo Framework for Action* i Kabokweni, Sydafrika, från ett underifrånperspektiv. En fallstudie utfördes i Kabokweni under augusti och september 2010 då data samlades in med hjälp av en enkät som kallas VFL LITE. Enkäten innehåller frågor om de fem *Priorities for Action* från *Hyogo Framework for Action*. De som deltog i studien var representanter från statliga myndigheter, *Civil Society Organisations* och företrädare för det lokala samhället. Endast deltagare som var relevanta för katastrofhantering i Kabokweni valdes ut.

Resultaten från fallstudien innehåller enkätsvaren, men även synpunkter från deltagarna samt noteringar från diskussioner som hölls i samband med studien. I detta examensarbete bedöms därför, både på ett kvalitativt och på ett kvantitativt sätt, hur väl *Hyogo Framework for Action* och katastrofriskreducering har implementerats i Kabokweni. Resultaten visar att den lokala nivån inte är tillräckligt delaktig i katastrofriskreducering och att *Hyogo Framework for Action* endast har implementerats i en begränsad utsträckning. Ramverket är mestadels fortfarande "på papperet" och har ännu inte införlivats i verksamheter och åtgärder. Halva implementeringsperioden för *Hyogo Framework for Action* kvarstår dock och Kabokweni har fortfarande en chans att nå de uppsatta målen.

Ett annat mål med detta examensarbete var att identifiera de tydligaste tendenserna i implementeringsgraden av *Hyogo Framework for Action* ur ett underifrånperspektiv jämfört med ett top-downperspektiv. Syftet med detta är att sätta resultaten från fallstudien i en större kontext. För att uppnå detta gjordes en jämförelse mellan resultaten från fallstudien och resultaten från en undersökning med ett top-downperspektiv, kallad NETaRNRA. En anmärkningsvärd trend identifierades i jämförelsen vilken tyder på en lägre implementeringsnivå av *Hyogo Framework for Action* ju närmre man kommer gräsrotsnivån.

List of abbreviations

These abbreviations are used at least once in the report. Page numbers indicate where in the report the abbreviation is first mentioned.

CSO	Civil Society Organisation	p. 21
GNDR	Global Network of Civil Society Organisations for Disaster Reduction	p. 20
HFA	Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters	p. 12
ISDR	International Strategy for Disaster Reduction	
KPA	Key Performance Area	p. 26
NDMC	National Disaster Management Centre	p. 27
NETaRNRA	National Education, Training and Research Needs and Resources Analysis	p. 27
PFA	Priority for Action	p. 14
SAWS	South African Weather Service	p. 64
UN	United Nations	p. 10
UN/ISDR	Secretariat of the ISDR	
VFL	Views from the Frontline	p. 20
VFL LITE	Views from the Frontline LITE	p. 24
HFA Monitor	Hyogo Framework for Action Monitor	P. 20
The Act	The Disaster Management Act 57 of 2002	p. 26
The Yokohama Strategy	The Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation	p. 12

List of definitions

These definitions are presented in the report, all compiled from the *2009 UNISDR Terminology on Disaster Risk Reduction*.

Capacity	<p>“The combination of all the strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals.” (UN/ISDR, 2009, p. 5)</p>
Capacity Development	<p>“The process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.” (UN/ISDR, 2009, p. 6)</p>
Civil Society Organisations (CSO)	<p>There is no commonly accepted or legal definition of a civil society organisation (The European Commission and Civil Society, 2010). According to GNDR (2010) a civil society organisation can be a non-governmental organisation and might include organisations like social service and health organisations, student or youth organisations, faith-based organisations or environmental organisations.</p>
Disaster	<p>“A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.” (UN/ISDR, 2009, p. 9)</p>
Disaster risk	<p>“The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.” (UN/ISDR, 2009, p. 9)</p>
Disaster risk management	<p>“The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.” (UN/ISDR, 2009)</p>
Disaster risk reduction	<p>“The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.” (UN/ISDR, 2009, p. 10)</p>
Early warning system	<p>“The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.” (UN/ISDR, 2009, p. 12)</p>

Land-use planning	<p>“The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.”</p> <p>(UN/ISDR, 2009, p. 19)</p>
Public awareness	<p>“The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.”</p> <p>(UN/ISDR, 2009, p. 22)</p>
Resilience	<p>“The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.”</p> <p>(UN/ISDR, 2009, p. 24)</p>
Response	<p>“The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.”</p> <p>(UN/ISDR, 2009, p. 24)</p>
Risk	<p>“The combination of the probability of an event and its negative consequences.”</p> <p>(UN/ISDR, 2009, p. 25)</p>
Risk assessment	<p>“A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.”</p> <p>(UN/ISDR, 2009, p. 26)</p>
Vulnerability	<p>“The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.”</p> <p>(UN/ISDR, 2009, p. 30)</p>

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CHAPTER 1

Introduction



CHAPTER 1

Introduction

This chapter is an introduction to the thesis. It provides the reader with background information, purpose and research questions and limitations of the project.

The UN/ISDR definition of disaster risk reduction is the following:

Disaster Risk Reduction

“The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.”
(UN/ISDR, 2009, p. 10)

This sidebar will be used for definitions and/or information relevant to the main text.

Natural disasters affect over 200 million people every year (UN/ISDR, 2007a). One recent example is the earthquake in Haiti in January 2010, which resulted in the deaths of hundreds of thousands and even larger numbers of injured (DN, 2010). Furthermore, one million people became homeless as a large part of the habitat surrounding the earthquake epicentre was destroyed due to poorly designed structures (Miami Herald, 2010).

The impact of natural disasters increase as urbanisation, environmental degradation and climate change accelerate (UN/ISDR, 2007a). These factors, especially combined with poverty, increase the impact of disasters, as in Haiti which is one of the poorest countries in the world (CIA, 2010b). There is no way to prevent natural hazard events from occurring but, with disaster risk reduction, human suffering and economic losses from these events can be reduced (UN/ISDR, 2007a).

In January 2005 a world conference on disaster risk reduction was held in Kobe, Japan. Its purpose was, among others, to review and develop the earlier framework *The Yokohama Strategy for a Safer World*, which was adopted in 1994. The outcome of the conference was a new framework called the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* (further referred to as HFA). HFA is based on five *Priorities for Action* (UN/ISDR, 2007b, p. 6);

1. *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.*
2. *Identify, assess and monitor disaster risks and enhance early warning.*
3. *Use knowledge, innovation and education to build a culture of safety and resilience at all levels.*
4. *Reduce the underlying risk factors.*
5. *Strengthen disaster preparedness for effective response at all levels.*

The framework was adopted to be implemented during the years 2005-2015. As half of the implementation period for the HFA has passed it is a suitable time to evaluate the adoption of the framework.

1.1 Purpose and research questions

The purpose of this thesis is to assess the level of implementation of the HFA at the local level in Kabokweni location, South Africa.

The study was done using a bottom-up approach since that will give a detailed picture of the HFA implementation in the local level. The local level in South Africa is most interesting to study since it is most critical to disaster risk reduction and is primarily affected by natural disasters.

To meet the purpose the following research question will be answered:

- *What is the current level of HFA implementation at the local level of Kabokweni location in South Africa?*

To put the results of this thesis into a larger context the following research question is added to the thesis:

- *What main features can be identified in the level of HFA implementation from the bottom-up perspective in the light of a top-down perspective?*

1.2 Theoretical foundation and case study

To be able to answer the first research question a case study was conducted in the Kabokweni location in South Africa. With the use of the *Views from the Frontline LITE* questionnaire, which is further described in chapter 3, results of the HFA level of implementation at the local level was obtained. The method used for the case study is described in chapter 5.

Before the case study could take place relevant literature was studied. This was to acquire enhanced knowledge in areas such as the theoretical framework of HFA and the structure and organisation of disaster management in South Africa. The information was required later on in the analysis of the case study results.

To answer the second research question the results from this bottom-up approached case study was compared with main findings from a top-down approach assessment of the HFA implementation in South Africa.

1.3 Limitations

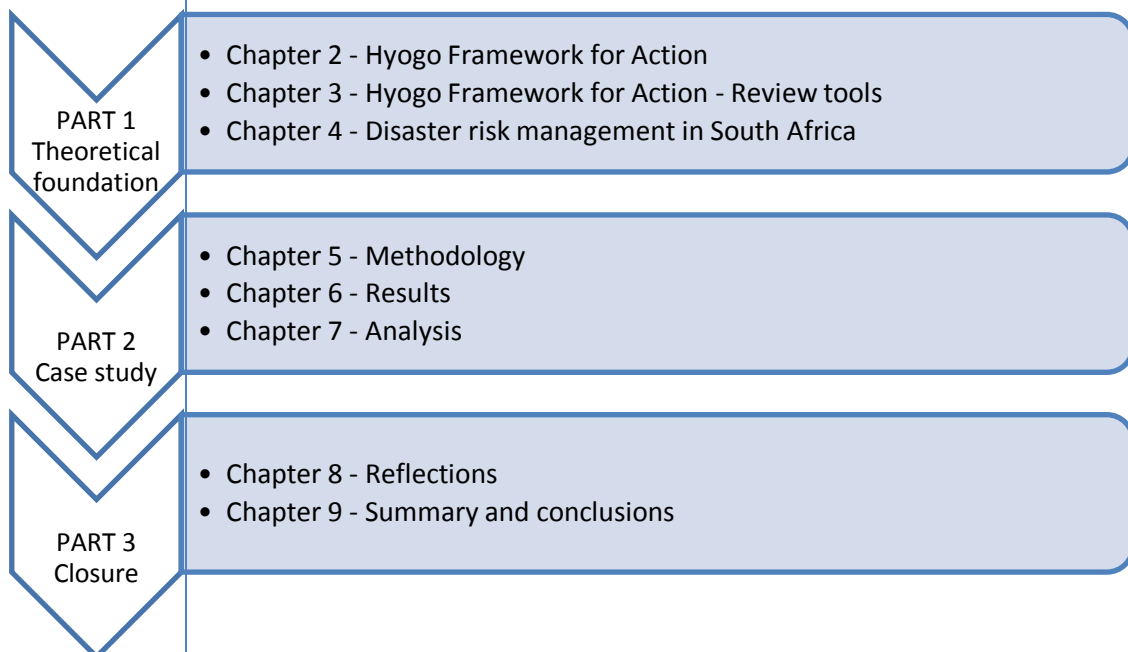
A limitation of this thesis is the fact that the case study results emanates from a selected amount of respondents. How this affects the results are further discussed in section 8.2.2.

Limitations are also found within the comparison between the case study and the top-down assessment. The top-down assessment is not entirely comparable with the results from this thesis since the method used for the results in the top-down assessment differs from the method used in this thesis.

Another limitation is the *Views from the Frontline LITE* questionnaire, used for data collection in the case study. The *Views from the Frontline LITE* questionnaire is a simplified version of the *Views from the Frontline* questionnaire (further described in section 3.2). The *Views from the Frontline LITE* questionnaire is supposed to be used when it is not practical to administer the *Views from the Frontline* questionnaire (GNDR, 2010). The simple structure of the *Views from the Frontline LITE* questionnaire may have affected the results.

1.4 Structure

The main structure of this examination paper is a set of three parts; the *theoretical foundation*, the *case study* and finally the *closure*.



The theoretical foundation introduces the *Hyogo Framework for Action*, review tools for assessing the *Hyogo Framework for Action* implementation level and disaster risk management in South Africa. The purpose of part one is to provide understanding of the subject of the

thesis and present up-to-date information on the national *Hyogo Framework for Action* implementation progress in South Africa.

Part 2 – the case study – gives a more thorough description of the case study methodology. It also presents the obtained results on the *Hyogo Framework for Action* implementation at the local level of Kabokweni location. Finally, this part contains an analysis of the results.

The closure includes reflections on all aspects of the thesis. To sum up the thesis the closure part is ended with a summary of the findings along with conclusions that give answers to the two research questions.

Introduction

PART 1

Theoretical foundation

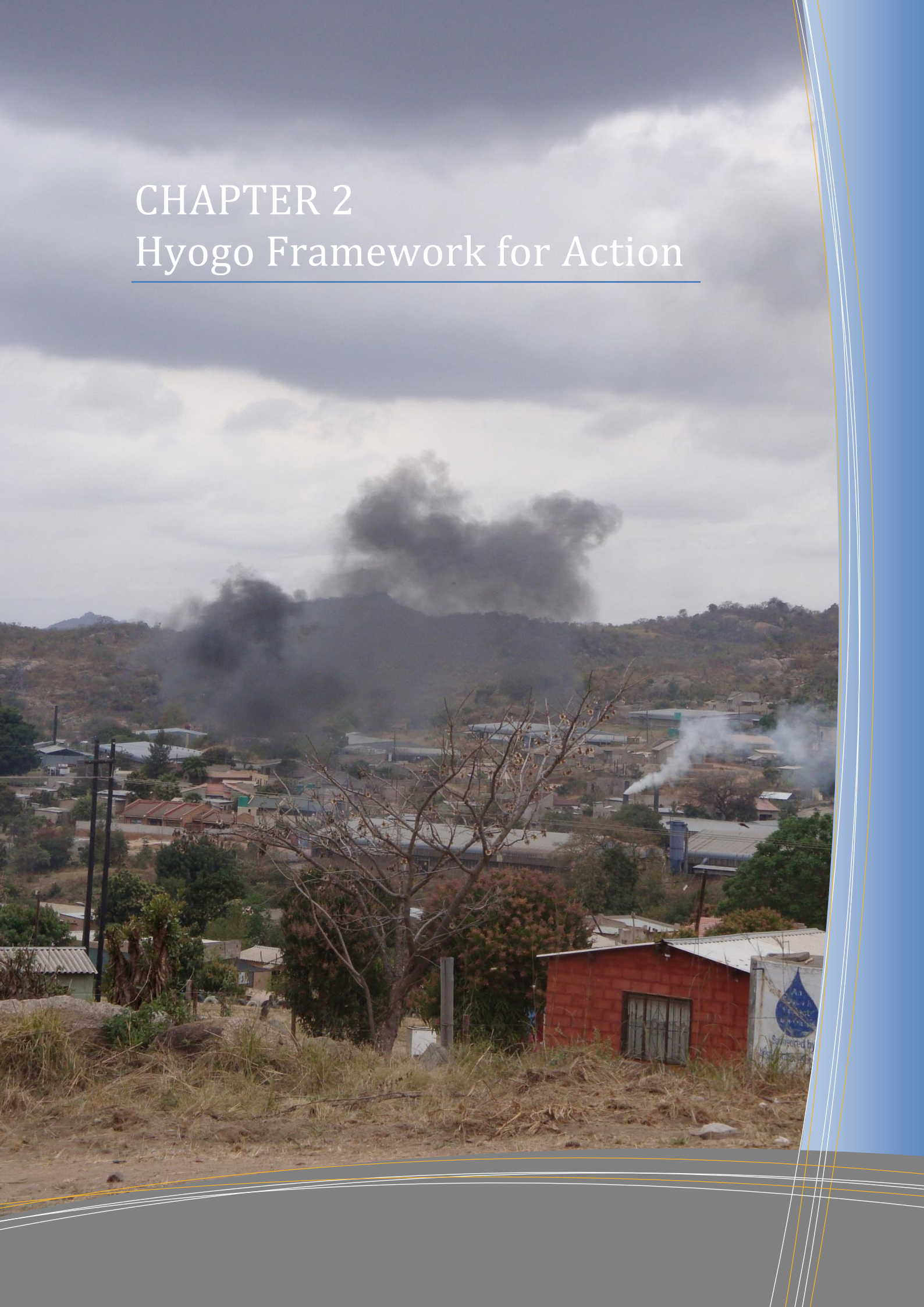
This first part of the thesis provides a theoretical foundation with information about the Hyogo Framework for Action and the disaster risk management organisation in South Africa.

The first two chapters in this part present facts about the Hyogo Framework for Action; about the background to the Hyogo Framework for Action, an introduction to it, available review tools and implementation assessment results.

The last chapter provides information about disaster risk management in South Africa; the organisational structure, the national disaster risk framework adopted in South Africa and the relationship between the national framework and the Hyogo Framework for Action.

CHAPTER 2

Hyogo Framework for Action



CHAPTER 2

Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters

This chapter first describes the background of the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* (HFA), including the preceding *International Decade for Natural Disaster Reduction* and the *Yokohama Strategy and Plan of Action for a Safer World*. Thereafter an introduction to the HFA follows; the main goals and objective, cross cutting issues and the five *Priorities for Action*. This information will later on form the basis for the analysis.

Disaster

“A serious disruption of the functioning of a community or a society involving wide-spread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.”

(UN/ISDR, 2009, p. 9)

Risk

“The combination of the probability of an event and its negative consequences.”

(UN/ISDR, 2009, p. 25)

A United Nations (UN) resolution from 1987 describes how natural disasters during the two decades preceding 1987 claimed about 3 million lives worldwide, adversely affected the lives of at least 800 million people and resulted in costs of immediate damage exceeding \$23 billion. Because of this, the UN recognised the importance of reducing the impact of natural disasters on all people, particularly in developing countries. As a result, the UN General Assembly decided to dedicate the years 1990-2000 as the decade in which the UN would pay special attention to fostering international cooperation in the field of disaster risk reduction. This was called the *International Decade for Natural Disaster Reduction*. (UN, 1987)

Even though governments have been working with disaster risk reduction both before and since the *International Decade for Natural Disaster Reduction* was announced, disasters still affect numerous people each year. The Haiti earthquake disaster mentioned in the introduction is just one of many disasters that have taken place in 2010 with huge damages as a result. These disasters show that even though efforts have been made in the past, there are still much to do in the area of disaster risk reduction. Consequently, disaster risk reduction is still an important topic, as is the implementation of the frameworks regarding disaster risk reduction, where HFA is the most recent.

2.1 Background

The HFA is the most recent framework in a line of several attempts to improve disaster risk reduction, during the last two decades, see Figure 1.

The *International Decade for Natural Disaster Reduction* and the *Yokohama Strategy and Plan of Action for a Safer World* preceding the HFA are described in the following sections.

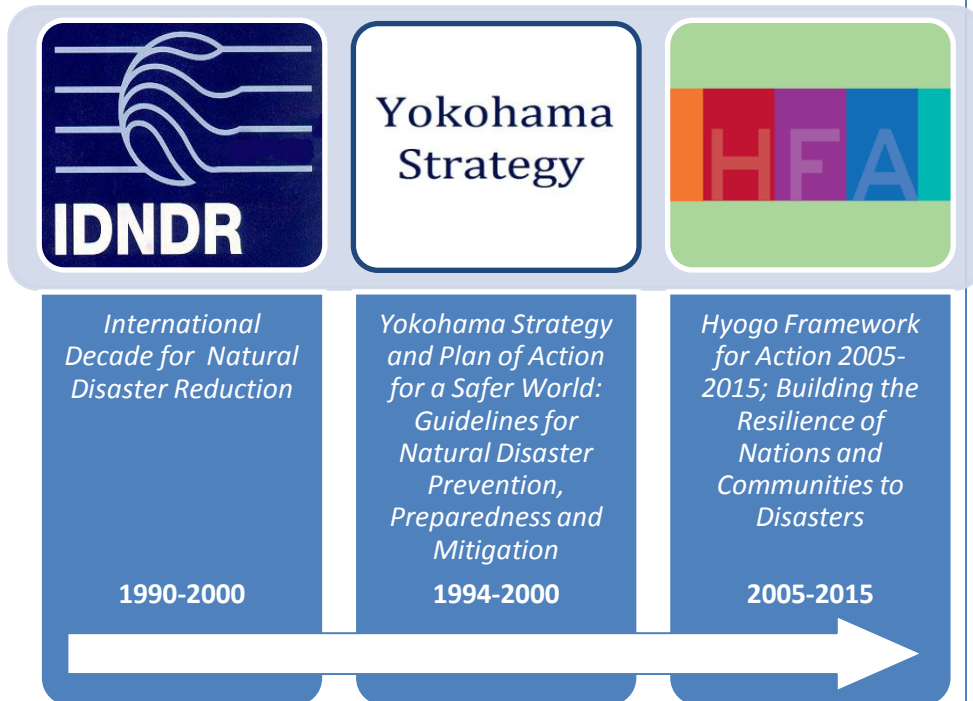


Figure 1 – Attempts on improving disaster risk reduction during the last two decades.

2.1.1 The Yokohama Strategy and Plan of Action for a Safer World

The *International Decade for Natural Disaster Reduction* became the UN's response to the past losses due to natural disasters and the increasing vulnerability in society. The objective of the decade was to reduce loss of life, property damage and social and economic disruption caused by natural disasters, especially in developing countries, through organised international actions. (UN, 1987)

As a follow-up on the *International Decade for Natural Disaster Reduction* a world conference on natural disaster risk reduction was held in Yokohama, Japan in May 1994. The participants of the conference acknowledged that the impact of natural disasters had increased in recent years and that society in general had become more vulnerable to natural hazards. It was also recognised that it was not sufficient with disaster response alone, since disaster response is expensive and achieves only temporary results. Prevention, contrary to response, contributes to lasting improvements in safety, thus the participants agreed that future focus ought to be on disaster prevention, mitigation, preparedness and recovery. As a result of this and to enhance the work

PART 1 – Theoretical foundation

Resilience

“The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.” (UN/ISDR, 2009, p. 24)

Vulnerability

“The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.” (UN/ISDR, 2009, p. 30)

on disaster risk reduction a new framework was adopted, the *Yokohama Strategy and Plan of Action for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation* (hereafter referred to as the Yokohama Strategy). (UN, 1994, pp. 4-5)

The basis for the Yokohama Strategy emphasise that the natural phenomena causing disasters generally is beyond human control, but that vulnerability in general is a result of human activity. Because of this it is important for society to take actions to prevent and reduce the effects of disasters. In the effort towards effective disaster management, the full continuum from recovery through rehabilitation, reconstruction and development to prevention must be the concept guiding actions towards the reduction of human and economic losses. (UN, 1994, p. 9)

2.2 Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters

In 2005 a new world conference on disaster risk reduction was held in Kobe, Hyogo, Japan. In advance of the upcoming conference in 2005 the UN General Assembly called for a review of the implementation of the Yokohama Strategy. During 2004 a review of the progress in implementing the Yokohama Strategy was conducted (UN, 2005, p. 3). The review emphasised among others the importance of a pro-active approach on informing and involving people in disaster risk reduction in their local communities (UN/ISDR, 2007b, p. 2). The Yokohama Strategy called for extra budgetary resources to encourage and implement the activities of the *International Decade for Natural Disaster Reduction* (UN, 1994) but the review identified shortages in allocated resources for risk reduction objectives while noting potential to make better use of existing resources for more effective disaster risk reduction (UN/ISDR, 2007b, p. 2).

One of the main objectives of the world conference in 2005 was to conclude the Yokohama Strategy with the intention to update the upcoming framework for the years 2005-2015. The HFA was formed out of the main areas where the review of the Yokohama Strategy had identified gaps and challenges (UN/ISDR, 2007b, p. 2). The conference took place less than a month after the *Indian Ocean tsunami* disaster, which affected people from all over the world, and motivated the participants of the conference who pledged to work for a world safer from disasters (UN/ISDR, 2005). The product of the conference came to be that 168 UN member states adopted a new framework for disaster risk reduction, the HFA (UN/ISDR, 2005). The implementation of the HFA, during the years 2005-2015, is expected to result in the following outcome;

“The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries.”
(UN/ISDR, 2007b, p. 3)

Three strategic goals were also set to achieve the expected outcome for the coming decade of 2005-2015 (UN/ISDR, 2007b, pp. 2-3). See Figure 2 on page 17 to view the expected outcome and short version of the three strategic goals in the HFA context.

For each and all of the efforts to achieve the strategic goals and expected outcome of the decade of 2005-2015 there are cross cutting issues that should be taken into account. See Figure 2 to view the cross cutting issues in the HFA context. Some highlights from these cross cutting issues are (UN/ISDR, 2007b, pp. 4-5):

- A multi-hazard approach should be integrated in policies, planning and strategies related to disaster management.
- Gender perspectives and cultural diversity should be incorporated in all disaster risk management policies, plans and processes.
- Special attention should be given the disaster-prone developing areas due to their higher vulnerability to disaster risk.
- Enhancing cooperation between all levels through information, research and technology exchange.
- Promoting a culture of awareness and safety in society and organisations.

Financing

Although every state involved in the HFA have the primary responsibility for financing the HFA implementation there is a need for international cooperation and support, especially in developing countries. (UN/ISDR, 2007b, p. 13)

2.2.1 The five Priorities for Action

The HFA is based on five issues called the *Priorities for Action* (hereafter abbreviated as PFA). These are derived from five identified main areas of the Yokohama Strategy review and are shaped in the light of the expected outcome and strategic goals from the world conference in 2005. (UN/ISDR, 2007b, p. 5) See Figure 2 on page 17 to view the five PFAs in the HFA context. The five PFAs are (UN/ISDR, 2007b, p. 6):

1. *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.*
2. *Identify, assess and monitor disaster risks and enhance early warning.*
3. *Use knowledge, innovation and education to build a culture of safety and resilience at all levels.*
4. *Reduce the underlying risk factors.*
5. *Strengthen disaster preparedness for effective response at all levels.*

Each PFA is divided into a number of key activities that states, organisations and stakeholders should take into account in their approach to disaster risk reduction and implement to their own capacity (UN/ISDR, 2007b, p. 6).

Here follows a more detailed description of each of the PFAs, along with highlights from the key activities.

2.2.1.1 Priority for Action 1: Make disaster risk reduction a priority

The first PFA indicates that to make disaster risk reduction effective it must be integrated at all levels of government and into all issues linked to disaster management (UN/ISDR, 2007b, p. 6). To be able to protect lives and livelihood from adverse effects of natural hazards it is important that public and private stakeholders incorporate disaster risk in decision making. States may hence revise their policies and laws as well as plans, programmes and projects to integrate disaster risk reduction. (UN/ISDR, 2007a, p. 2)

The key activities emphasise the importance of legislation to make disaster risk reduction a priority (UN/ISDR, 2007b, p. 6), and community participation to ensure that local needs are met (UN/ISDR, 2007a, p. 2). It is also important that governments have a strong and positive political attitude towards disaster risk reduction to prioritise the allocation of resources to implement disaster risk reduction into policies, laws and regulations in all relevant sectors at all levels (UN/ISDR, 2007b, p. 7).

Capacity

“The combination of all the strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals.”
(UN/ISDR, 2009, p. 5)

2.2.1.2 Priority for Action 2: Know the risks and take action

One important challenge that the states confront is to become aware of what risks due to natural hazards they are exposed to and how it could affect different regions and communities. In order to work effectively it is important to have up to date information about disaster occurrence. Impacts and losses should also be recorded and analysed on a regular basis. The information must thereafter be distributed to decision makers, the general public and vulnerable populations. Taking action based on the up to date information will reduce the vulnerability due to natural hazards. (UN/ISDR, 2007b, p. 7).

Another important part to reduce vulnerability is the use of early warning systems. Many lives can be spared when early warning systems provide correct information about hazards affecting vulnerable populations. (UN/ISDR, 2007a, p. 3)

2.2.1.3 Priority for Action 3: Build understanding and awareness

People that are well informed about what to do when disasters occur can help reduce the vulnerability to disasters substantially, especially if they are motivated to take action (UN/ISDR, 2007a, p. 3). The public awareness of hazards can be increased in many ways e.g. by incorporating education on disaster prevention in school curricula (UN/ISDR, 2007b, p. 9).

Media engagement should be encouraged in order to stimulate a culture of disaster resilience and a strong society commitment. Public education campaigns and consultations at all levels of society are examples of activities that promote media engagement. (UN/ISDR, 2007b, p. 10)

2.2.1.4 Priority for Action 4: Reduce risk factors

By investing in simple, well known measures underlying risk factors can be reduced with increased resilience as a result (UN/ISDR, 2007a, p. 4). Applying building standards to improve critical infrastructure, e.g. the health sector, public facilities, physical infrastructure (like water and power plants) and communication transports, are examples of measures that reduce risk factors (UN/ISDR, 2007b, p. 11).

It is also important that disaster risk reduction is taken into account in all kinds of land use planning. This includes integrated disaster risk reduction within environmental and natural resource planning as well as issues associated with the existing climate and climate changes. Disaster risk reduction factors must also be taken into consideration in building projects. This could for example include the encouragement of disaster resilient buildings and the identification of land zones where settlement is safe. (UN/ISDR, 2007b, pp. 10-12)

Including education about disaster risk reduction issues in the school curricula is an effective way to build a culture of safety, a value in the society that also can be transmitted to future generations. (UN/ISDR, 2007c, p. 65)

Public awareness
“The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.”
(UN/ISDR, 2009, p. 22)

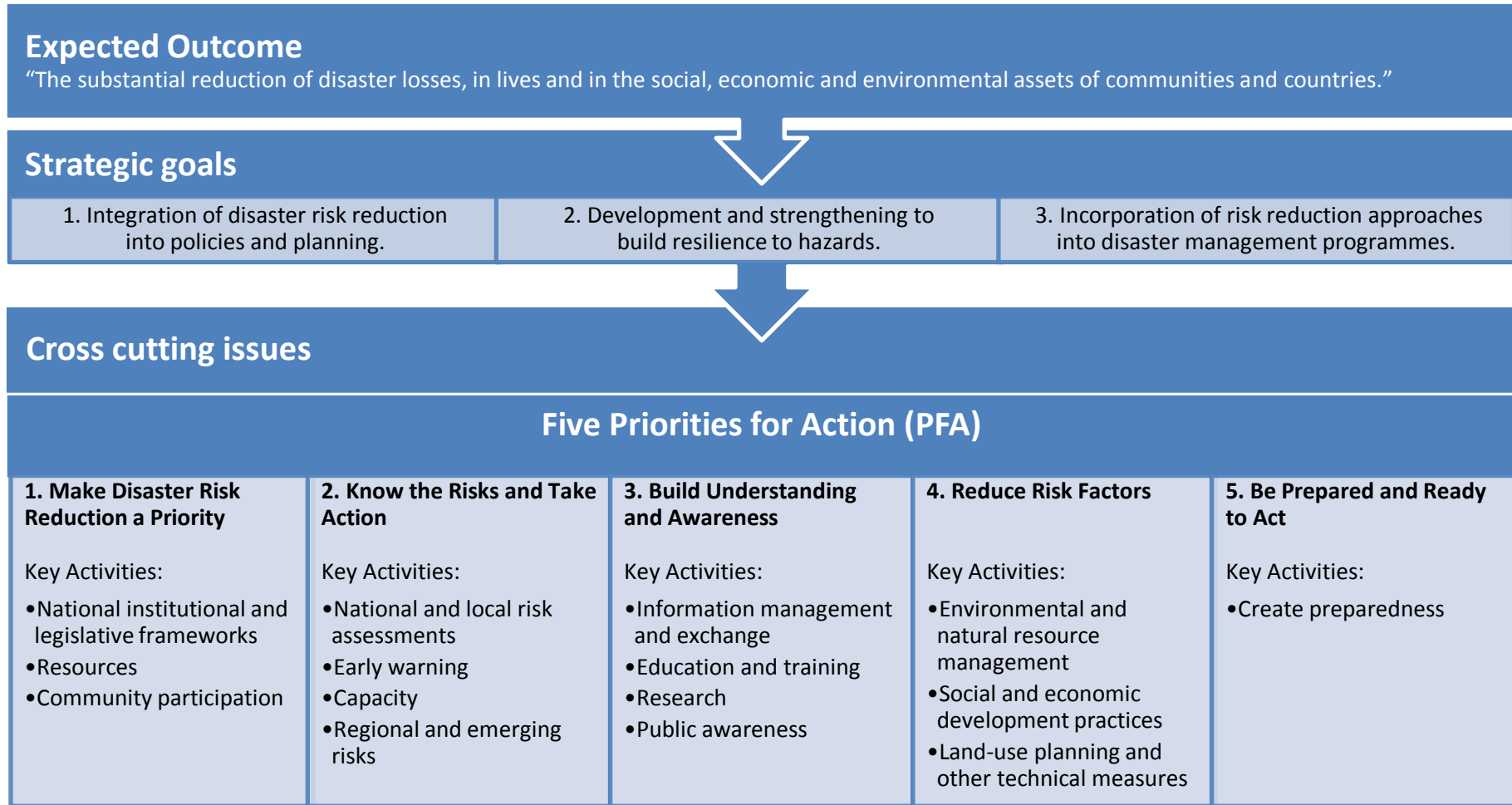
PART 1 – Theoretical foundation

2.2.1.5 Priority for Action 5: Be prepared and ready to act

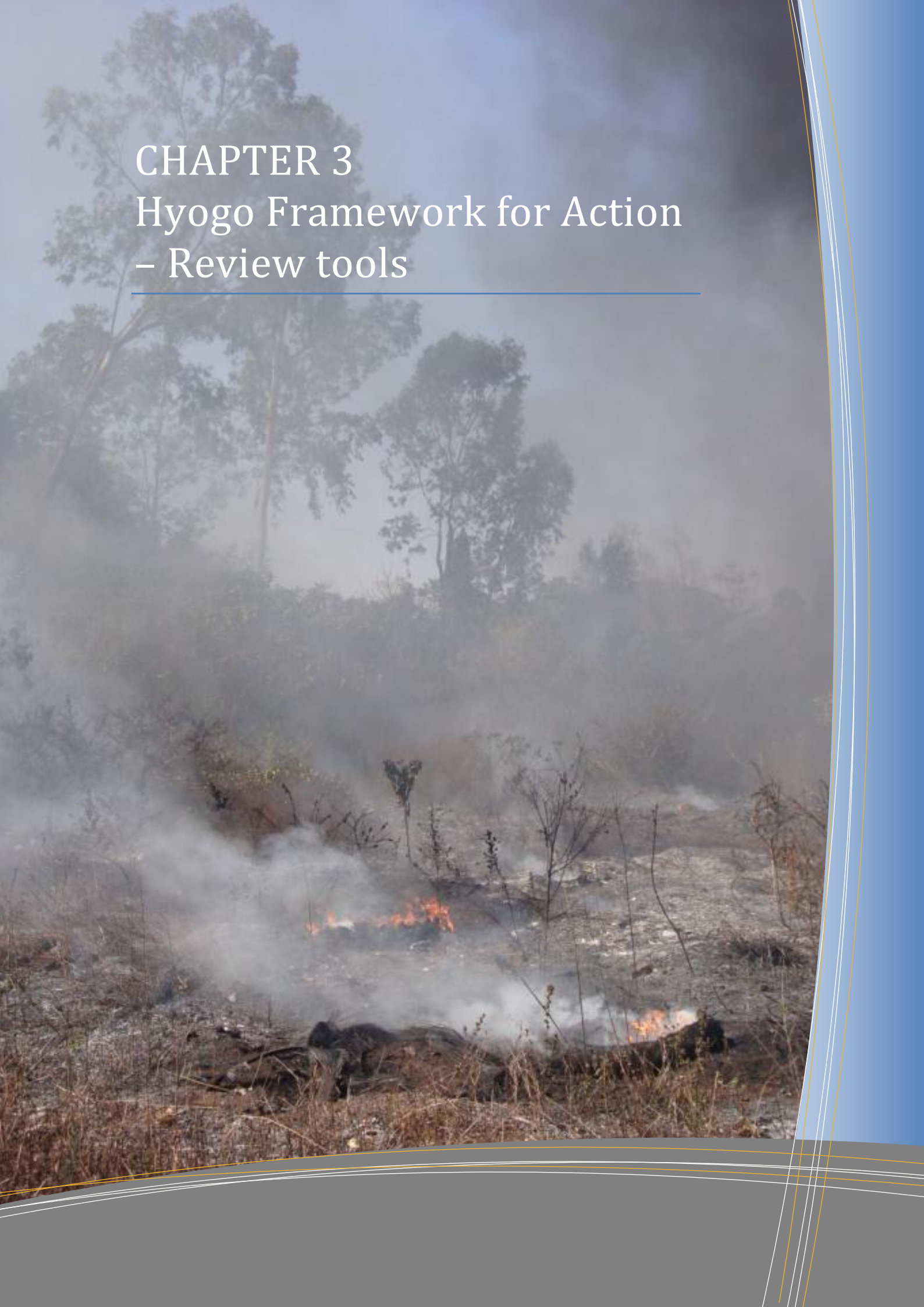
Increased preparedness will increase resilience in society (UN/ISDR, 2007a, p. 3). Attaining effective preparedness requests the PFA 1-4 to be implemented. PFA 1 contributes to strengthening institutional structure, capacities and improved legislation frameworks which are conditions for preparedness measures and responsibilities. PFA 2 provides tools for preparedness and contingency planning through risk identification, vulnerability analysis and early warning systems. Through PFA 3, which contributes to enhancing the public awareness, knowledge and communication systems, the capacity to develop preparedness and contingency plans are enabled. PFA 4, identification of underlying risk factors, contributes further to this. Effective implementing of PFA 5 is thus dependent on the requests of PFA 1-4 to be implemented. (UN/ISDR, 2007c, p. 121)

PART 1 – Theoretical foundation

Figure 2 - A schematic summary of the Hyogo Framework for Action 2005 – 2015 (UN/ISDR, 2007b)



PART 1 – Theoretical foundation



CHAPTER 3
Hyogo Framework for Action
– Review tools

CHAPTER 3

Hyogo Framework for Action – Review tools

There are several methods available for assessing the implementation of the *Hyogo Framework for Action*. In this chapter the two methods *Hyogo Framework for Action Monitor* and *Views from the Frontline* are further described. Together, these two methods can give a better picture of the progress of implementing the HFA.

The *Views from the Frontline LITE* has been used in the case study of this thesis and is presented in the last section of this chapter.

3.1 Hyogo Framework for Action Monitor

The *HFA Monitor* is an online tool developed and distributed by the UN/ISDR. It is being used in the process of reviewing the implementation of the HFA. The main purpose of the tool is to help stakeholders in their review process and in their work on disaster risk reduction in accordance with the HFA. (PreventionWeb, 2010c)

Through the review process existing problems can be identified and decision makers can be made aware of their importance and put them on the political agenda. Solutions of the problems can also be promoted through e.g. policies, programmes and plans etc. The process may also contribute to the development of systems to manage data and information and generic standards relating to disaster risk reduction. (PreventionWeb, 2010d)

In May 2009 an assessment report, using the *HFA Monitor*, was presented. It is called the *2009 Global Assessment Report on Disaster Risk Reduction* and reports the progress of the implementation of the HFA and the work on disaster risk reduction up until 2009 (PreventionWeb, 2010e). At the time of its release 62 states had reported national interim progress reports, South Africa was though not one of them (PreventionWeb, 2010a).

3.2 Views from the Frontline – An Introduction

The participatory research and learning project *Views from the Frontline* (hereafter VFL), led by the *Global Network of Civil Society Organisations for Disaster Reduction* (hereafter GNDR), is the first independent

assessment of the implementation progress of the HFA at the local level. Initially, the VFL assessment involved 20 states but it has now expanded to 48 states, including South Africa, and counting. In the pilot phase over 400 organisations conducted face-to-face interviews with 5290 people, which makes VFL the largest independent, global assessment of disaster risk reduction ever undertaken at local level. (GNDR, 2009a, p. 3)

The VFL assessment contains a questionnaire with a mix of qualitative and quantitative questions based on the five PFAs as well as the cross cutting issues. It is the first of several planned local level reviews designed to complement the review at national level, the *HFA monitor*, mentioned earlier. The main indicators of the VFL questionnaire are therefore comparable to the *HFA Monitor* indicators. (GNDR, 2009a, p. iv)

Results from the *HFA Monitor* and the VFL assessment give a better picture of the progress of implementing the HFA. The results facilitate the identification of critical factors and actions that influence the progress of HFA implementation. With both national (*HFA Monitor*) and local (VFL) level assessments, connections can be made between policy making at national level and policy execution at local level. (GNDR, 2009a, p. iv)

The main objectives of the VFL assessment are shown below (GNDR, 2009a, p. iv):

"To provide an overview of progress at the local level within participating countries."

"To strengthen public accountability for disaster risk reduction policy execution by establishing a local level monitoring system and relevant baselines."

"To enhance civil society monitoring, research, analytical and advocacy capabilities."

"To increase dialogue and understanding between different groups responsible for reducing risk."

3.2.1 The VFL methodology

The method used in the VFL assessment is based on a focus group approach for measuring the local level implementation progress of HFA. The following three local level stakeholder groups were involved: local government representatives, civil society organisations and community representatives. (GNDR, 2009a, p. 6)

The project consists of two main components – research and learning. The research part consists of face-to-face interviews and focus group

Civil Society Organisations (CSO)

There is no commonly accepted or legal definition of a civil society organisation (The European Commission and Civil Society, 2010). According to GNDR (2010) a civil society organisation can be a non-governmental organisation and might include organisations like social service and health organisations, student or youth organisations, faith-based organisations or environmental organisations.

discussions, using the VFL questionnaire. The results show perceptions of the implementation process regarding the five PFAs of the HFA. The learning phase uses the research results to increase uniformity in policies and recommendations for the national, regional and international levels. (GNDR, 2009a, p. 7)

The GNDR provides support and communications and is in charge of the learning phase of the VFL assessment. By analysing the results from the states and regions, the GNDR will raise awareness of local identified needs referring to the five PFAs of the HFA. (GNDR, 2009a, p. 7)

3.2.2 The VFL results

The results from the VFL research phase are collected from the three local level stakeholder groups. A total of 33 states managed to complete their VFL questionnaires within the set timeframe, and their results were complemented by qualitative data from the interviews and group discussions regarding the HFA implementation. (GNDR, 2009a, p. 11)

Figure 3 shows the latest South African results from the VFL assessment, which was presented in 2009. The figure shows the results grouped according to the five PFAs. The results were obtained using a total of 139 participants represented as 4 % local government representatives, 24% civil society organisations and 36% local community representatives.

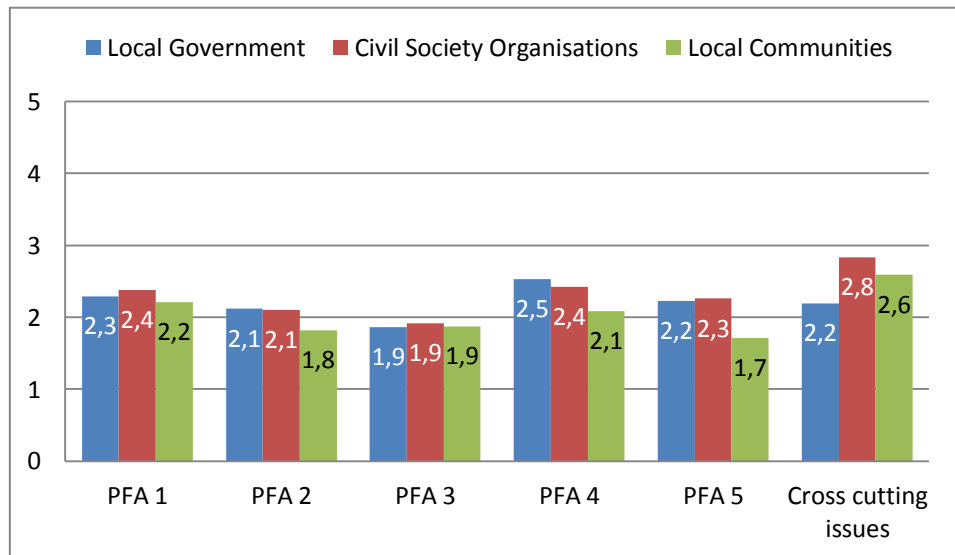


Figure 3 - The South African Views from the Frontline perception of the Hyogo Framework for Action implementation progress, presented in 2009 (GNDR, 2009b). The results are presented in the categories Local Government, Civil Society Organisations and Local Communities. PFA is acronym for Priority for Action.

Since the five-point scale in the VFL assessment results has a starter value of 1 (*No, not at all*), the results originating from a method using this scale will never get below 1. It is advised to keep this in mind when studying the VFL assessment results since the results are presented with a starter value of zero on the graph y-axis signifying the level of implementation.

The five-point scale shown in Figure 3 is used in the VFL assessment to estimate the implementation progress of the HFA. The scales signify the following (GNDR, 2009a, p. 9):

1. No, not at all.
2. To a very limited extent.
3. Some activity but significant scope for improvements.
4. Yes, but with some limitations in capacities and resources
5. Yes, with satisfactory, sustainable and effective measures in place.

The VFL assessment indicates that the overall HFA implementation progress has not substantially improved. Figure 4 (below) shows that only five states attain an overall level of 3 (yellow fields), which indicates *“some activity but with significant scope for improvement”*. The remaining of the 33 states has reached even lower levels. (GNDR, 2009a, p. 12)

When excluding Vietnam, because of its low response rate, the report shows that the Philippines had the highest overall HFA implementation level among the participating states. The results indicate that the Philippines government supports the formation of local level partnerships which is a key factor for local progress. The data from the VFL report indicates that states that have made greatest progress are ones that have adopted local community-based approaches. (GNDR, 2009a, p. 13)

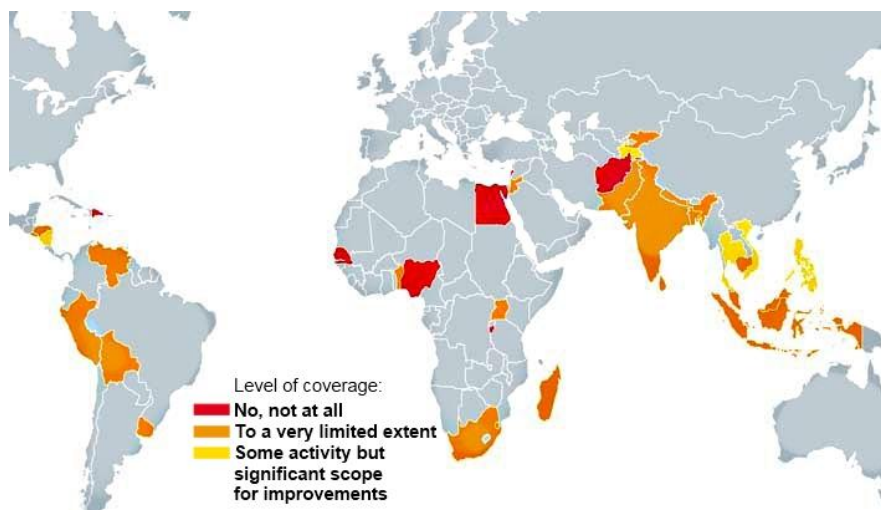



Figure 4 - The VFL assessment level of coverage. (GNDR, 2009a, p. 33)

3.2.3 Views from the Frontline LITE

The *Views from the Frontline LITE* offers an alternative method to gather baseline data for assessing the HFA level of implementation. Mainly, the potential respondents are invited to participate directly online in a simplified version of the VFL questionnaire; the VFL LITE questionnaire. The VFL LITE questionnaire is designed to be used in cases when the VFL questionnaire is not practical to administer. (GNDR, 2010) VFL LITE guidelines provide the user with helpful information on how to use the questionnaire.(GNDR, 2010)

The VFL LITE questionnaire contains a reduced set of 36 questions and serves to offer respondents to conduct it online, which is why the VFL LITE questionnaire requires online computer access. In the case of no internet access there is also a printable version of the VFL LITE questionnaire available. (GNDR, 2010) The printable version has been used in the case study for this thesis. See Appendix A for a full view of the VFL LITE questionnaire.

A photograph of a large, leafless tree in a dry, open landscape. In the foreground, there is a fire burning through tall, dry grasses. The sky is clear and blue. The image is framed by a blue border on the right and a grey border at the bottom, with white and yellow decorative lines.

CHAPTER 4

Disaster risk management in South Africa

CHAPTER 4

Disaster risk management in South Africa

This chapter describes the South African disaster risk management machinery, explaining the country's own disaster management framework and government structure.

Disaster risk management has traditionally been about focusing the national resources on post-disaster response and recovery operations. However, the HFA uses an approach that has a stronger focus on pre-disaster risk management, like preparedness and prevention. This leads to a new level of communication and cooperation between international, regional and municipal agencies. (WMO, 2010)

4.1 The National Disaster Management Act and Framework

Disaster management in South Africa has its roots in the *Civil Protection Act 67 of 1977*. It was not until the Cape Flats, a residential area in Cape Town, was flooded in 1994 along with a new government taking power that the *Civil Protection Act 67 of 1977* was regarded as insufficient and it was realised that a new holistic aspect on disaster management was needed. This resulted in South Africa's first national policy on disaster management, the *White Paper on Disaster Management* launched in January 1999. (Van Niekerk, 2005)

Later in 2003 the efforts on disaster risk reduction made by the South African government and different stakeholders were set forth with the release of the *Disaster Management Act 57 of 2002* (hereafter referred to as the Act) (Van Niekerk, 2005). The Act is more or less a development of the *White Paper on Disaster Management* (Van Niekerk, 2005) and generally promotes integrated and coordinated disaster risk management and the creation of disaster management centres. (NDMC, 2005, p. 1)

The Act specified a legal instrument in 2005, the *National Disaster Management Framework*, providing policies on disaster management suitable for the entire country. The *National Disaster Management Framework* acknowledges the different disaster risks in South Africa and prioritises measures that reduce vulnerability. The framework consists of four *Key Performance Areas* and three *Enablers* that support the

Disasters are severe threats to the African countries, especially because of their insufficient capability to predict, respond to and mitigate disasters. Economical and technical support is a requirement to empower the African capacity in early warning systems, prevention, preparedness, response and recovery. (UN/ISDR, 2007b, p. 14)

achievement of the *Key Performance Areas*, see Table 1. (NDMC, 2005, pp. 1-2)

The *National Disaster Management Framework* calls for legal requirements to promote disaster management capacity building, training, education and research. For this reason, the framework requested the *National Disaster Management Centre* (NDMC) (further described in section 4.3.1) to conduct the *National Education, Training and Research Needs and Resources Analysis* (further on referred to as NETaRNRA) for disaster risk management in South Africa. (NDMC, 2010a, p. 2) For further information about the NETaRNRA and the results see section 4.4.

Though the Act predates the HFA it is considered to be consistent with all the five *Priorities for Action* (PFA) of the HFA (Oosthuizen, 2009), so is the *National Disaster Management Framework* (NDMC, 2005). Therefore the NETaRNRA can represent the South African implementation progress of the HFA, which is helpful since there currently is no official report available on the South African implementation progress of the HFA (NDMC, 2010b, p. 13).

Table 1 shows how the different requirements of the Act and the *National Disaster Management Framework* correspond with the HFA.

Table 1 - Comparison between the *Hyogo Framework for Action (HFA)*, the *Disaster Management Act* and the *National Disaster Management Framework* made in the NETaRNRA. According to the NETaRNRA all of the *Priorities for Action* in the HFA are covered by the *Disaster Management Act* and *National Disaster Management Framework*. For this reason, the NETaRNRA can be seen as the latest report on the South African implementation progress of the HFA. (NDMC, 2010b, p. 11)

Disaster Management Act and National Disaster Management Framework	Hyogo Framework for Action
<p>Purpose of the Disaster Management Act: Provide for a disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the consequences and improve preparedness, response and recovery. Establish national, provincial and municipal disaster management centres.</p>	<p>Goal 1: A more effective integration of disaster risk considerations into development strategies, policies and planning at all levels of organisation, with a particular emphasis on prevention of disasters, preparedness and reduced vulnerability.</p> <p>Goal 2: Development and reinforcement of institutions, mechanisms and capacity of all levels, which will systematically increase resilience to hazards.</p> <p>Goal 3: A systematic integration of disaster risk reduction methods in the performance at preparedness, response and recovery programmes.</p>
<p>Key Performance Area 1: Establish nationally integrated institutional capacity to enable the effective implementation of disaster risk management policy and legislation.</p>	<p>Priority for Action 1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.</p>
<p>Key Performance Area 2: Establish a uniform approach to assessing and monitoring disaster risks to facilitate disaster risk management planning and disaster risk reduction.</p>	<p>Priority for Action 2: Identify, assess and monitor disaster risks and enhance early warning.</p>
<p>Enabler 2: Promote a culture of risk avoidance among stakeholders by qualifying all role players through integrated education, training and public awareness supported by scientific research.</p>	<p>Priority for Action 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels.</p>
<p>Key Performance Area 3: Ensure all stakeholders develop and implement integrated disaster risk management plans and risk reduction programmes in accordance with approved frameworks.</p>	<p>Priority for Action 4: Reduce the underlying risk factors.</p>
<p>Key Performance Area 4: Ensure effective and appropriate disaster response and recovery.</p>	<p>Priority for Action 5: Strengthen disaster preparedness for effective response at all levels.</p>
<p>Enabler 1: Guide the development of comprehensive information and communication system and establish an integrated network with all role players.</p>	<p>Mainly Priority for Action 3, but also in the other Priorities.</p>
<p>Enabler 3: Establish mechanisms for funding.</p>	<p>Priority for Action 1, 4 and 5.</p>

4.2 South African governmental structure

To be able to understand the structure of the disaster management in South Africa a short introduction to the South African governmental structure is essential since the disaster management structure follows the structure of the government to a large extent.

The structure of government is divided into three levels; national government, provincial government and local government. The level of local government is divided into three different units of government; metropolitan, district and local municipalities, see Figure 5. The larger cities are metropolitan municipalities, while the more rural parts are district municipalities. Some examples of cities that are metropolitan municipalities are Cape Town, Johannesburg and Durban (GCIS, 2010).

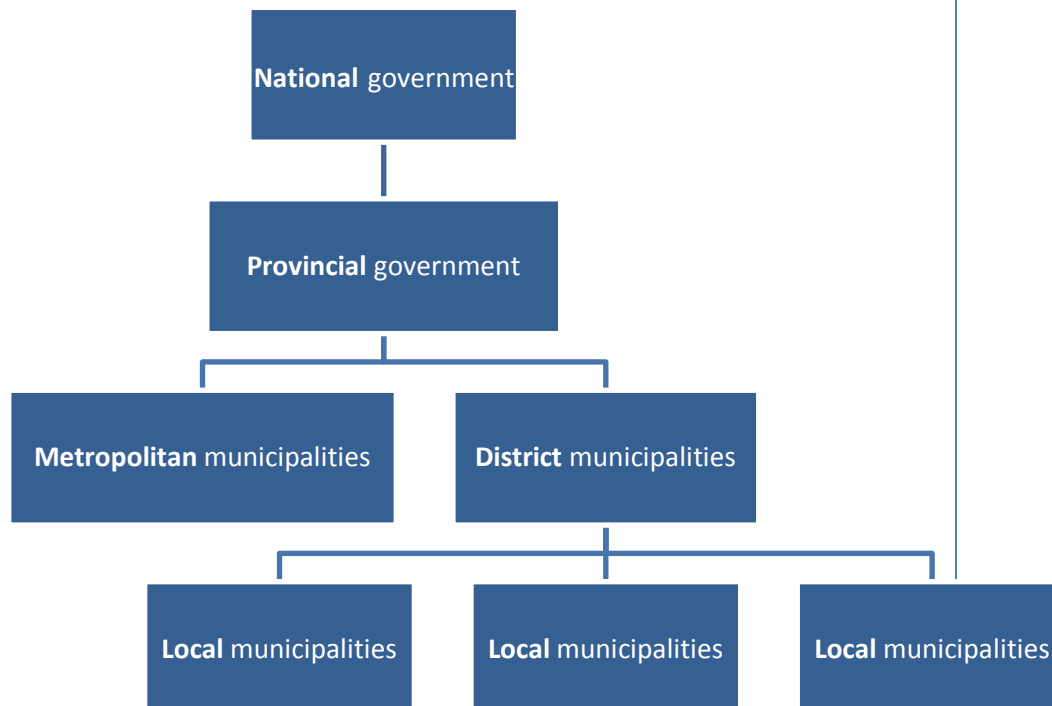


Figure 5 - The South African governmental levels. The government is divided into three levels; national government, provincial government and local government. While the district municipalities comprise a number of local municipalities, the metropolitan municipalities are single units. (Van Niekerk, 2005, p. 90)

The district municipalities comprise a number of local municipalities; this is not the case with the metropolitan municipalities which do not have any local municipalities within their area, see Figure 6. (Van Niekerk, 2005, pp. 89-91)

Disaster risk management

“The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.”

(UN/ISDR, 2009, p. 10)

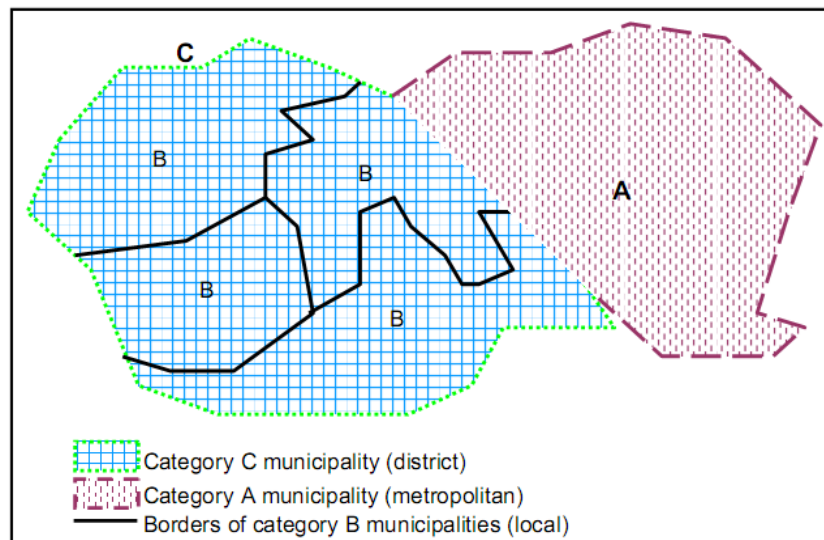


Figure 6 – A schematic figure of local level units of government; the district municipalities comprising local municipalities and the metropolitan municipality without any local municipalities within their jurisdiction. (Van Niekerk, 2005, p. 92)

The levels of government and their roles in relation to each other can be described as the strategic level, tactical level and operational level. The national level of government can be called the strategic level where policies and plans for the future are formulated. The provincial government can be called the tactical level where the objectives of the policies and plans are to be implemented. The local level of government can be called the operational level where the objectives of the policies and plans are substantialised. Even though these three different levels describes the hierarchy within national, provincial and local government it is also possible to find these three levels within each and every governmental level, i.e. each level of government has their own decision making levels. (Van Niekerk, 2005, pp. 92-96)

4.3 Main actors in South African disaster risk management

The disaster risk management functions in South Africa are coordinated by national, provincial and municipal centres. It is important to locate the centres close to the highest level of decision-making in their respective areas to give them enough authority to integrate disaster risk reduction into developmental processes, but also to span across departments which have individual responsibility for disaster risk management. (NDMC, 2005, p. 9)

The structure of disaster management centres in South Africa to a large extent follows the structure and responsibilities of each level of government. The key responsibilities of the centres are defined in the *National Disaster Management Framework* and are further described in this section.

4.3.1 National disaster management centre

The *National disaster management centre* (NDMC) is the South African central unit for disaster risk management at the national level. The NDMC is mainly responsible for guidance and developing disaster risk management frameworks and policies, monitoring the implementation progress and improving cross-functional activities related to disaster risk management. (NDMC, 2005, p. 9)

All NDMC actions must be done in accordance with the *National Disaster Management Framework* and the *Disaster Management Act*. The Head of the NDMC is responsible for ensuring that the NDMC is performing its duties in the way that is described in the *Disaster Management Act*. (NDMC, 2005, p. 9)

The *Disaster Management Act* defines some key responsibilities for the NDMC (NDMC, 2005, p. 10). Some of these are presented in Figure 7 on page 33.

4.3.2 National organs of state

Every national organ of state, e.g. national departments, are connected to the NDMC and must define its roles and responsibilities regarding disaster risk reduction and make sure that they fulfil the obligations of the *Disaster Management Act*. (NDMC, 2005, p. 11)

Some of the key activities for the national organ of state are presented in Figure 7 on page 33.

4.3.3 Provincial disaster management centres

The provincial disaster management centres are central units of disaster management in each province. Their main responsibility is to support the NDMC, the metropolitan and district disaster management centres in the province and prepare the municipalities for the event of a disaster by supporting and guiding them in appropriate ways. (NDMC, 2005, p. 12)

The provincial disaster management centres are the links between the national level and the provincial and municipal levels of disaster risk management. (NDMC, 2005, p. 12) See Figure 7 on page 33 for further information on the key responsibilities of the provincial disaster management centres.

4.3.4 Municipal disaster management centres

The municipal disaster management centres are central units for disaster risk management in metropolitan and district municipalities. Every arrangement in the municipal disaster management centres must coincide with the national and provincial arrangements and allow cooperation between the different levels. (NDMC, 2005, p. 14)

In the event of a disaster, the municipal disaster management centres should provide support and guidance to the municipalities and furthermore mobilise municipal infrastructure and resources for local disaster management. The main key responsibilities are presented in Figure 7 on page 33. (NDMC, 2005, p. 14)

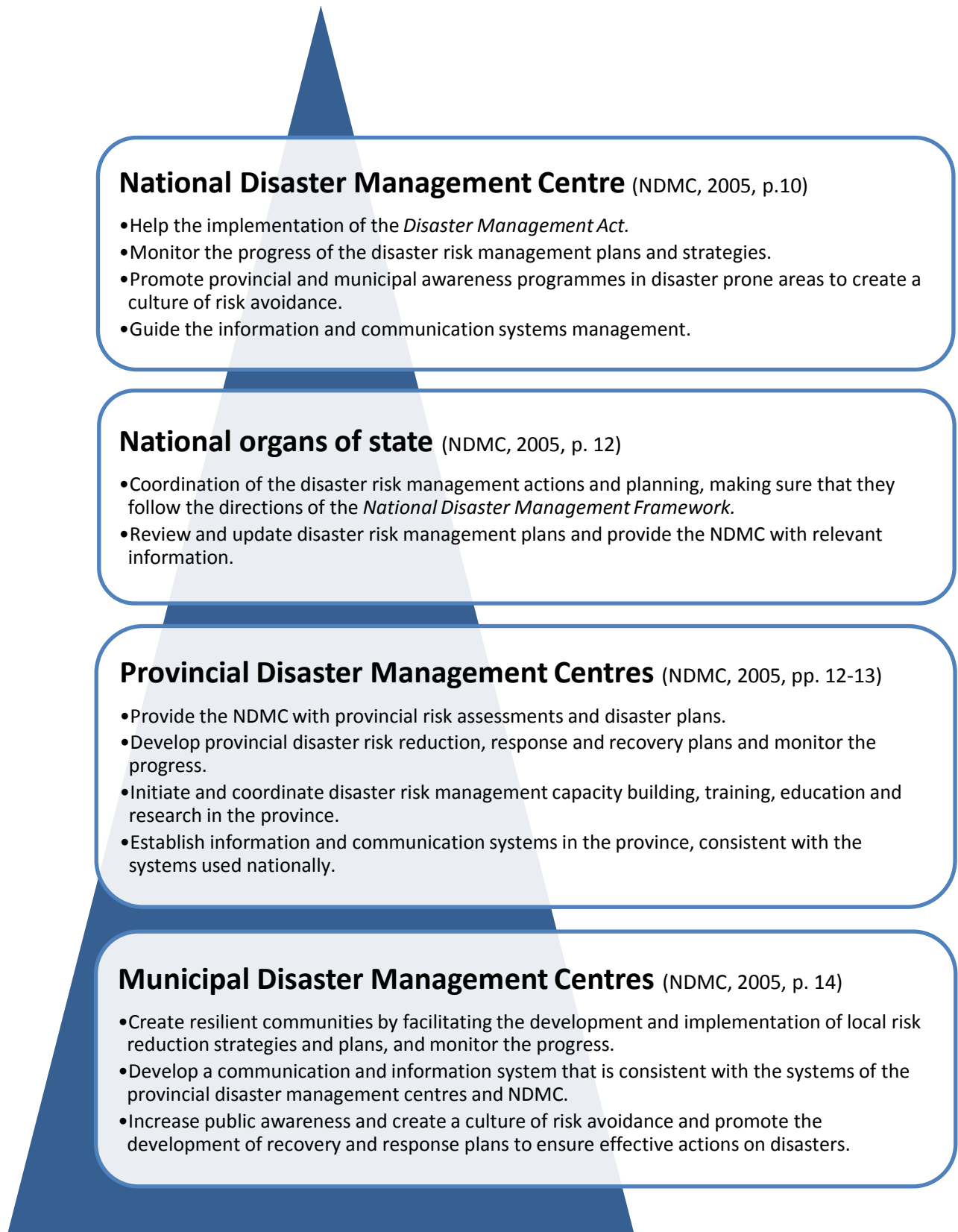


Figure 7 - The main key responsibilities of the NDMC, the national organs of state, the provincial disaster management centres and the municipal disaster management centres according to the *National Disaster Management Framework* (NDMC, 2005, pp. 10-14).

4.4 National Education, Training and Research Needs and Resources Analysis; NETaRNRA

In 2009, one national and nine provincial workshops were held in South Africa with the aim to among others review the implementation of the *National Disaster Management Act* and the *National Disaster Management Framework*. Representatives from 199 stakeholder groups, representing both organs of state and private organisations, participated in the workshops. (NDMC, 2010b, p. 14)

A survey was conducted by the participants of the workshops with the objective to analyse the needs for education, training and research in disaster risk management in South Africa. The survey was completed in 2010 and provides the most recent implementation status of the *National Disaster Management Framework*. As mentioned earlier, the report of the survey is called *National Education, Training and Research Needs and Resources Analysis* (NETaRNRA) and is composed for the NDMC by the private company *Disaster Management Solutions*. (NDMC, 2010b, p. 1)

South Africa has not presented a national interim progress report to be included in the *2009 Global Assessment Report on Disaster Risk Reduction* (PreventionWeb, 2010a), as mentioned earlier in section 3.1.

Nevertheless, as the *Key Performance Areas* and *Enablers* of the *National Disaster Management Framework* are comparable to the PFAs of the HFA (see Table 1) (NDMC, 2010b, p. 13) the NETaRNRA can be used to study the implementation progress of the HFA in South Africa.

A summary of the NETaRNRA results are presented in the upcoming section.

4.4.1 Results from the NETaRNRA

The main part of the survey comprises questions about the progress made on implementing the *National Disaster Management Framework*. The participants were asked to rank their progress according to the following scale (NDMC, 2010b, p. 23):

1. Not acceptable/Nothing in place/ Not started yet
2. Progress/Below 50% completed/ Started process
3. Not fully compliant/Not up to standard yet/ Still need attention
4. Fully compliant/Up to standard/ Completed

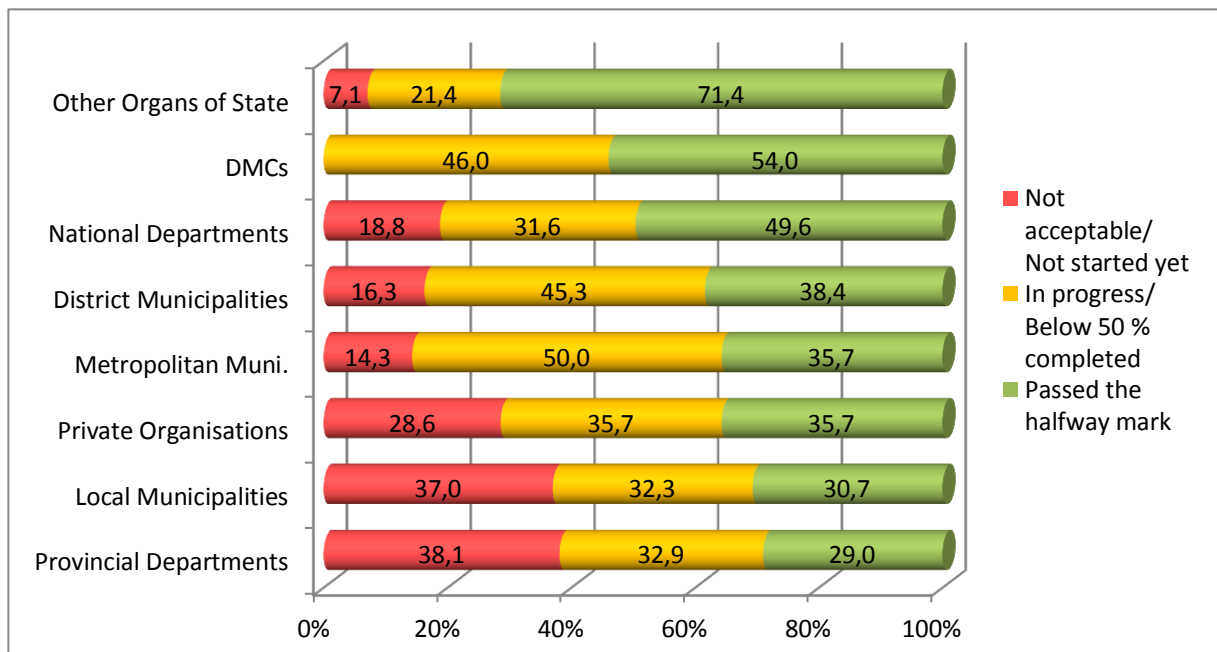


Figure 8 - The overall progress of implementing the *National disaster Management Framework*. From the chart it can be seen that other organs of state have done best in implementing the framework while the local municipalities and the provincial departments have the lowest implementation level. The green fields include both 3 (Not fully compliant/Not up to standard yet/Still need attention) and 4 (Fully compliant/Up to standard/Completed). (NDMC, 2010b, p. 23) DMCs is acronym for Disaster Management Centres and Metropolitan Muni. refers to metropolitan municipalities.

Figure 8 shows the overall progress of implementing the *National disaster Management Framework*, divided into respondent categories. From the figure it can be seen that according to the NETaRNRA most of the stakeholders have a lot of work to do before they even pass the halfway mark. Looking at the overall progress about 26% of the stakeholders indicate that progress is not acceptable or has not started yet. The NETaRNRA reports that other organs of state indicated leading implementation progress of the *National Disaster Management Framework* and also the disaster management centres. About 70% of the participants from other organs of state report that they have passed the halfway mark and all of the participating disaster management centres have started their implementation progress. Local municipalities and provincial departments have in their turn reported the lowest level of implementation, about 40% indicate that implementation is not acceptable or has not even started yet. (NDMC, 2010b, pp. 23-24)

The *National Disaster Management Framework* is based on four *Key Performance Areas* and three *Enablers*, see chapter 4. The *Key Performance Areas* and the *Enablers* were analysed separately in the NETaRNRA and the average results of each *Key Performance Area* and *Enabler* are presented in Figure 9.

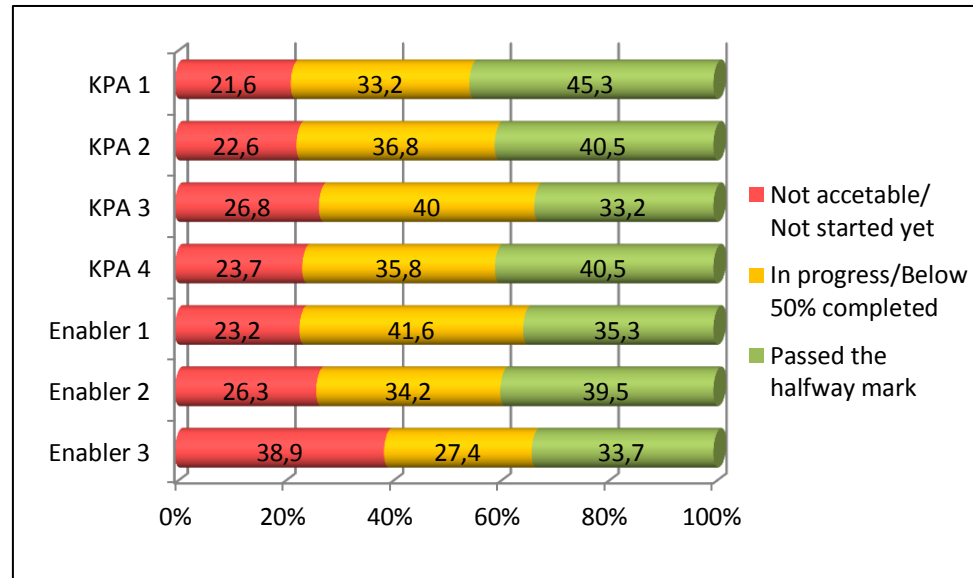


Figure 9 - The average implementation progress on each *Key Performance Area* and *Enabler* of the *National Disaster Management Framework*. *Key Performance Area 3* and *Enabler 3* are the areas where least progress is reported. (NDMC, 2010b, pp. 25, 27, 28, 30, 32, 33 and 35)

Key Performance Area 3 calls for the process to develop and implement integrated disaster risk management plans and risk reduction programmes and is the area where least improvement is reported. About 67% of the stakeholders report progress below 50% complete on *Key Performance Area 3* (NDMC, 2010b, p. 46). Lack of development and implementation is also reported on *Enabler 3* which calls for the establishment of mechanisms for the funding of disaster risk management, 66% report progress below 50% complete (NDMC, 2010b, p. 46). Most improvement is reported on *Key Performance Area 1*, which calls for an integrated institutional capacity to enable effective implementation of disaster risk management policy and legislation, where about 55% report progress below 50% complete (NDMC, 2010b, p. 47).

The overall improvement made on the implementation of the *National Disaster Management Framework*, shown in Figure 9, was converted to illustrate the HFA (NDMC, 2010b, p. 37). Figure 10 illustrates the South African results on the implementation of the HFA.

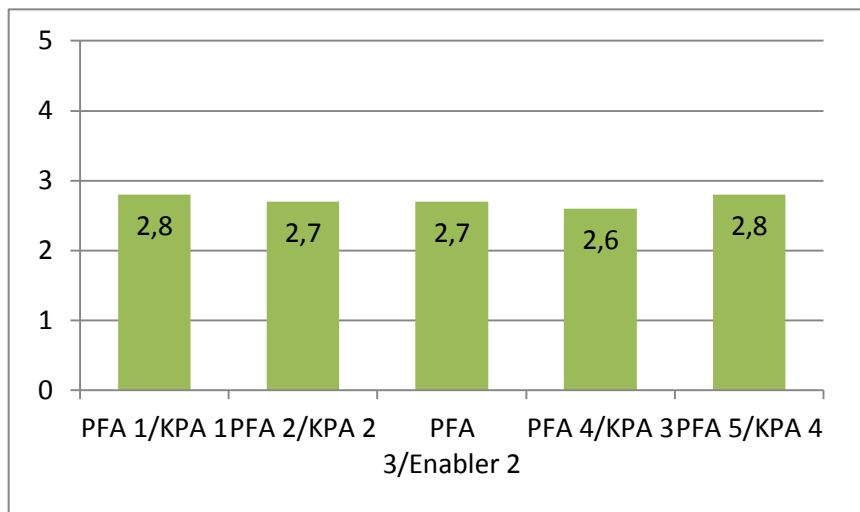


Figure 10 - The South African overall progress made on implementing the *National Disaster Management Framework* has been recalculated to illustrate the implementation of the five *Priorities for Action* of the *Hyogo Framework for Action*. PFA is acronym for *Priority for Action*, KPA is acronym for *Key Performance Area*. (NDMC, 2010b, p. 37)

The five-point scale shown in Figure 10 signifies the following (GNDR, 2009a, p. 9):

1. No, not at all.
2. To a very limited extent.
3. Some activity but significant scope for improvements.
4. Yes, but with some limitations in capacities and resources
5. Yes, with satisfactory, sustainable and effective measures in place.

The recalculations should only be seen as estimations since the method used for the recalculations in the NETaRNRA is rather simple. The method can be viewed in Appendix B. The estimated results show that South Africa has made least HFA implementation progress in PFA 4, related to *Key Performance Area 3*.

PART 2

Case study

This second part of the thesis presents the case study and consists of three sections; methodology including an introduction to the case study area, results from the case study and finally an analysis of the results.

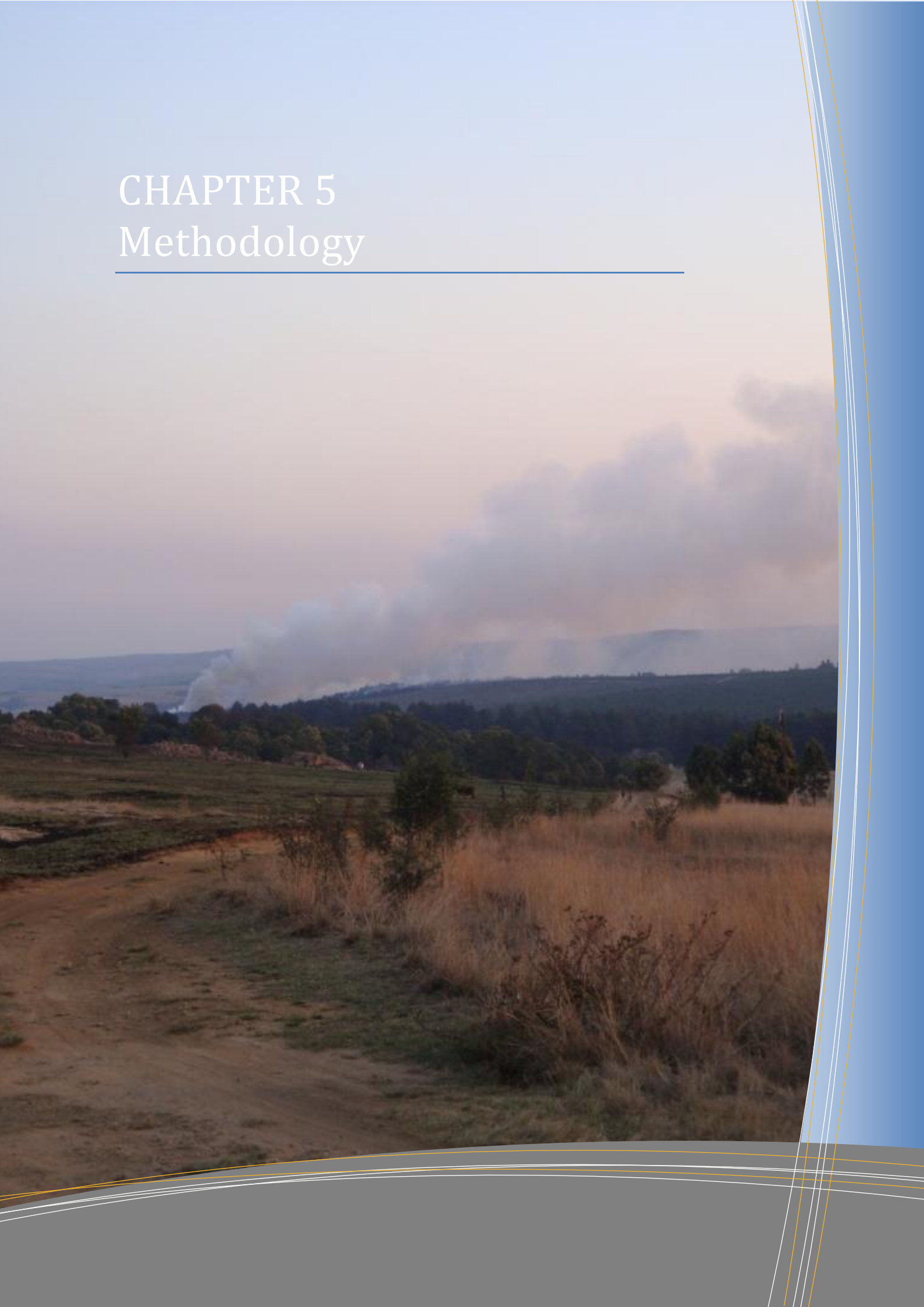
The first chapter of this part provides a more extensive description of the used methodology. In this section the case study area is also introduced; general information about South Africa as a whole, information about Kabokweni location and the reason why it is an interesting area to study.

The second chapter presents the results from the case study. The results consist of charts and comments from the open ended questions for each Priority for Action.

Finally, in the third chapter, the analysis of the results is presented. The implementation of each Priority for Action is analysed, along with a comparison of a top-down and bottom-up assessment. Lastly, the results are put into the South African context.

CHAPTER 5

Methodology



CHAPTER 5

Methodology

This chapter describes the method used for the case study and introduces the studied location, i.e. the country South Africa and the Kabokweni location. Firstly the execution of the case study is described. Thereafter the republic of South Africa, along with some information about its most common natural hazards, and the case study focus area Kabokweni location are introduced.

5.1 Data collection method

Data was collected with the use of a questionnaire; the VFL LITE questionnaire. The choice of using a questionnaire for data collection originates from the need for something that was easy to administer and could be used for gathering a large amount of data in a short time. The choice came to be the VFL LITE questionnaire since it fulfilled these requirements.

With the use of a questionnaire there are some general advantages and disadvantages that can be more or less present, see Table 2.

Table 2 - Advantages and disadvantages in the collection of data using a questionnaire. (Ejvegård, 2008, pp. 52-57)

Advantages	Disadvantages
Easy and inexpensive to administer	A lot of work must be done in the design phase
A large amount of data can easily be gathered	Hard to get a high response rate
Can be generalised	Can be too generalised
Flexible in the design phase	Inflexible, relying on the design phase
Standardisation enables comparisons	

When using a questionnaire one must be aware that the quality of the data is dependent upon the questions used. Even though some shortcomings are found within the VFL LITE questionnaire (further discussed in section 8.1) it is regarded as a strength that the questionnaire is developed by GNDR (*Global Network for Civil Society Organisations for Disaster Reduction*) since GNDR is a large organisation well involved in disaster risk reduction. The questionnaire is also well

proven to indicate the HFA level of implementation. Another advantage in using the VFL LITE questionnaire, which contributed to the decision of using it, is that the results are standardised. This means that the results generated from the use of the VFL LITE questionnaire are comparable to other HFA assessment results, such as the VFL questionnaire results and results generated with the *HFA Monitor*.

The fact that the VFL LITE questionnaire is easy and manageable to administer is also one of the reasons why the questionnaire was chosen for this case study. The full VFL questionnaire is not used in this case because of time restrictions and lack of resources; it is basically too extensive for the given time frame. It is also positive, and simplifies the work, that the VFL LITE questionnaire is generalised which means that the same questionnaire can be used for local government, civil society organisations and local community representatives.

The VFL LITE questionnaire consists of a total of 36 questions and takes about 15-20 minutes to finish. It takes a relatively short time to complete the questionnaire which is why respondents should find it quite easy to complete and data can be gathered in a short time. Each question has answering alternatives on a five-point scale to indicate the implementation progress of the HFA. The scales signify the following:

1. No, not at all.
2. To a very limited extent.
3. Some activity but significant scope for improvements.
4. Yes, but with some limitations in capacities and resources
5. Yes, with satisfactory, sustainable and effective measures in place.

An additional choice of answer is “*Don’t know*”.

The VFL LITE questionnaire also contains six open ended questions, one for each PFA and one for the cross cutting issues, giving the respondents an opportunity to make comments. The open ended questions contribute to more flexibility in the questionnaire, but could generate a large amount of data that could take a long time to analyse.

Normally the VFL LITE questionnaire is accessed through Internet but there is also a printout version for cases where Internet is unavailable. In this case study printouts were used and the results have been compiled manually. A benefit of the printout version is that it gives a good opportunity to interact with the participants and discuss the content of the questionnaire. It is also a good way to make sure that the participants

receive the questionnaire and also finish it in time for the appointed deadline.

5.2 Execution of case study

The selected participants for the case study were contacted by phone and enquired to partake in the case study for assessing the HFA implementation. Some agreed on meeting to get the questionnaire in person, others preferred receiving it by email. The participants were given about a week to finish the questionnaire and then a meeting was set up to collect the questionnaire, discuss its content and to answer any remaining questions.

Before participating in the case study respondents needed to sign a consent form showing that they approved of the case study conditions. The consent form is presented in Appendix C. The main purpose of the consent form was to certify that the respondents participated voluntarily in the case study and fully understood their anonymity and freedom to choose what information to share. In cases where the participants received the questionnaire by email the consent form was attached as well. It was then to be signed at the deadline meeting when the questionnaire was collected.

1. What difficulties the respondent faces in implementing disaster risk reduction in the work and activities of their department/organisation/community.
2. What the respondent would like to see improved in order to increase the level of implementation of disaster risk reduction in the work and activities of their department/organisation/community.

After finishing the questionnaire some respondents remained for a few minutes to talk about disaster management. This contributed to further knowledge of disaster risk reduction within the local level of government and aided with the interpretation of the results in the analysis. Although a range of topics were discussed, the two main ones were;

During the case study cooperation was possible with a Master's student from *North West University*, Prudence Dlamini, who has also been taking part of the results. English is widely used and understood in South Africa, which simplified the case study a lot, but Prudence Dlamini provided a lot of help when translation was necessary. She also contributed with her knowledge of the area and a lot of important contacts.

When the case study was finished the data from the questionnaire was compiled and analysed. The results will be compared to results in the

NETaRNRA, further described in section 4.4, which is a disaster risk reduction assessment from a top-down approach. The results will also be compared, to some extent, to the VFL assessment that presents the HFA level of implementation results in South Africa. The findings are then to be analysed and discussed.

5.2.1 Participant selection

To be able to use a bottom-up approach the respondents were selected from within the area of local government, civil society organisations and local community. These respondent groups are recommended by the VFL guidelines. The respondents were either situated in Kabokweni location or in the surrounding area. All the participating respondents were representatives from their respective department/organisation/community, all of which have activities that involve Kabokweni location.

According to the VFL guidelines the local government can consist of local municipalities, district municipalities or provincial government (GNDR, 2010). In accordance with the guidelines the chosen respondents of the local government were representatives from Mbombela local municipality, the Ehlanzeni district municipality and the Mpumalanga province.

When selecting participants for the case study it was important to avoid a too homogenous group since they should represent a wide range of units involved in local level disaster management. This provided more reliable results because of the presence of many different views and approaches to disaster risk reduction. Many participants were specifically chosen because they are main drivers of disaster risk reduction initiatives and therefore are considered to provide high quality information about disaster risk reduction and other disaster management issues. Also, the VFL guidelines provided good examples of different civil society organisations and local community representatives to include in the case study which helped a lot in the selection of questionnaire respondents.

Which organisations/organs of state that the participants represent will not be presented in this thesis due to the anonymity of the case study.

5.3 Case study area

The Republic of South Africa is situated in the southernmost part of the African continent. The country is divided into nine provincial areas, namely Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape, North-West and Western Cape. (CIA, 2010a) The case study took place in the Mpumalanga province which is located in the north-eastern part of South Africa, see Figure 11.

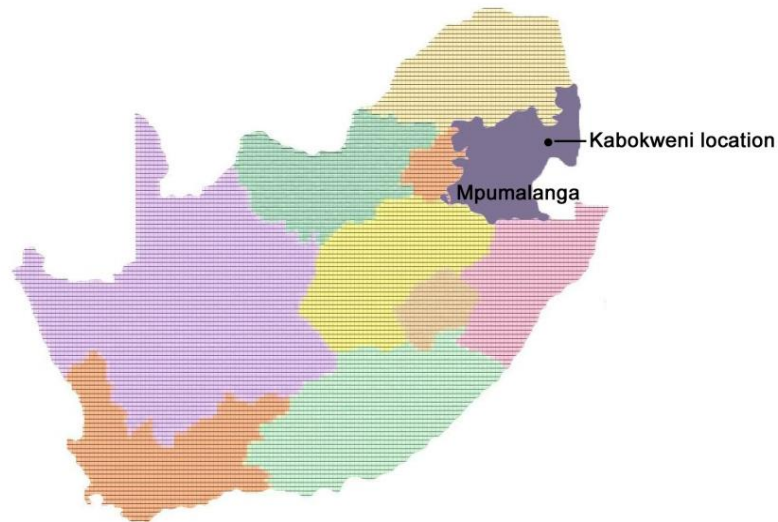


Figure 11 - The provinces of South Africa and the location of Kabokweni. The Mpumalanga province, where the case study takes place, is situated in the north-eastern parts of the country. Figure retrieved from Booking South Africa (2010) and modified.

South Africa is a very diverse country in many ways, including its climate and culture. While in many aspects diversity is a good thing, it complicates matters for disaster management. Although English is widely spoken and understood by its 49 million citizens (CIA, 2010a) there are a total of eleven official languages in the country (Brand South Africa, 2010) making distribution of disaster management information complicated. The South African climate varies just as much, depending on the latitude, altitude and distance from the coast. In most parts the summer months bring a lot of rain while the winters are dry. (SA-Venues.com, 2010) Different areas of the country are prone to different hazards at different times of the year, requiring disaster management in South Africa to have a multi-hazard approach.

5.3.1 Natural hazards in South Africa

The most common natural hazards in South Africa have for the last twenty years been floods, storms, wild fires and drought. There have also been cases of epidemics, earthquakes, extreme temperatures and landslides. (PreventionWeb, 2010b) The single natural hazard that has been affecting the largest number of people is drought, with huge economic losses as a result, see Figure 12. However, floods are the most common with 0.79 estimated floods every year, compared to 0.24 estimated droughts every year. Floods are also the natural hazard that have killed the most people during the last twenty years and caused a lot of economic damage, see Figure 13. (PreventionWeb, 2010b)

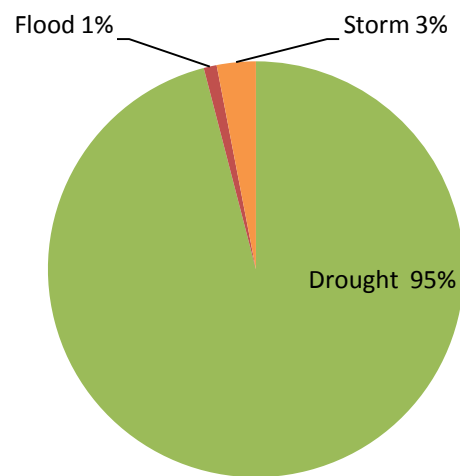


Figure 12 - Percentage of people in South Africa reported affected by disaster type in the years 1980-2008. (PreventionWeb, 2010b)

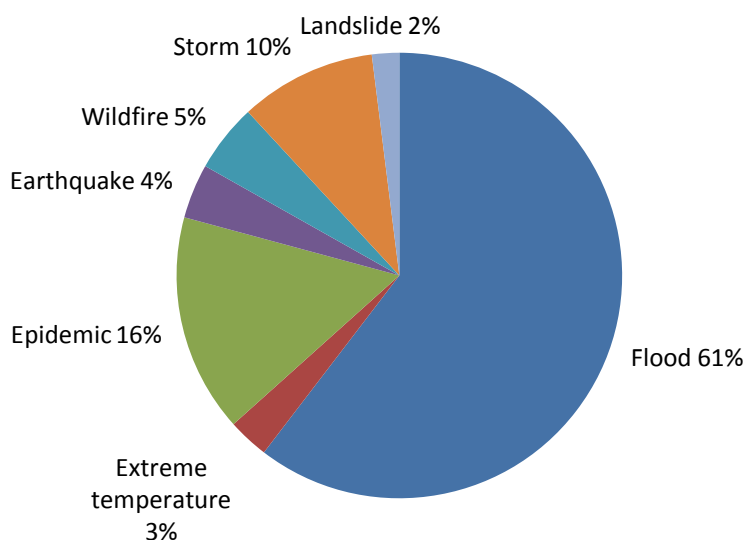


Figure 13 - Percentage of people killed in South Africa by disaster type in the years 1980-2008. The category *earthquake* also includes tsunamies. (PreventionWeb, 2010b)

5.3.2 Kabokweni location

The focus of the case study was in the Kabokweni location. Kabokweni is situated in the Mbombela local municipality in Ehlanzeni district of Mpumalanga province, South Africa. Kabokweni was chosen as a case study object mainly because it is considered to be a disaster prone region. Another important reason was that Prudence Dlamini was going to conduct the same case study in Kabokweni due to her Master's Thesis. By cooperating with Ms Dlamini it was possible to take part of her important networks and contacts, necessary for conducting the case study.

Kabokweni is seen as an at-risk community because of its dense population within a hazard prone geographical area. It is located in a valley with surrounding mountains. This makes it vulnerable to floods and landslides, for example, since the water is running down the slopes and gathers in the rivers running through the central parts of the settlement area.

Mbombela is the Siswati word for "*a lot of people together in a small space*" (Mbombela Local Municipality, 2010) which very much corresponds to the situation of Kabokweni. Unfortunately, no population figures for Kabokweni have been found, but it has been estimated to about 10 000 inhabitants¹. Most of the population is situated within the valley but as the number of inhabitants has increased the settlement area has grown and at present reaches up the slopes towards the mountain tops. Settlements are also found in other risky areas such as the river banks. In a country like South Africa, where you can expect floods more or less every year (PreventionWeb, 2010b), this situation is a ticking bomb.

A problem in the Kabokweni that could have large effects on the public health and safety in case of disaster is the lack of proper sanitation and water supply. This risk is especially present in the informal settlements along the mountain slopes where the water pressure is too low to supply the families with water and henceforth also sanitation. Kabokweni has no bulk water supply or plant and is depending on water from the town of Kanyamazane², about 20 kilometres away, which increases the vulnerability even more.

Another reason for classifying Kabokweni as an at-risk community is the industrial site in the middle of the settlement area. These industries include mills and the electrical power distributor. In case of any major emergency within this industrial site there could be huge damages to the surrounding residences. Some of the industries also pollute the air severely, see cover page of chapter 2. Though no specific numbers on the

Mbombela

means "*a lot of people together in a small space*" (Mbombela Local Municipality, 2010)

¹ Prudence Dlamini, Assistant Director, Mpumalanga Provincial Disaster Management Centre, 1 Sep 2010.

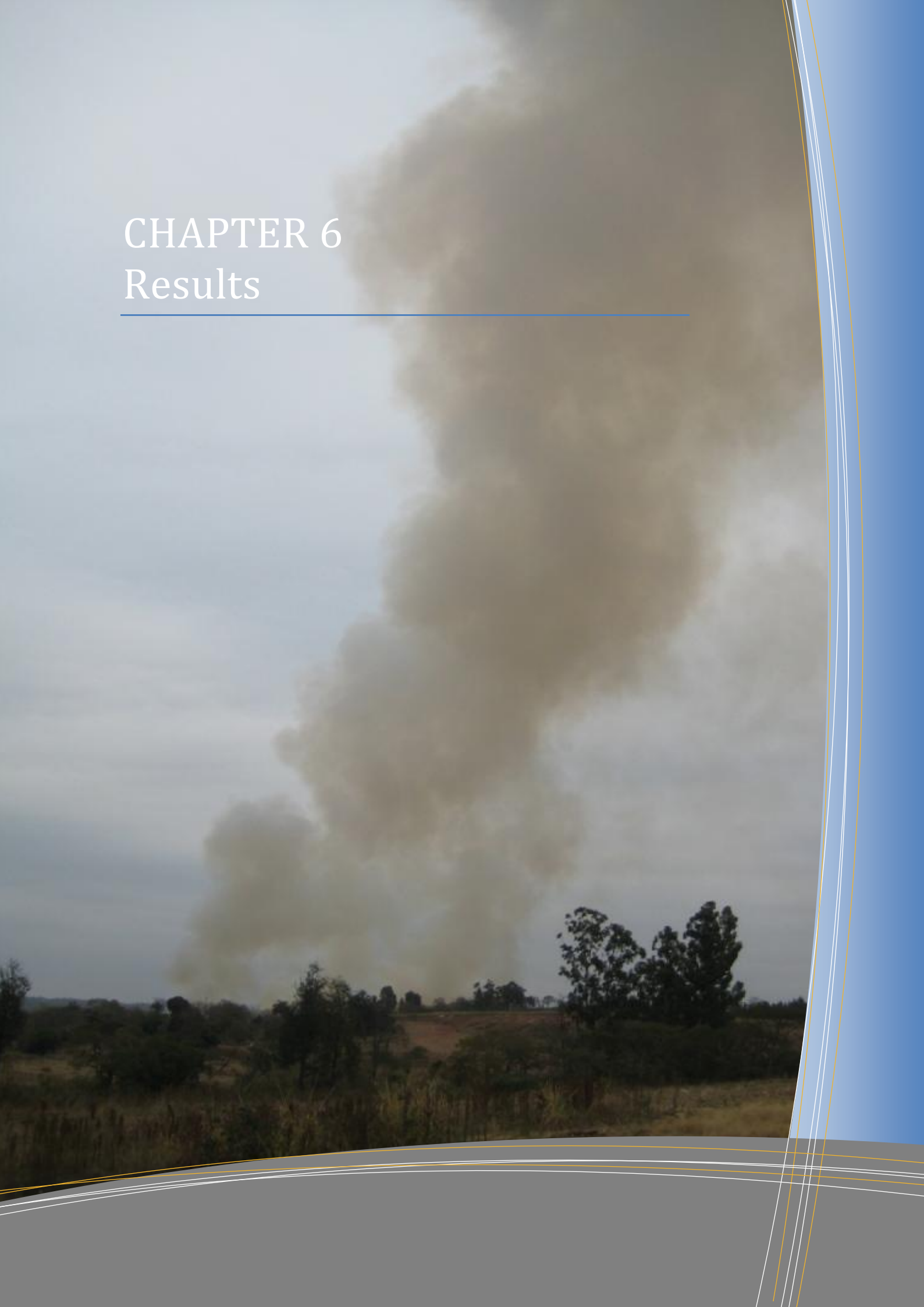
² Prudence Dlamini, Assistant Director, Mpumalanga Provincial Disaster Management Centre, 1 Sep 2010.

amount of air pollution can be presented, the visual impression speaks on its own. For more photos of Kabokweni see Appendix D.

An example of a natural hazard that struck the case study area is the flood in the year 2000 when large parts of the Mpumalanga province, including Kabokweni, and the Limpopo province were affected. About 6 500 people lost their homes and the infrastructure was heavily damaged. (ReliefWeb, 2010) When, not if, disaster strikes in this area again the inhabitants will suffer the consequences once more. A lot of people will probably lose their homes and suffer major economical, psychological and physical damages as a result, unless preventive disaster risk management can minimise those risks.

CHAPTER 6

Results



CHAPTER 6

Results

This chapter contains the results from the case study. They are presented both as overall averages for the five *Priorities for Action* and as averages for the three respondent groups; local government, civil society organisations and local community representatives. Additionally, comments from the VFL LITE questionnaire are presented.

The case study has generated results that give a picture of the implementation of the HFA at local level in Kabokweni, South Africa.

A total of 30 respondents have completed the VFL LITE questionnaire, all of which are in some way connected to Kabokweni in South Africa. The respondent groups consisted of 43% local government, 20% civil society organisation and 36% local community representatives. Overall results for the five PFAs and the cross cutting issues are presented in Figure 14.

The result in Figure 14 presents the overall HFA implementation level of

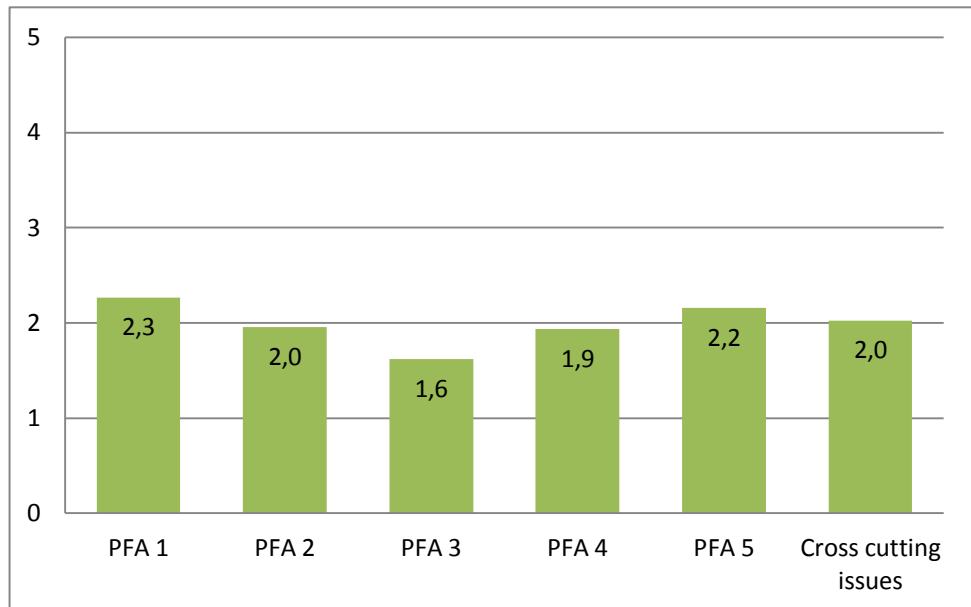


Figure 14 - The overall result on the five *Priorities for Action* (PFA) and the cross cutting issues in the *Hyogo Framework for Action*. Results obtained from the case study using the *Views from the Frontline LITE* questionnaire.

Kabokweni. The results are also presented according to the three respondent groups, see Figure 15. For all the result details, see Appendix E.

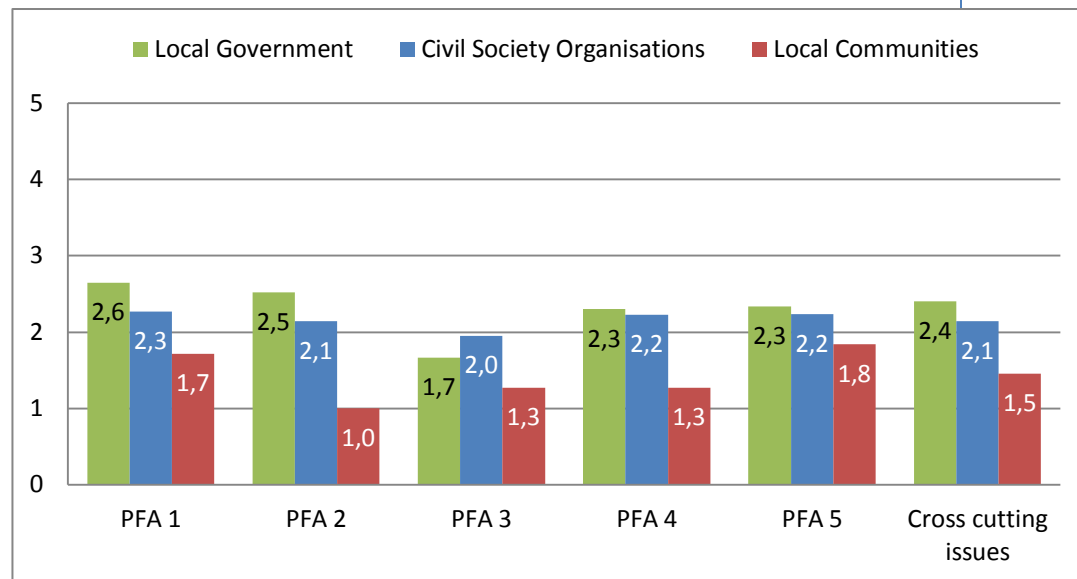


Figure 15 – The case study results categorised into the three respondent groups. Results show the level of implementation of the five *Priorities for Action (PFA)* and the cross cutting issues in the *Hyogo Framework for Action*.

The five-point scale used in the VFL questionnaire is the same that is used in the VFL LITE questionnaire. As mentioned earlier the scale provides an indication of the implementation progress of the HFA and signify the following (GNDR, 2009a, p. 9):

1. No, not at all.
2. To a very limited extent.
3. Some activity but significant scope for improvements.
4. Yes, but with some limitations in capacities and resources.
5. Yes, with satisfactory, sustainable and effective measures in place.

The overall results in Figure 14 show that the implementation of the HFA at the local level of Kabokweni is to a very limited extent. It is also seen that the PFA 3 (build understanding and awareness) is doing worst.

Do not forget that since the five-point scale has a starter value of 1 (*No, not at all*), the results originating from a method using this scale will never get below 1. It is advised to keep this in mind when studying the results since the results are presented with a starter value of zero on the graph y-axis signifying the level of implementation.

The categorised result in Figure 15 shows that the issue of HFA implementation differs between the three respondent groups where local community representatives state the lowest level of HFA implementation. Except for PFA 3, an apparent trend can be seen in the results, where the level of HFA implementation is decreasing with descending hierarchy levels.

There is also an option in the questionnaire to tick “Don’t know”. The local community representatives ticked this option in about 30% of the questions while the local government and civil society organisation chose it in about 12% of the questions. See Table 3 for more details on the “Don’t know” answers divided into the five PFAs and the cross cutting issues and the three respondent groups.

Table 3 - Percentage of “Don’t know” answers for each of the *Priorities for Action* (PFA) and the cross cutting issues and the three respondent groups; local government (LG), civil society organisations (CSO) and local community (LC).

	LG (%)	CSO (%)	LC (%)
PFA 1	9,2	10,0	23,6
PFA 2	2,6	11,1	21,2
PFA 3	19,2	8,3	38,6
PFA 4	15,4	21,4	29,9
PFA 5	3,8	16,7	40,9
Cross cutting issues	12,3	13,3	23,6
Total	12,2	12,2	29,5

In total, the respondents chose the answer “Don’t know” in 18,6% of the questionnaire questions and the total share of questions left unanswered was 1,3%. See Table 4 for more details of the overall percentage of questions marked with “Don’t know” or left unanswered.

Table 4 - The overall percentage of questions either marked with the option “Don’t know” or left unanswered for each of the *Priorities for Action*. A total percentage of the “Don’t know” answers and the unanswered questions is given in the last row.

	“Don’t know” Overall (%)	Unanswered Overall (%)
PFA 1	14,7	0
PFA 2	11,1	2,2
PFA 3	24,2	0,8
PFA 4	21,9	0,5
PFA 5	20,0	1,7
Cross cutting issues	16,7	3,3
Total	18,6	1,3

6.1 The VFL LITE questionnaire comments

The VFL LITE questionnaire consists of 36 questions categorised according to the five PFAs and the cross cutting issues. An open ended comment field follows each category giving the respondent an opportunity to add supplementary information about the implementation of disaster management within their department/organisation/community tied to the category in the questionnaire.

Below, a compilation of the questionnaire comments follows. The information is divided into the five PFAs and contains the main topics addressed.

6.1.1 Priority for Action 1 – Make disaster risk reduction a priority

The most common type of comments discuss the lack of financial resources and the need for information, training and community involvement. About 23% of the respondents ask for more information about disaster risk reduction to the local community and 20% ask for more training within the area of disaster risk management. The lack of financial resources as an obstacle for effective disaster risk reduction is mentioned by 20% of the respondents.

Many of the civil society organisations and local communities have never been engaged in anything that involves disaster risk reduction but would welcome that opportunity.

6.1.2 Priority for Action 2 – Know the risks and take action

The civil society organisations and local communities have mostly made comments about the lack of information and warnings given to vulnerable communities.

Within the local government the comments deal more with the lack of financial and human resources. There are also comments about the need for information about hazards to vulnerable communities. A challenge in rural settlements is the lack of adequate infrastructure which is crucial for communications.

6.1.3 Priority for Action 3 – Build understanding and awareness

Quite many respondents have written that they support the idea that disaster risk reduction should be taught at school and be a part of the school curricula.

71% of those who have made comments mentioned the need for (or lack of) community information, training and awareness especially in communities at risk.

Again there are comments about the need for involvement of local communities and also about the lack of financial resources.

6.1.4 Priority for Action 4 – Reduce risk factors

The problem with informal settlements is a common subject. The problem is based on the lack of infrastructure, building in flood lines, industrial and waste sites etc. Comments notify the lack of water and poor sanitation and also on the illegal and unsafe electrical connections that have led to electrical shocks of small children.

Some respondents also proposed possible solutions; disaster management must be extended to peri-urban townships and municipalities need to control the informal settlement.

Underlying risk factors are for the most part still only addressed on a national level and not realised in the same extent on the local level; there is a lot of talking but no action according to some respondents.

6.1.5 Priority for Action 5 – Be prepared and ready to act

There are several comments that reflect the lack of disaster preparedness, that the government is reactive rather than proactive. There are also comments about the need for adequate allocation of financial resources for disaster preparedness.

The second problem addressed in the comments is that even when the government is acting to increase the disaster preparedness level there is a lack of financial and human resources. Consequently, this can leave devastated communities unattended.

6.1.6 Cross cutting issues – Social engagement, gender and cultural aspects

There is a challenge in changing the tactics in communities that have been doing the same specific actions for years. The respondents feel that there is no guarantee that the behaviour will change only because of additional information.

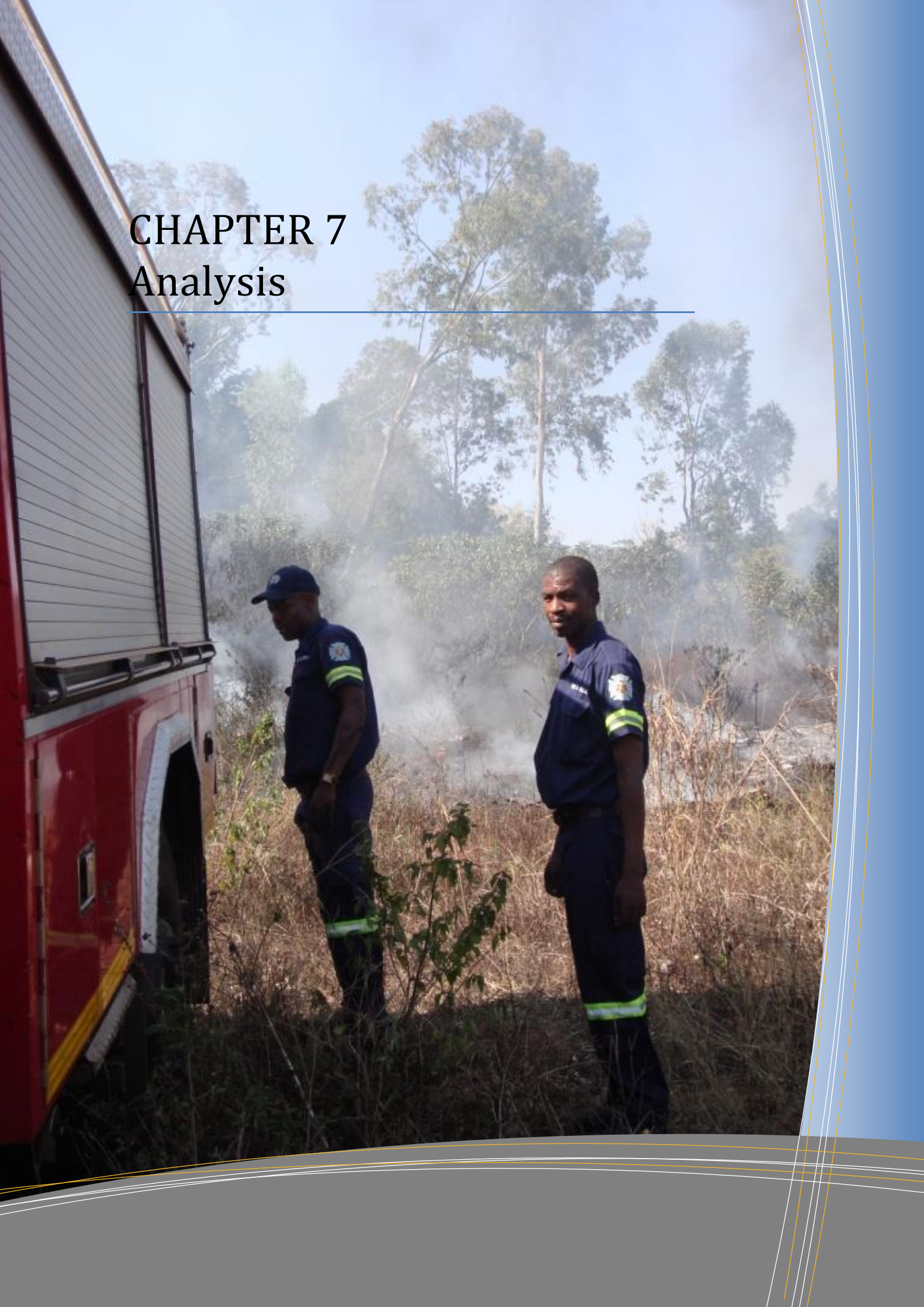
Additional challenges include making information understandable and acceptable to all community groups, including those who are illiterate

and the difficulty in making people volunteer in South Africa because of the poverty.

Again, respondents request more governmental involvement and bring up the fact that there is little or no involvement of community representatives. A common opinion is that government organs, the private sector and all stakeholders need to pull their resources together when approaching disaster risk reduction. Another common opinion is that the government need to address the real issues of the community and to develop and assist programs that are being run by the communities.

CHAPTER 7

Analysis



CHAPTER 7

Analysis

This chapter contains the analysis of the case study results. An analysis has been made on the implementation of the *Hyogo Framework for Action* at local level in Kabokweni, South Africa. The main features identified in the comparison of the bottom-up and top-down approach have also been analysed. Lastly, the case study results are put into the South African context to give a broader view of the findings.

This chapter is divided into three sections;

1. Implementation of Hyogo Framework for Action

Analysis of the implementation of the HFA at the local level in Kabokweni, South Africa. Overall results, categorised results and comments from the VFL LITE questionnaire presented in the previous chapter will be used, supported by discussions with the participants.

2. The bottom-up approach in the light of the top-down approach

A comparison between the bottom-up and the top-down approach towards the implementation of HFA in South Africa. Results from the case study (bottom-up) will be compared to the results from the NETaRNRA (top-down) and analysed.

3. The case study in the South African context

Putting the case study into a broader context by comparing its results with the VFL assessment results of South Africa and analysing the findings.

7.1 Implementation of Hyogo Framework for Action

The implementation level of the HFA at the local level in Kabokweni, South Africa can be interpreted from the results and comments compiled from the VFL LITE questionnaire in this thesis.

As mentioned earlier, half of the implementation period for the HFA has passed and conducting the case study at this point is an opportune time for evaluating the adoption of the framework. Perhaps, since half of the HFA implementation period has passed one would expect the overall results on the framework implementation to have reached at least halfway, i.e. level 3 of implementation (*Some activity but significant scope for improvements*). The case study results show that this is not the case. The level of HFA implementation have progressed to around level 2

(*To a very limited extent*) which indicates that the local level of Kabokweni is behind in disaster risk reduction. It is difficult to say whether the HFA implementation is slow in the initial phase or whether the local level in Kabokweni is experiencing difficulties in the implementation process. To better be able to identify problems and explain the reason for why the results are low every PFA will be analysed separately in this section.

7.1.1 Priority for Action 1 – Make disaster risk reduction a priority

The first PFA regards governance of disaster risk reduction which has been one of the topics most commonly discussed. By incorporating disaster management into all governmental issues, policies and plans, and by using legislation the attitude towards disaster management can be changed for the better. This is the PFA which had the highest level of implementation in the overall results (Figure 14), though it was only implemented to “*a very limited extent*”. When looking at the categorised results (Figure 15) the same results can be seen; the PFA 1 has some of the highest levels of implementation. Even though the level of PFA 1 implementation is now mentioned to be “highest” it must be acknowledged that the overall level of implementation on the PFA 1 is still below the half-way mark and that there is still a lot of room for improvement.

The VFL LITE questionnaire comments give clear indications of the low level of implementation of PFA 1. The participants express opinions that the implementation of PFA 1 faces four problems; budgeting, prioritising, attitude and responsibility. These problems could be the explanation to the apparent low implementation level and will be analysed further in this section.

7.1.1.1 Budgeting

It seems like the largest concern within this issue is budgeting. This is also reflected in the questionnaire comments where 20% of the respondents mentioned the issue of budgeting for disaster management.

Many organisations and departments do not have a fully dedicated disaster management unit. Because of the lack of commitment to disaster management, adequate budgeting is not recognised which results in a shortage of finances and only *ad hoc* based economical support. This aggravates the implementation of disaster risk reduction since there are no operational budgets.

Another problem concerning budgeting is bureaucracy. When trying to get financial resources for different disaster management actions, slow

Disaster risk

“The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.”
(UN/ISDR, 2009, p. 9)

bureaucracy creates a long handling process leading to inefficient disaster management.

At local level, the budget is limited and other matters considered more urgent are therefore prioritised before disaster management. The attitude towards disaster management is that “disasters might not happen”. The local municipalities are the most critical level of disaster management. Budgeting for disaster risk reduction is primarily to be found in the local level of government but the local municipalities ignore this. The respondents think that although budgeting is not made for events that “might not happen” seasonal disasters are rather predictable and should be budgeted for in some way.

7.1.1.2 Prioritising

Another topic discussed within the PFA 1 is the low prioritising and dedication to disaster management. Some respondents feel that more human resources are needed in the departments for disaster management but since disasters occur infrequently disaster management is not seen as a full time job. This means that disaster management officials are given other tasks as well which aggravates their ability to fully engage in disaster management.

7.1.1.3 Attitude

On both the local and top management level there is a lack of understanding for disaster risk management. The focus is mainly on response and relief and it is common that the local level see disaster management as an event and not a process. Respondents say this poses trouble for disaster management budgeting where the budget only covers for emergency response and relief; preparedness and prevention is set aside.

The *South African Disaster Management Act 57 of 2002* (The Act), mentioned in chapter 4 is the latest act that prescribes how disaster management should be handled in South Africa. Before the Cape Town flood in 1994 South Africa had an approach saying that natural disasters was something that could not be prevented. Because of this disaster management actions only takes place when disasters have already occurred. The new holistic approach on preventing disasters is a new phenomenon in South Africa. It is not even ten years since the Act was launched and only five years since the *National Disaster Management Framework* was presented. Implementation of the new approach is still ongoing, which also affects the case study results.

7.1.1.4 Responsibility

Based on the questionnaire comments and discussions with the respondents it seems like only district municipalities are responsible for disaster management at the local level and are the ones who must

initiate disaster management actions in local municipalities. The local municipalities seem to take no responsibility or initiatives regarding disaster risk reduction on their own.

There are features within the Act that could explain the low sense of responsibility from the local municipalities. Even though this project assesses the implementation of HFA, it should be noted that the Act is much more relevant to the South African government. The problem with responsibility lies in the fact that the Act only addresses the district and metropolitan municipalities (Act 57 of 2002, 2002). Local municipalities are only involved in some disaster management directives where district municipalities have to integrate or consult the local municipalities. Clearly, there are no responsibilities directed to the local municipalities within the Act. This results in the local municipalities believing that disaster management is something that should be dealt with at the district level. Therefore no major initiatives are being taken at local municipal level and the implementation of disaster risk reduction grounds to a halt at the district municipal level of government. The lack of responsibility distribution in the Act could be a good explanation to why the local communities are so far behind in disaster risk reduction implementation. The policies may be in place but the effects never reach the lower levels of society.

There is also another issue concerning the problem with responsibility. When a natural disaster occurs in South Africa the local municipality has the primary responsibility to manage the situation. If the disaster is estimated to be too extensive the district municipality will manage the situation instead. If the district municipality is incapable of managing the disaster the provincial government will step in and take command. In reality though, when disasters occur, the responsibility is immediately transferred to the district municipality or the provincial government, merely for the sake of simplicity.³ This results in the municipalities getting themselves uninvolved in disaster management which in the long run will diminish their capacity of managing and preventing disaster risks.

7.1.2 Priority for Action 2 – Know the risks and take action

PFA 2 is about becoming aware of what disaster risks society is exposed to and how it could affect different regions and communities. Information arrangements like early warning systems can give up to date information about disaster occurrence and possible disaster risks. The information should thereafter be distributed to government, the private sector and communities. (UN/ISDR, 2007b, p. 7)

Risk assessment

“A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.”
(UN/ISDR, 2009, p. 26)

³ Prudence Dlamini, Assistant Director, Mpumalanga Provincial Disaster Management Centre, 1 Sep 2010

PART 2 – Case Study

Early warning system

“The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.”

(UN/ISDR, 2009, p. 12)

South Africa’s most significant early warning system is the *South African Weather Service (SAWS)* which delivers early warning services for high-risk weather and climate events (Buys, 2004). Despite the fact that systems seem to be in place, the results from the case study show an apprehension for a lack of early warning systems, programmes for climate change and prevention in disaster management. The most likely reason for this is that information is not cascaded down to local government, communities and civil society organisations. Somewhere along the line of communication inadequacies occur and disaster risk reduction implementation is hindered. This is alarming since it indicates that even if there are early warning systems in place, the information is not disseminated down to the vulnerable communities. This is not in line with the guidelines of the HFA which emphasise the use of early warning systems to reduce disaster risk among vulnerable communities (UN/ISDR, 2007a). The early warning systems that are in place need to be improved and the information must be cascaded down to vulnerable communities to reduce the risks of disaster. The lack of information on the local level results in a less significant focus on knowing the disaster risks. For example, the local police force in Kabokweni have no function whatsoever in disaster prevention and are solely active when a disaster has already occurred, mainly for response actions. It seems like “*Knowing the risks and take action*” only makes it to “*...take action*” at the local level.

According to the HFA it is also important to invest in scientific, technical and institutional arrangements to map and observe natural hazards (UN/ISDR, 2007a). Efforts regarding this have just begun in the Mpumalanga province; just one (the Ehlanzeni district) of the three districts within the province has a disaster management centre that is fully equipped and running⁴. This is despite the fact that the Act specifies the establishment of a disaster management centre in every district municipality (Act 57 of 2002, 2002).

It is also apparent in the case study results that PFA 2 has the largest implementation gap between local government and local community, see Figure 15. In PFA 2 local community has the lowest possible implementation level (*No, not at all*). It is evident that the local community is not involved in the implementation of PFA 2.

⁴ Prudence Dlamini, Assistant Director, Mpumalanga Provincial Disaster Management Centre, 1 Sep 2010.

7.1.3 Priority for Action 3 – Build understanding and awareness

PFA 3 is focused on information and communication. Education and training are two main components for building understanding and awareness, and that should be incorporated into school curricula, information-sharing systems and media among others. (UN/ISDR, 2007b, pp. 9-10)

The overall results in Figure 14 on page 52 show that PFA 3 has the lowest level of implementation of all the PFAs. One problem identified is a gap between the people that are affected by disasters (society) and the ones who know that disasters occur (authorities). The information is not used or exchanged and the two groups are detached from each other.

Another issue regarding the low implementation level of PFA 3 is that it has the highest rate of "Don't know"-answers, see Table 4 on page 54. The questionnaire contains four questions concerning PFA 3, two of these questions are about school curricula and teachers. Many of the respondents simply do not have the answer to these two questions since their area of expertise is not involving education of that sort.

Despite the lack of cooperation and communication between local government and higher instances, the local level of Kabokweni seems well aware of the importance of education and information. In fact, this seems to be the hottest topic discussed when the matter of disaster management implementation is raised. Many respondents also made comments about the need for education on disaster risk reduction. To be able to fully implement disaster risk reduction a good start is to create a culture of awareness and understanding. According to the HFA it is encouraged to incorporate education about disaster risk reduction in school curricula to reach young people. How well this is done in Kabokweni is hard to say because of the high rate of "Don't know"-answers to the questions regarding this. However, by incorporating education about disaster risk reduction in school curricula a culture of awareness can be established for future generations and this is why it is important to improve this area. One respondent made remarks that survival skills like swimming, fire fighting etc. should be thought at school. Easy measures like these could also increase the resilience of the population and should also be seen as future investments that will pay off, instead of being regarded as expensive programmes that are unaffordable.

Another discussed problem within the government units is staff turnover. As soon as employees are educated and trained they have no interest in working at the local level anymore and they go looking for jobs in higher levels of government. Human resources are limited and the constant

Public awareness

"The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards." (UN/ISDR, 2009, p. 22)

Capacity Development

"The process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions." (UN/ISDR, 2009, p. 6)

Land-use planning

“The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.”
(UN/ISDR, 2009, p. 19)

changing of employees is a risk factor since it results in a “brain drain” where knowledge and experience is lost where it is needed the most. This is obviously a problem that counteracts the capacity development that is encouraged in PFA 3 (UN/ISDR, 2007c, p. 70).

7.1.4 Priority for Action 4 – Reduce risk factors

When looking at the PFA 4 results it is evident that, like the other priorities, the level of implementation is not very high. The overall result reaches just above 2 (*to a very limited extent*), see Figure 14. PFA 4 also has a high percentage of “Don’t know”-answers, especially among the local community representatives who seem to have little knowledge about the issue of reducing underlying risk factors.

The largest problem within PFA 4 seems to be land-use planning. In Kabokweni there are apparent problems with land-use planning. There seems to be very little, if any, control over where houses are built and this ends up in the mushrooming of settlements in flood lines and flood banks, up the slopes of the mountains, in industrial and dump sites, next to electricity transformer facilities and under electricity cables; informal settlements are made everywhere without concerns for risk. An example of a dangerous combination of shortage in infrastructure and absence of risk awareness is illegal electrical wiring. Electricity is regarded as a basic need these days, but when the settlements grow fast and in unplanned areas the electricity distributor cannot support them all with electricity. In the end this leads to unsafe and illegal electrical wiring made by the locals. This is a major risk factor and known to have caused electrical shocks of small children. Evidently, the settlement problem in Kabokweni is a result from the combination of low implementation levels of education and awareness (see analysis of PFA 3) and land-use planning.

People are exposed to high risk levels because of lack of knowledge or ignorance. Improved support for land-use planning could improve society’s resilience against disasters dramatically and there is a huge need for support from the local municipality regarding the organisation of settlements and land-use planning. The HFA encourages the incorporation of disaster risk assessment in rural development planning and the management of disaster-prone human settlements (UN/ISDR, 2007b, p. 12). Disaster risk reduction should also particularly be taken into consideration in highly populated and flood prone areas (UN/ISDR, 2007b, p. 12), which is very much the case in Kabokweni. The absence of land-use planning in Kabokweni is leaving settlements vulnerable to natural hazards. Combined with the lack of awareness of hazards, which was revealed in PFA 3, these people are very much at risk. The problem with fast growing, informal settlements are a major problem which probably is very difficult to deal with. However, there must be regulations

and control of where it is safe and allowed to settle. This is a particularly important measure to build a resilient society.

7.1.5 Priority for Action 5 – Be prepared and ready to act

The fifth and last PFA emphasises the preparedness of society to ease the impact of hazardous events and to prevent disasters. Preparedness can be properly attained with the implementation of the PFA 1-4 (UN/ISDR, 2007c, p. 121). Therefore, the low level of implementation can be explained by several of the reasons already described previously.

One problem that is uttermost connected to the fifth PFA is the attitude problem mentioned in PFA 1. The focus on disaster management in the local level is mainly concentrated on relief and response rather than prevention and preparedness. It seems like the preparation for disasters is not about mitigating the impact of disasters, instead it is about getting enough financial resources for e.g. facilities, blankets and food in case of disasters. This could also be important, but focus on preventative measures is still too low. Unfortunately, without cooperation and communication between and within disaster management levels (PFA 4) along with education and awareness (PFA 3) prioritisation of disaster prevention (PFA 1) is difficult to accomplish. Without the help of PFA 1-4 the new approach on preventing natural disasters will not reach the lowest level of society which is the most critical level for preventing disaster risks.

The PFA 5 is summarized as follows:

“At times of disaster, impacts and losses can be substantially reduced if authorities, individuals and communities in hazard-prone areas are well prepared and ready to act and are equipped with the knowledge and capacities for effective disaster management.”

(UN/ISDR, 2007b, p. 12)

When relating this to the results from the PFA 1-4 it can be concluded that authorities, communities and individuals are not prepared, they are not ready to act, they are not equipped with the appropriate knowledge and they do not have efficient capacities.

By working on PFA 1-4 the implementation of PFA 5 will also be improved.

Response

“The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.”

(UN/ISDR, 2009, p. 24)

7.1.6 Cross-cutting issues– Social engagement, gender and cultural aspects

As well as all the other PFAs the cross-cutting issues are below the halfway mark in implementation. A few problems have been identified which could be part of the explanation to why the cross-cutting issues only are implemented to a *“very limited extent”* (see Figure 14).

The cross-cutting issues apply to different matters that should characterise all disaster risk reduction efforts in the implementation of HFA. The main issues concern multi-hazard approaches, gender and cultural perspectives, disaster-prone developing areas, creating a culture of disaster risk awareness and cooperation. When doing the case study no evidence could be found that e.g. gender perspectives are integrated into disaster management. Also no results show that cultural diversity and vulnerable groups are taken into account in disaster risk reduction efforts.

Taking cultural diversity into account to be able to reach the most vulnerable groups is particularly important in a country like South Africa that has 11 official languages. From both comments and discussions it has become apparent that because of the many languages, cultures and educational levels in South Africa it is difficult to disseminate disaster management systems, like early warning systems and information systems, to everyone.

There is also an issue of integration within and between disaster management units in departments and municipalities. There are several comments that bring up the fact that the local level of government is working in silos instead of putting their resources together. If cooperation and communication was improved, both vertically and horizontally within the disaster management levels, integrated disaster risk reduction would be reinforced and society would become much less vulnerable.

7.1.7 “Don’t know” answers

The total percentage of questions marked with the answer *“Don’t know”* is about 20%, see Table 4. The highest percentage of questions marked with *“Don’t know”* is reported from the local community representatives. About 30% of the questions were left this way by the local community representatives while the same numbers for the local government and civil society organisations is about 12% respectively.

The high number of questions marked with *“Don’t know”* from the local community representatives indicate that the local community representatives are not involved in disaster management and hence do not recognise the issues. Some confusion regarding whether to answer

“Not at all” or “Don’t know” did also occur, probably also because of the low rate of recognition. The respondents were all representatives for their organisation or organ of state and should know what activities that are present and what efforts that are made. If the respondent do not know about a certain issue they should tick “No, not at all” since if they do not know about it – but should – then it is most likely that the issue is not exercised at all. However, many respondents chose to tick “Don’t know” instead. It is like a vicious circle; if the respondents are not involved they do not know when they are supposed to be involved, and because they do not know that, they do not know what to tick. This confusion might have led to an over-representation of questions with the mark “Don’t know” and could be one explanation to the high number of questions left this way. However, all this indicates that the respondents are not involved in issues regarding disaster management in the way that is desirable.

The results of “Don’t know”-answers to questions are only indicated in Table 3 and Table 4 and not presented in Figure 15, where the rest of the results are presented. It could be assumed that the reported level of HFA implementation, primarily among the local community, could be even lower than what is presented since the “Don’t know”-answers principally indicate no involvement in disaster risk reduction.

7.2 The bottom-up approach in the light of the top-down approach

In this section the results from the case study will be compared to results from the NETaRNRA which assessed the implementation of the *National Disaster Management Framework*. The case study in this thesis is regarded to have a bottom-up approach while the NETaRNRA is regarded to have a top-down-approach. It should be of interest to look into the results and examine whether there are any differences between the two different approaches.

Figure 16 shows a comparison of the results from the case study (presented in Figure 14 and Figure 15) and the NETaRNRA results (presented in Figure 10). As described in section 4.4.1 the NETaRNRA results have been recalculated to match studies that assess the implementation of HFA. The NETaRNRA survey is done with a scale from 1 to 4 while the case study is based on the VFL LITE questionnaire that has a scale from 1 to 5. The different scales used, combined with the fact that the two assessments are using different methods and analyses different frameworks, makes it difficult to do a simple comparison. However, an interesting trend has been noticed when looking at the results in Figure 16.

The NETaRNRA reports an overall higher implementation level of the PFAs than the case study. However, in both the assessments the level of HFA implementation is low; NETaRNRA reports a level of 2 to 3 which means between *“To a very limited extent”* and *“Some activity but significant scope for improvements”*. The level of HFA implementation of the case study is in general a bit lower, between 1 and 2, i.e. *“No, not at all”* and *“To a very limited extent”*.

When looking at Figure 16 an obvious trend can be seen; the HFA level of implementation descends from NETaRNRA national level to local government, further to civil society organisations and then to local community. This observation indicates that a top-down approach might give higher levels of HFA implementation than a bottom-up approach and the closer one gets to the local communities and the grass-root level, the lower the HFA implementation level gets. This is the case for all the PFAs except PFA 3, where the civil society organisations have reported higher HFA implementation level than the local government.

An explanation to the trend might be found in the governmental structure. The higher level of government can be called, as mentioned earlier in section 4.2, the strategic level of the governmental structure and the lower level of government can be called the operational level. Efforts of any sort often begin at the strategic level, in the form of policies and plans, and will be fully completed at the operational level in the form of certain actions. Therefore it can be claimed that an issue is not fully implemented until it has reached, from the national/regional level, to the local level and also has been fully performed or activated. Because the NETaRNRA have included higher levels of government compared to this case study it could be the reason to why the perceived level of HFA implementation is higher. Disaster risk reduction policies and plans might de facto be carried out in the strategic level but cascading of these issues down to being fully implemented at local level might be the real struggle. So, while the higher levels of government bespeak of one certain HFA implementation level the local government might not fully agree and instead report a lower HFA implementation level.

It is alarming that the HFA implementation level decreases when approaching the local community level since the people that are primarily affected by disasters are the vulnerable communities. The results show that local communities are not involved in the efforts on disaster risk reduction, but disaster risk reduction measures must be improved and disseminated down to the local communities to increase resilience in society.

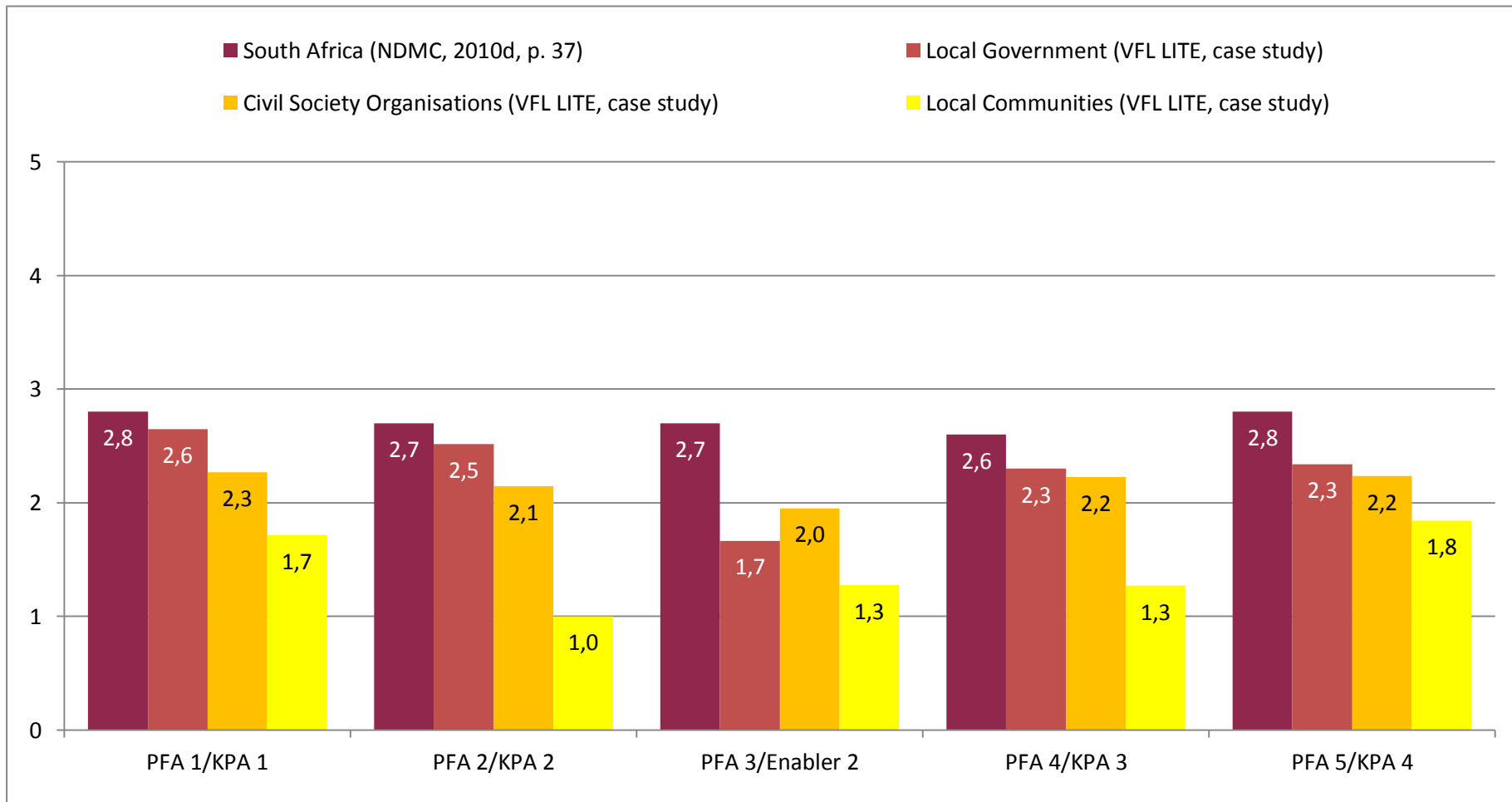


Figure 16 - Comparison of the top-down approached results from the NETaRNRA and the bottom-up approached results from the case study. A trend is revealed in the comparison of the results; the further down in hierarchy, the lower the HFA implementation level.

7.3 The case study in a South African context

The case study was conducted at Kabokweni which is a small town in the Mbombela local municipality of South Africa. Because the case study only involved 30 respondents it cannot represent all of South Africa. However, putting the case study results into the context of South Africa will give a somewhat good estimation on how the Kabokweni level of HFA implementation is related to the HFA implementation level of South Africa. By comparing the case study results to the VFL assessment results it can be seen whether the HFA implementation level of Kabokweni coincides with or differs from the overall result of South Africa. This will confirm whether the case study results agree with the overall level of HFA implementation level of the country or if it is an extreme value.

Figure 17 shows a comparison between the overall case study results and the overall results from the VFL assessment. The results are rather equal with only a maximum difference of 0,5 in PFA 4 and the cross cutting issues. This means that the current level of HFA implementation in Kabokweni is quite similar to the current level in the rest of the country. One can therefore assume that the case study result generated in this thesis is not inconsistent or in any way dramatically different compared to the South African average.

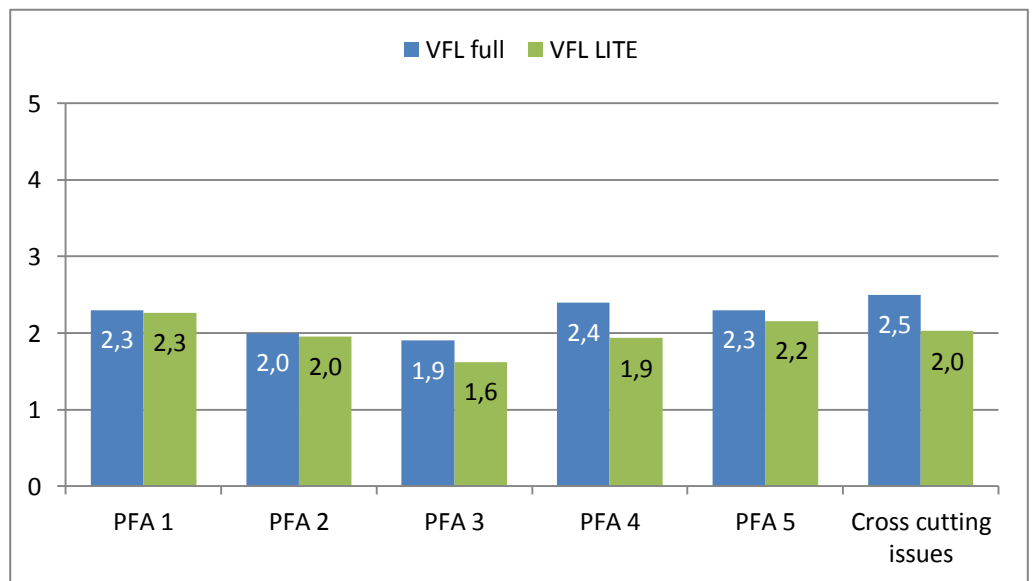


Figure 17 - A comparison between the VFL assessment results (GNDR, 2009b) and the case study results obtained in this thesis.

PART 3

Closure

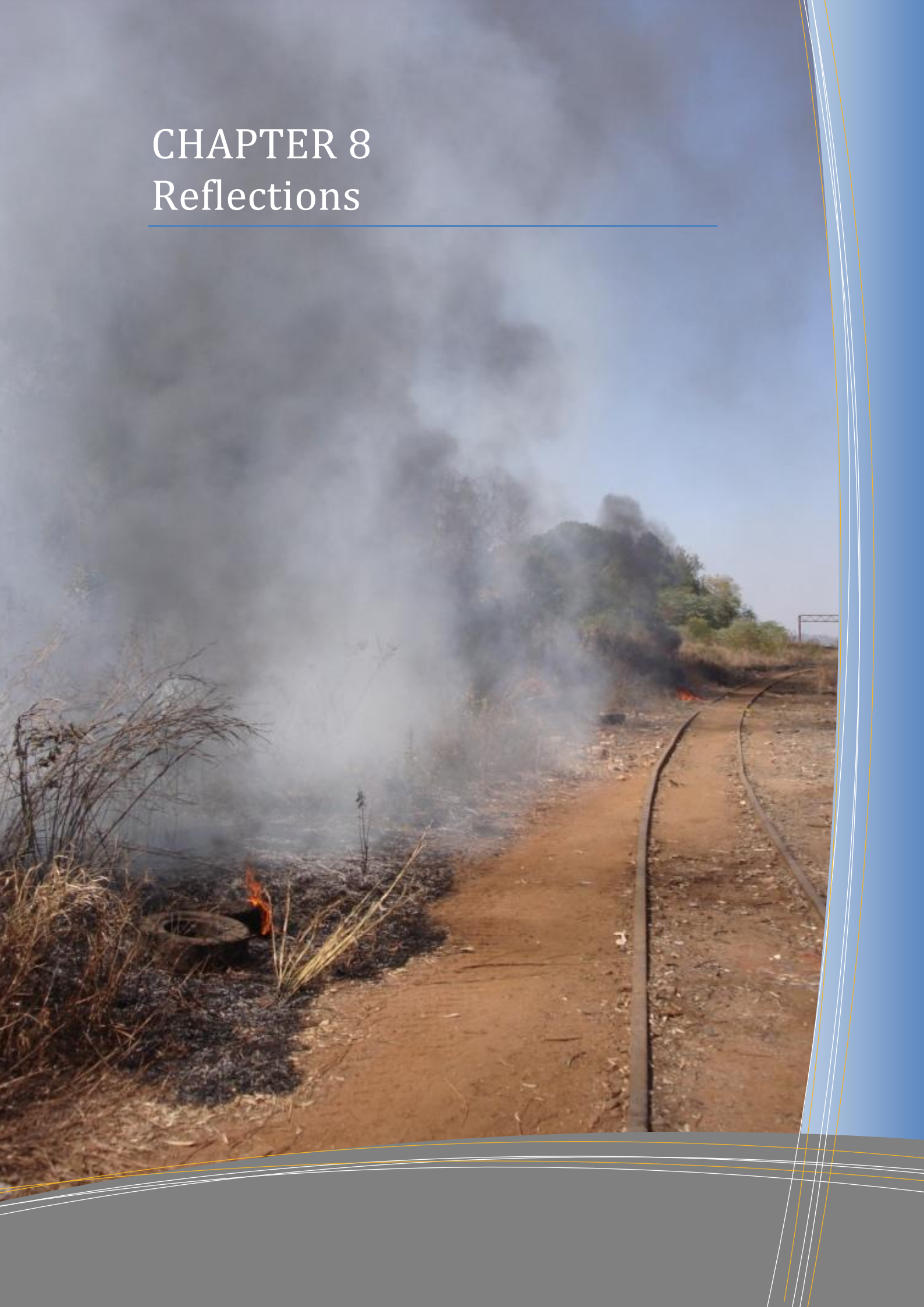
The third part is a completion of the thesis. It consists of two chapters; reflections and summary, including conclusions.

The reflections regard the VFL LITE questionnaire, the method and source criticism.

Finally, the summary and conclusion of the thesis is presented. In this chapter the research questions are answered.

CHAPTER 8

Reflections



CHAPTER 8

Reflections

The results are very much dependent upon how the case study was performed; this will be discussed in this chapter. The most important parts are considered to be the VFL LITE questionnaire, the methodology of the case study and response issues. There will also be a discussion about the used literature.

8.1 The VFL LITE questionnaire

As mentioned earlier the VFL LITE questionnaire is developed by the *Global Network of Civil Society Organisations for Disaster Reduction* (GNDR). The questionnaire was kept in its original form in the case study which means that expressions and formulations were not edited. In this way the results generated can be compared with other assessments of the HFA. However, this also means that any problems accompanying the questionnaire will be present in this thesis as well. During the utilisation of the questionnaire some problems were identified which most probably have had some effects on the generated results.

The VFL LITE questionnaire is a simplified version of the VFL questionnaire and is therefore supposedly more general in its attribute to make it relevant to all respondents. The positive feature with the VFL LITE questionnaire is that it is not as complicated or time-consuming as the VFL questionnaire and instead is more manageable and simple. The concept is good; the problem though is that some questions are quite specific to the point that numerous respondents did not have answers to these questions. Especially in PFA 3 (education, training and awareness needs) 50% of the questions regards school curricula and teachers which are quite narrow subjects. The issue can cause respondents to either not know what to answer and therefore feel irrelevant to the questionnaire or to answer incorrectly because of misconception or lack of ambition. It is undoubtedly quite difficult to make a general questionnaire for such a diversified group of respondents.

There are formulation problems in the questionnaire where some questions are double-barrelled, i.e. contain the word “and”. An example is the first question in PFA 1: “*Does local and provincial government provide organisation for disaster risk reduction at the local level?*”. A dilemma occurs when the respondent think that for example only provincial government provide organisation for disaster risk reduction at local level. The respondent then gets into a situation where he or she

does not know what to answer. The questionnaire consists of almost 50% double-barrelled questions. Perhaps, if the questions would have been rephrased the adverse effects on the results would have been reduced.

The three different respondent groups in the case study were predefined as local government, civil society organisations and local community. Categorising the respondents of the case study into these three groups was easier said than done. The largest issue is the definition of civil society organisation which obviously is quite unclear, see sidebar comment on page 21. Local government respondents were easy to identify while civil society organisations and local community were easily mixed up. Because of the difficulty to categorise the respondents confidently it might not completely correspond with other VFL assessments such as the VFL assessment presented in this thesis.

Since the number of respondents only adds up to 30 the case study results are quite sensitive to how the categorisation of the respondents is made. Since local government respondents were quite easy to identify the categorised result for that respondent group is reasonably correct. However, as it was more difficult to categorise the other respondents into the two other groups there is a bigger risk that the results are improperly presented in this thesis. Efforts have been made to avoid this risk as much as possible through discussions with Terry Gibson, Project Manager at the *Global Network of Civil Society Organisations for Disaster Reduction* (GNDR).

8.2 The methodology of the case study

The results of the case study are very much depending on how the case study was executed and also on the participating respondents; how many they are, who they are (i.e. age, gender, education etc.) and what organisations or organs of state they represent. These, among others, are factors that have impact on the responses and thus also on the results and will be discussed in this section.

8.2.1 The execution of the case study

In most of the cases the printed VFL LITE questionnaire was handed out to the respondent to be gathered some days later. Many respondents had forgotten to do the questionnaire and were reminded of this when we arrived to collect it. This led to a situation where the respondent was embarrassed and let us know that he or she was a bit busy and had us to sit down and wait for him or her to finish it. This was obviously a stressing moment for the respondent; having us waiting, knowing that he/she had forgotten. This stress factor might have had an impact on the results. To avoid this, the respondent should have been reminded per telephone or e-mail before the appointed deadline. On some occasions

this was done, but it is definitely something that should have been done more regularly. This would have increased the chances that the questionnaire was completed when we arrived and if not, giving the respondent some extra time. Meanwhile, there must be a time limit; the case study had to be executed during a certain amount of time and it was not possible to give the respondents extra time to complete the questionnaire.

8.2.2 The participation rate

30 respondents participated in this case study which is considered to be quite low. This means that the results can only be seen as estimation of the HFA implementation level at local level in the Kabokweni. All the respondents were chosen because of their connection to or involvement with the Kabokweni. The participants also represent a lot of different organisations and organs of state which has contributed to a wide range of different approaches on disaster management. This means that even though the participation rate is low the results should give a good understanding of the HFA implementation level in Kabokweni, from a bottom-up perspective.

The participation rate induces that if there are any extremes they will have great impact on the results. This is particularly the case when the results are divided into three categories representing the three respondent groups; the 30 respondents consist of 13 local government representatives, 6 civil society organisations and 11 local community representatives. If some respondents choose to answer “*Don’t know*” or leaves the question unanswered in the VFL LITE questionnaire the impact on the results of the ones who answer will be even greater.

When looking at Figure 15 on page 53 it can be seen that a trend is that local government report the highest level of HFA implementation, the local representatives report the lowest level of HFA implementation and the civil society organisations are in between. However, this is not the case with PFA 3 – create a culture of safety and resilience at all levels, using knowledge and education – where the civil society organisations report the highest level of HFA implementation. Since the civil society organisations are so few to the number it is not unlikely that this “breaking of the trend” is because of the result sensitivity. There are only two civil society organisations that have given answers of 3 or higher to PFA 3. One of the two civil society organisations that have given answers of 3 or above to this PFA perform disaster risk reduction education and training in their normal day to day practice. This could be why this respondent noted a higher level of PFA 3 implementation than the others. The impact of the extremes, enhanced by the number of participants, rate of unanswered questions/“*don’t know*”-answers and answer variations could hence be the reason why civil society

organisations break the trend on PFA 3. Adding more participants to the case study would have lowered the result sensitivity and the effect of extremes would not have been as substantial.

In this context it is easy to believe that the local community representatives' answer to PFA 2 – know the risks and take action – is an extreme value or has in some way been affected by the same issues the was recently mentioned. Figure 15 shows that the local community reports the lowest possible level of HFA implementation on this priority. Looking at the detailed results it can however be affirmed that this is not the case; all of the respondents that have answered this question have answered 1 - "Not at all". Because there were 11 local community respondents it is probable that this result is no coincidence.

8.3 Response issues

A problem recognised during the execution of the case study is that people sometimes tend to answer the questionnaire, based on their own personal experiences, instead of on behalf of the organisation or organ of state that they represent. In this way some answers might not represent the chosen organisation or organ of state and the results will therefore not fully illustrate the level of HFA implementation of the certain organisation or organ of state.

A problem that also might have affected the results occurs when respondents worry about their appearance. There might have been some participating organisations or organs of state that want to "look good" and because of this reason reporting higher levels of HFA implementation than is the actual case. Even though the respondent may be anonymous in the questionnaire this problem might have been present. The results may also have been affected if the respondents have answered what they thought we wanted them to answer. In some cases the respondents discussed the assessment before they completed the questionnaire; this might have influenced their answers in the direction they thought we wanted them to be. How major these problems are and what impact they have had on the results is hard to say, but it is acknowledged.

8.4 Source criticism

Since the NETaRNRA report originally assessed the South African *National Disaster Management Framework* a translation was needed to create results representing the HFA, see Table 1 on page 28. The NETaRNRA also used an assessment method containing four answering alternatives which had to be recalculated to match the five answering alternatives of the HFA. The NETaRNRA translation of the results to HFA is used in the comparison of a bottom-up and top-down approach. The

PART 3 – Closure

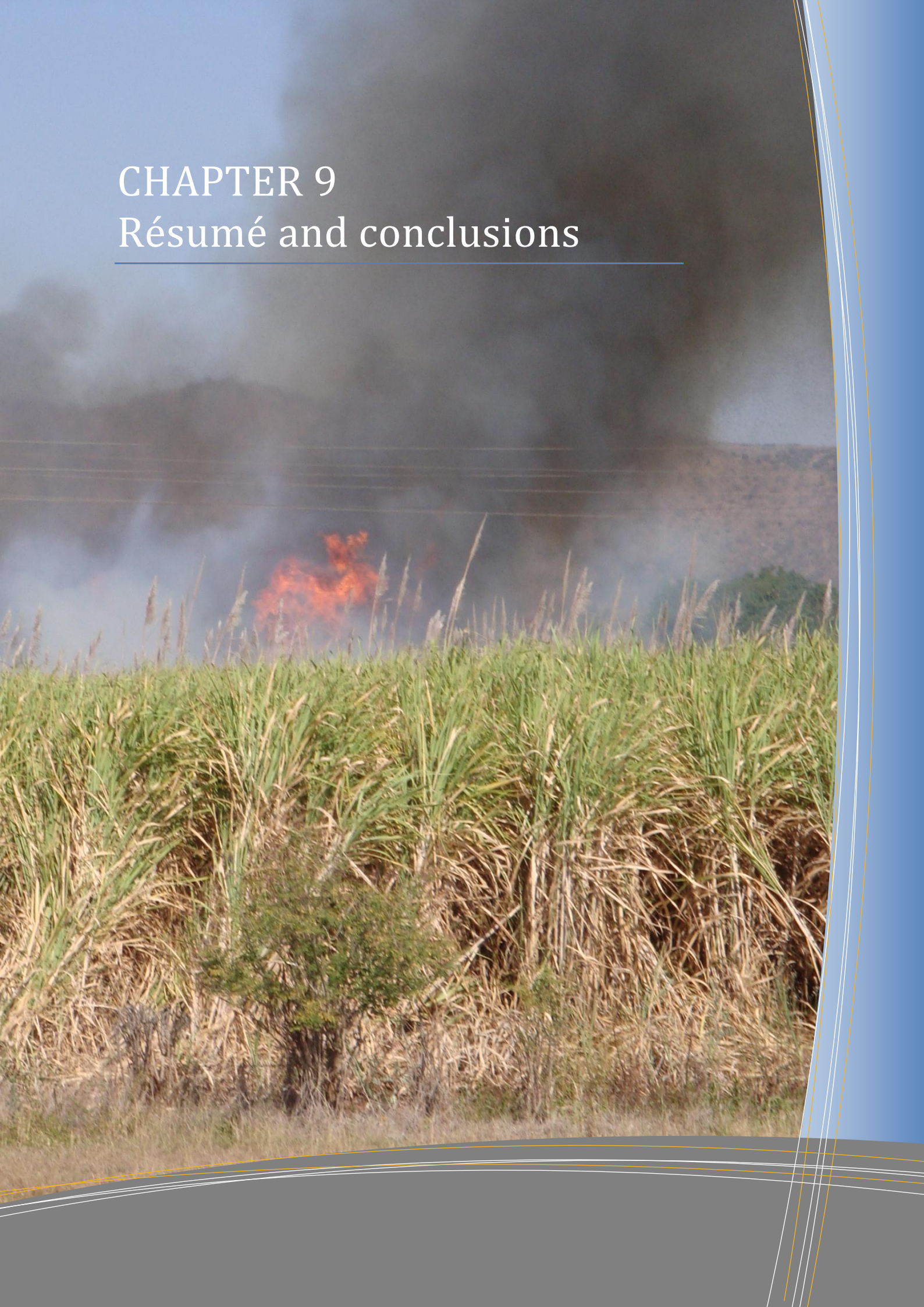
results and analysis of this comparison is therefore fully dependent upon the NETaRNRA translation which has not been verified for reliability. Due to the set time frame for the thesis no review of this problem has been made. It is however acknowledged that the NETaRNRA recalculation of the results might be a bit too simple to be ideal and that the translation between the two frameworks may include subjective opinions.

Looking at Table 1 it is clear that *Enabler 1* and *3* of the *National Disaster Management Framework* cover several of the PFAs. It is unsure whether the authors of the NETaRNRA even included the generated results for these enablers when translating the results generated in the NETaRNRA to South African implementation results of the HFA. This could imply that all of the results generated in the NETaRNRA have not been used in the presentation of the recalculation to results for the HFA implementation.

The VFL assessment is quite similar to this case study regarding the generated results which means that no translation was necessary for comparison. The VFL assessment involved a total of 139 participants for the South African study. The case study in this thesis involved a total number of 30 participants representing local level of Kabokweni. Relatively, this thesis only assesses one location, but the number of participants in the case study is equal to around 20% of the VFL assessment participation rate which is said to represent all communities of South Africa. One can therefore claim that the case study has sufficient amount of participants compared to the VFL assessment and thus gives a good picture of the HFA implementation level at Kabokweni.

CHAPTER 9

Résumé and conclusions

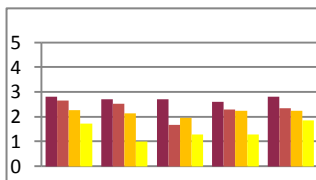


CHAPTER 9

Summary and conclusions

This chapter summarises the analysis and reflections and presents the conclusions made in this thesis which answers the research questions.

The interesting trend can be seen in Figure 16 on page 71, here is a miniature of the same figure.



The most interesting finding in the analysis is the noticeable trend in the HFA level of implementation. Both within the local level of Kabokweni and in the comparison with the top-down assessment NETaRNRA there seem to be decreasing levels of HFA implementation further down in the levels of society. Since the results rely on a case study the trend only indicates, and does not prove, that involvement in the HFA implementation and disaster risk reduction is worse in lower levels of South African society. Also, the implementation level of the HFA might be even lower than presented since the amount of "Don't know"-answers could indicate no involvement in disaster risk reduction.

Even though the NETaRNRA reports an overall higher HFA implementation level than the case study the level of HFA implementation is still low; NETaRNRA reports a level of 2 to 3 which means between "To a very limited extent" and "Some activity but significant scope for improvements". The level of HFA implementation presented in the case study is in general a bit lower, between 1 and 2, i.e. "Not at all" and "To a very limited extent". This observation indicates that a top-down approach might give higher levels of HFA implementation than a bottom-up approach.

The case study shows that there is a lot of room for improvement regarding the implementation of HFA. PFA 1 – make disaster risk reduction a priority – is considered as a very important area to improve, even though it currently has the highest level of implementation. The allocation of resources is a general problem and lack of responsibility and the right attitude is obviously a major concern. Prioritising disaster risk reduction will enable progress in the other PFAs and make the full implementation of HFA possible which is why PFA 1 needs even more attention.

PFA 1 is tied to PFA 3 – build understanding and awareness – since increased knowledge of the importance on disaster risk reduction will argue for and increase the prioritisation of prevention and mitigation of natural disasters. At local level of Kabokweni an obvious need for the

implementation of HFA is education and awareness. PFA 1 and 3 could really help the implementation of HFA and the three remaining PFAs.

Land-use planning (PFA 4) is a current and apparent problem in Kabokweni. Apart from the other PFAs, the issues of PFA 4 are visible in the everyday life, which can be seen on the cover page of chapter 2 and in photos in Appendix D. The substantial lack of land-use planning is a warning sign of the vulnerability to natural hazards in the Kabokweni.

Despite obvious problems there is one thing that pulls in the right direction; South Africa has adopted its own disaster management act and framework. This means that attempts are made to improve disaster risk reduction. The identified problems with the Act needs attention though, since it only addresses metropolitan and district municipalities. Disaster risk reduction needs to be a priority within all levels of government. If disaster management is not as prioritised as it needs to be it will be difficult to complete the implementation of the HFA and hence mitigate the effects of natural hazards.

All investments that are done to increase resilience and mitigate vulnerability are more cost effective than relying on post-disaster response and recovery (UN/ISDR, 2006, p. 5). This must be remembered by decision makers; all efforts done in the area of disaster risk reduction are investments for the future. By implementing PFA 1-5 and taking cross cutting issues into consideration much improvement could be made. This must be done in order to save lives and property from future disasters.

What is the current level of HFA implementation at the local level of Kabokweni location in South Africa?

It has been indicated that the local level of disaster management has not been sufficiently involved in the efforts of disaster risk reduction and the *Hyogo Framework for Action* is implemented only to a limited extent. The HFA is still mostly a framework on paper and has not yet been substantialised into accomplishments and actions. However, only half of the HFA implementation period is up and therefore Kabokweni still has a chance of reaching the expected outcome. It is a bit odd, though, that Kabokweni is below the halfway mark in HFA implementation since South Africa is different from many other countries regarding the fact that the *Act* and the *National Disaster Management Framework* has been present for seven and five years respectively. This fact should have somehow have “swept the court” and given South African implementation of disaster risk reduction and HFA a head start.

What main features can be identified in the level of HFA implementation from the bottom-up perspective compared to a top-down perspective?

A noteworthy trend has been identified when looking at results from these two different approaches. This trend supports the conclusion that the implementation of HFA is less present in lower levels of society. However, although the NETaRNRA results are overall higher in HFA implementation level than the case study both the assessments report a low level of HFA implementation.

9.1 Implications and future research needs

The results of the thesis address officials working with disaster management in Kabokweni, Mbombela local municipality, Ehlanzeni district and Mpumlanga province. Since the HFA is implemented only to a “*very limited extent*” at the local level in Kabokweni there is a need for improvement. It is therefore important that decision-makers take this thesis, and other HFA implementation assessments, seriously.

Shortages are found within all PFAs and the cross cutting issues of the HFA. To be able to improve these areas disaster risk reduction must be prioritised and sufficient resources must be allocated. Officials at the local level are well aware of the shortages of the HFA implementation but need support from the political top positions to be able to improve. This is why the thesis should also be highly interesting for officials in all levels of South African society.

The results also address larger organisations like the GNDR who assesses the HFA implementation progress at the local level around the world. The results of the thesis have been presented to the GNDR and will, together with the VFL assessment, contribute to a better understanding of the HFA implementation progress in South Africa. Hopefully, in the future, the *HFA Monitor* will also provide additional information on the progress of the HFA implementation in South Africa.

Large organisations, like the GNDR, have a great influence on disaster management, which is crucial to make disaster risk reduction a priority. Disaster risk reduction must be on the political agenda in all levels to be able to reduce vulnerability and build a society more resilient to natural, and human induced, hazards.

The research of the thesis is based on a case study of the location Kabokweni. Although Kabokweni is considered as an interesting case study area it represents only a small portion of the whole country and is merely a brick in the wall when it comes to evaluating the HFA implementation. The VFL assessment evaluated the implementation of

the HFA in the local level of South Africa; further studies of other areas such as the case study area would though give more detailed information on the HFA implementation progress in the local level of South Africa. On the other hand, no matter how many and detailed assessments that are made, decision-makers must recognise the importance to make a change. However, a more detailed assessment of the HFA implementation would give a better basis for decisions and hopefully increase awareness of the importance of disaster risk reduction among decision-makers.

Looking into the larger perspective; the world, it is apparent that the HFA is present in almost all countries. However, Figure 4 on page 23 shows that only 33 countries finished the VFL questionnaires in time for the VFL assessment report 2009. This implies that there is a lot of work left to do and further research is needed on the HFA implementation progress in the remaining countries. There is a particular need for HFA implementation assessments in the more disaster prone and poor countries where monitoring the implementation of disaster risk reduction is most crucial.

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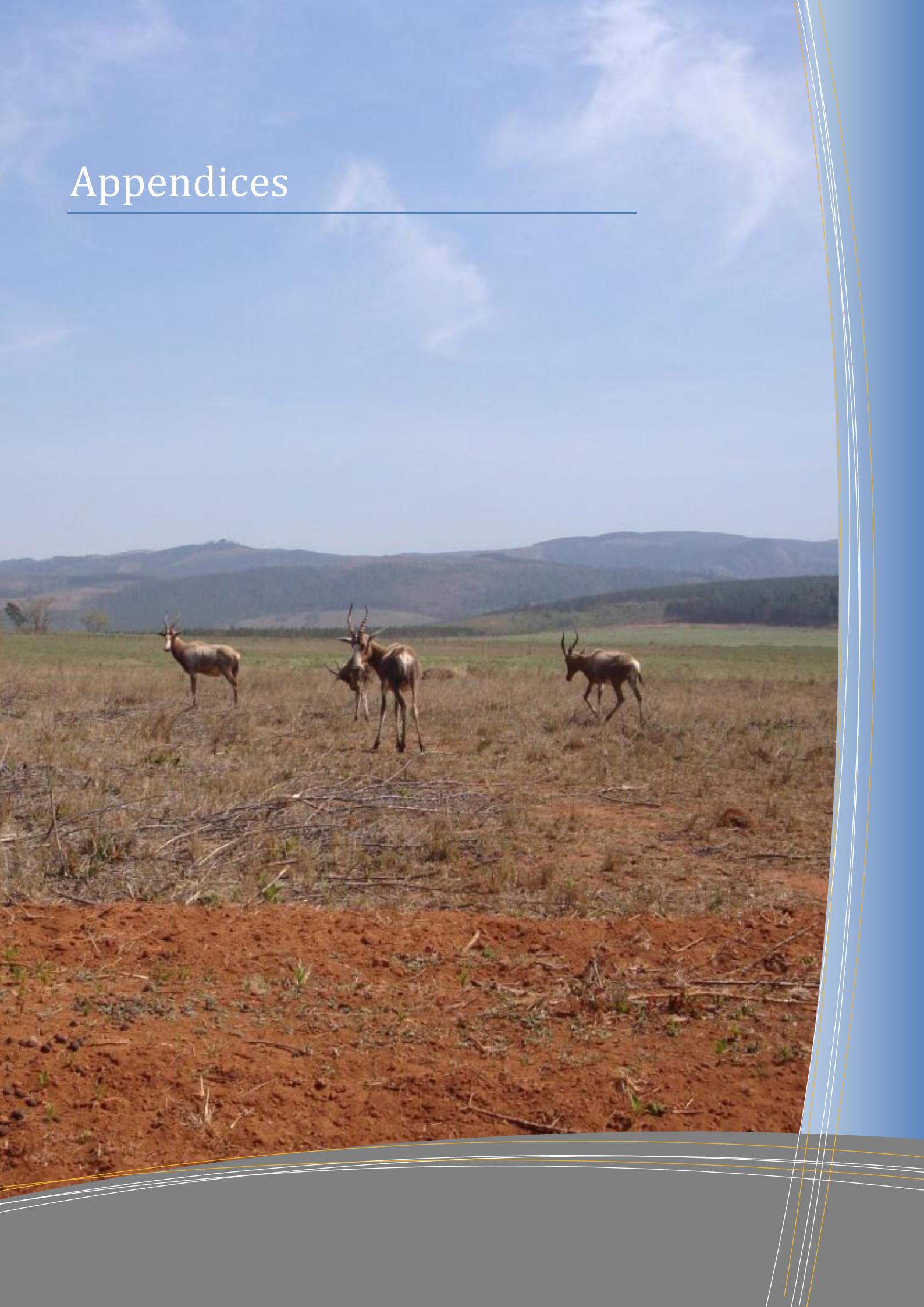
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Appendices



Appendix A

The VFL LITE questionnaire

VFTFLite

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 Last Modified: February 09 2009, 9:46 AM
 Design Theme: Global Blue
 Language: English
 Button Options: Labels
 Disable Browser "Back" Button: False

Views from the Frontline Lite

Page 1 - Question 1 - Choice - Multiple Answers (Bullets) [Mandatory]

Please give us some information about you. This information will be treated in confidence. Select the 'role' which most accurately describes you.

- Local/District/Provincial Government
- Member of Civil Society Organisation
- Member of a local community

Page 1 - Question 2 - Open Ended - One Line [Mandatory]

Please tell us which country and which region of the country you come from

Page 2 - Question 3 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 1 Governance:
 Structure: Does local and regional government provide organisation for disaster risk reduction at the local level?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
○	○	○	○	○	○

Page 2 - Question 4 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 1 Governance:
 Planning: Do local sectoral and development plans incorporate disaster risk reduction (i.e. agriculture, housing, environment, etc)?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
○	○	○	○	○	○

Page 2 - Question 5 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 1 Governance:
Participation: Do representatives of local communities and community-based organisations participate in the development of local level planning and policy development?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 2 - Question 6 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 1 Governance:
Financial resources: Are adequate financial resources dedicated to local government and other local institutions for Disaster Risk Reduction?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 2 - Question 7 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 1 Governance:
Human Resources: Does the government provide training in Disaster Risk Reduction to local officials and local 'civil society organisations / community leaders?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 2 - Question 8 - Open Ended - Comments Box

Governance
Do you have any other comments you would like to make about Governance and Disaster Risk Reduction in your situation?

PFA 2 Assessment, Monitoring and Warning
 Risk assessment: Are regular hazard/risk assessments held with the participation of representatives of all sections of the local communities (including women and the most vulnerable groups)?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PFA 2 Assessment, Monitoring and Warning
 Early warning: Are there effective early warning systems in place, reaching local populations and taking local conditions into account?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PFA 2 Assessment, Monitoring and Warning
 Systems: Are systems in place to monitor key hazards and vulnerabilities and share such information with at-risk communities?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Assessment, Monitoring and Warning
 Do you have any other comments you would like to make about Assessment, Monitoring and Warning in your situation?

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PFA 3 Knowledge and Education
 Formal education: is Disaster Risk Reduction taught as part of the local school curricula?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 4 - Question 14 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 3 Knowledge and Education
Training: Are teachers trained on Disaster Risk Reduction and provided with educational material?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 4 - Question 15 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 3 Knowledge and Education
Training (2): Are community leaders (including women) trained in Disaster Risk Reduction?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 4 - Question 16 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 3 Knowledge and Education
Public Awareness: Are there public awareness initiatives informing communities about disaster risk?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 4 - Question 17 - Open Ended - Comments Box

Knowledge and Education
Do you have any other comments you would like to make about Knowledge and Education in your situation?

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.....

.....

.....

Page 5 - Question 18 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Natural resource management: Are there policies at the local level to support the sustainable management of natural resources?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 19 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Climate Adaptation: Do local government and organisations support communities to adapt to actual or expected climate change?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 20 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Livelihood Security: Do local government and organisations communities to strengthen their livelihoods in flood or drought-prone areas?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 21 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Poverty Alleviation; Do local government and organisations include Disaster Risk Reduction as an aspect of poverty reduction plans?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 22 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Land use: Is Disaster Risk Reduction incorporated into land use plans for informal settlements in your locale?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 23 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Building codes: Are new building codes applicable to construction practices for informal or unregulated human settlements?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 24 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 4 Underlying risk factors
Protection of public facilities: Are key public facilities (such as schools and hospitals) re-built or strengthened to project against the threat of major hazards, especially in areas of high risk?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 5 - Question 25 - Open Ended - Comments Box

Underlying Risk Factors
Do you have any other comments you would like to make about the Underlying Risk Factors in your situation?

Page 6 - Question 26 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 5 Preparedness and Response
Disaster preparedness planning: Are there disaster preparedness plans in place at the local and community level?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 6 - Question 27 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 5 Preparedness and Response
Training and Rehearsals: Are regular training drills and evacuation rehearsals done with at-risk communities and local 'civil society' organisations?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 6 - Question 28 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 5 Preparedness and Response
Financial reserves: Do the local authorities have financial reserves / emergency funds that can be made available quickly to support effective response to disasters?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 6 - Question 29 - Rating Scale - One Answer (Horizontal) [Mandatory]

PFA 5 Preparedness and Response
Disaster recovery: Are disaster recovery programmes designed to reduce the risk of future disasters?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 6 - Question 30 - Open Ended - Comments Box

Preparedness and Response
Do you have any other comments you would like to make about the levels of Preparedness and Response in your situation?

Page 7 - Question 31 - Rating Scale - One Answer (Horizontal) [Mandatory]

'Cross-cutting' issues
Participation: Are communities and vulnerable groups involved in Disaster Risk Reduction planning and decision-making with local authorities and local 'civil society' organisations?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 7 - Question 32 - Rating Scale - One Answer (Horizontal) [Mandatory]

'Cross-cutting' issues
Volunteers; Are there activities to support and encourage the voluntary participation of communities in reducing disaster risk?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 7 - Question 33 - Rating Scale - One Answer (Horizontal) [Mandatory]

'Cross-cutting' issues
Gender: Are local women able to participate and have specific roles in decision-making and planning/ implementation of Disaster Risk Reduction activities?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 7 - Question 34 - Rating Scale - One Answer (Horizontal) [Mandatory]

'Cross-cutting' issues
Cultural sensitivity; Do Disaster Risk Reduction activities take into account the views and needs of different vulnerable groups with communities (young, old, disabled, ethnic minorities, etc)?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 7 - Question 35 - Rating Scale - One Answer (Horizontal) [Mandatory]

'Cross-cutting' issues
Culture: Are traditional knowledge and cultural practices of communities taken into account in Disaster Risk Reduction activities?

Not at all	To a very limited extent	Some activity but significant scope for improvement	Yes, but with some limitations in capacity	Yes, with satisfactory, sustainable and effective measures in place	Don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page 7 - Question 36 - Open Ended - Comments Box

'Cross Cutting' issues
Do you have any other comments you would like to make about 'Cross cutting' issues (issues such as social engagement, gender, and cultural aspects) in your situation?

Thank You

Appendix B

Recalculation method - NETaRNRA

Take notice that this is not a method used by the authors. The method is used in the NETaRNRA (NDMC, 2010b, p. 42) to recalculate the level of implementation of the *National Disaster Management Framework* to make the results comparable with the implementation level of *Hyogo Framework for Action*.

B.1 Method used for recalculation of the NETaRNRA results

Step 1: Calculate an average score per *Priority for Action/Key Performance Area/Enabler*:

An average score per *Priority for Action* was calculated from the results of progress reported by 62 countries published in the *2009 Global Assessment Report on Disaster Risk Reduction* report for Africa (18), America (15), Asia (13), Europe (12) and the Pacific (4) to get global average scores.

An average score per *Key Performance Area* and *Enabler* was calculated from the results of progress reported by 165 participants that represented organs of state at the national and provincial NETaRNRA workshops in 2009 to get South African average scores – Disaster Management Centres (8); National Departments (19); Provincial Departments (56); District Municipalities (35); Local Municipalities (27); Metropolitan Municipalities (6); and Other Organs of State (14).

Step 2: Recalculate South African average scores to make it comparable with global average scores:

Progress made with the five *Priorities for Action* of the HFA was reported on five levels:

Level 1: Minor progress with few signs of forward action in plans or policy.

Level 2: Some progress, but without systematic policy and/ or institutional commitment.

Level 3: Institutional commitment attained, but achievements are neither comprehensive nor substantial.

Level 4: Substantial achievement attained but with recognized limitations in key aspects, such as financial resources and/or operational capacities.

Level 5: Comprehensive achievement with sustained dedication and capacities at all levels.

Participants to the NETaRNRA workshops had to indicate their organisation's progress with implementing the four key performance areas and three enablers of the *National Disaster Management Framework* by selecting one of four options, namely:

- 1 Not acceptable/Nothing in place/Not started yet
- 2 In progress/Below 50% completed/Started process
- 3 Not fully compliant/Not up to standard yet/Still need attention
- 4 Fully compliant/Up to standard/Completed

Formula for recalculation:

$\Sigma = a + (a \times 0.25)$, where $a = \text{score (i.e. 1, 2, 3, or 4)}$

Appendix C

Case study participant consent form

PARTICIPANT CONSENT FORM

Research Title: **EVALUATION OF THE IMPLEMENTATION OF THE HYOGO FRAMEWORK FOR ACTION IN THE KABOKWENI LOCATION: VIEWS FROM THE FRONTLINE PERSPECTIVE**

Project Leader: Surname _____

First Name: _____

Address: _____

Telephone number: _____

We appreciate your willingness to partake in this research project. The project leader will contact you to arrange a time for the interview to take place.

- Your involvement in this study is voluntary, you are not obliged to divulge information you would prefer to remain private, and you may withdraw from the study at any time.
 - The project team will treat the information you will provide as confidential. If you wish, you will not be identified in any document, including the interview transcripts and the research report, by your surname, first name, or by any other information. You will be referred to in the document under a code name. No one, other the project team will be informed that you participated in this research.
 - Although no risks are anticipated in this project, every effort will be made to minimized possible risks.
 - The research findings will be made available to you should you request them.
 - Should you have any queries about the research, now or in the future, you are welcome to contact the project leader at the above address.
 - We appreciate your willingness to be involved in the project.
-

I understand the contents of this document and agree to participate in this research.

SIGNATURE _____

DATE _____

NAME _____

Appendix D

Photos of Kabokweni location



Figure D.1 - Settlements in the presence of an industrial site, Kabokweni.



Figure D.2 - Locals using the flood banks for farming but also as a settlement area, Kabokweni.



Figure D.3 - Constructions close to the river side, Kabokweni.



Figure D.4 - Settlements in the vicinity of the electrical power plant, Kabokweni.

Appendix E

The case study results in detail

DK means that the question has been answered with “Don’t know”.

XX means that the question has not been answered at all.

Question → Respondent ↓	1	2	PFA 1	3	4	5	6	7	PFA 2	8	9	10
1	CSO	SA, MP		1	1	2	1	1		3	1	1
2	CSO	SA, MP		4	3	3	3	4		2	2	3
3	CSO	SA, MP		2	DK	1	2	1		DK	1	1
4	CSO	SA, MP		3	3	2	2	2		3	3	3
5	CSO	SA, MP		3	3	2	2	3		2	2	2
6	CSO	SA, MP		4	DK	2	DK	1		3	2	DK
7	LC	SA, MP		3	2	2	DK	DK		1	1	1
8	LC	SA, MP		2	DK	1	1	1		1	1	1
9	LC	SA, MP		1	2	2	1	1		1	1	1
10	LC	SA, MP		5	5	DK	DK	5		DK	DK	DK
11	LC	SA, MP		2	1	1	DK	DK		1	1	1
12	LC	SA, MP		2	1	1	2	1		1	1	1
13	LC	SA, MP		4	4	DK	1	DK		1	DK	DK
14	LC	SA, MP		1	1	1	1	DK		1	1	XX
15	LC	SA, MP		1	1	1	1	1		1	1	1
16	LC	SA, MP		1	1	2	1	1		1	1	1
17	LC	SA, MP		DK	4	DK	1	DK		DK	1	DK
18	LG	SA, MP		3	3	2	4	4		2	2	3
19	LG	SA, MP		4	2	2	2	2		2	1	1
20	LG	SA, MP		1	1	DK	1	1		2	2	4
21	LG	SA, MP		4	DK	3	2	DK		3	2	3
22	LG	SA, MP		3	3	1	2	1		2	1	1
23	LG	SA, MP		3	4	2	3	3		DK	3	4
24	LG	SA, MP		3	3	2	1	1		1	1	2
25	LG	SA, MP		2	4	2	5	4		4	5	XX
26	LG	SA, MP		4	3	3	3	4		4	4	4
27	LG	SA, MP		4	4	4	2	1		1	1	2
28	LG	SA, MP		5	DK	DK	DK	5		5	5	4
29	LG	SA, MP		4	3	3	3	3		3	3	3
30	LG	SA, MP		1	1	1	2	1		1	1	1
Question averages:				2,76	2,52	1,92	1,96	2,17		2,00	1,82	2,04
			PFA 1 average: 2,27						PFA 2 average: 1,95			

Question → Respondent ↓	1	2	PFA 3				PFA 4			
			11	12	13	14	15	16	17	18
1	CSO	SA, MP	1	1	1	1	2	1	2	1
2	CSO	SA, MP	2	2	3	3	3	4	3	5
3	CSO	SA, MP	DK	DK	1	1	DK	DK	DK	2
4	CSO	SA, MP	4	3	2	4	4	2	3	2
5	CSO	SA, MP	2	2	2	3	3	3	3	2
6	CSO	SA, MP	1	1	1	2	DK	DK	1	DK
7	LC	SA, MP	DK	1	1	1	DK	1	XX	1
8	LC	SA, MP	DK	DK	1	2	DK	1	1	DK
9	LC	SA, MP	1	1	1	2	1	1	1	1
10	LC	SA, MP	DK	DK	4	DK	4	1	1	DK
11	LC	SA, MP	2	1	1	1	1	1	1	1
12	LC	SA, MP	1	DK	1	1	DK	DK	DK	1
13	LC	SA, MP	DK	2	2	DK	2	DK	2	DK
14	LC	SA, MP	1	DK	DK	1	DK	1	DK	1
15	LC	SA, MP	1	1	1	1	1	1	1	1
16	LC	SA, MP	DK	DK	1	1	1	1	1	1
17	LC	SA, MP	DK	DK	DK	DK	2	2	DK	2
18	LG	SA, MP	DK	DK	DK	2	2	2	2	3
19	LG	SA, MP	1	1	1	2	2	2	2	1
20	LG	SA, MP	1	1	1	4	1	DK	2	1
21	LG	SA, MP	DK	DK	1	2	DK	1	DK	DK
22	LG	SA, MP	1	1	2	3	3	3	3	3
23	LG	SA, MP	4	2	DK	4	2	2	3	2
24	LG	SA, MP	1	1	1	1	4	3	1	1
25	LG	SA, MP	1	2	1	XX	5	4	4	4
26	LG	SA, MP	2	2	2	2	3	3	2	2
27	LG	SA, MP	1	1	1	2	2	DK	4	1
28	LG	SA, MP	DK	DK	DK	DK	DK	DK	DK	DK
29	LG	SA, MP	3	2	2	3	2	2	2	2
30	LG	SA, MP	1	1	1	1	1	1	1	4
Question averages:			1,60	1,45	1,44	2,00	2,32	1,79	2,00	1,88
			PFA 3				PFA 4			
			average: 1,62				average: 1,93			

Question → Respondent ↓	1	2	PFA 5	19	20	21	22	Cross-cutting issues	23	24	25	26
1	CSO	SA, MP		1	1	4	DK		2	1	2	1
2	CSO	SA, MP		3	2	XX	2		2	3	3	2
3	CSO	SA, MP		DK	DK	2	DK		1	1	1	1
4	CSO	SA, MP		4	3	2	1		3	2	4	3
5	CSO	SA, MP		3	2	3	XX		XX	XX	XX	XX
6	CSO	SA, MP		3	4	1	1		2	2	DK	DK
7	LC	SA, MP		1	1	DK	DK		1	1	1	1
8	LC	SA, MP		1	1	DK	DK		1	1	1	1
9	LC	SA, MP		1	1	1	1		1	1	1	1
10	LC	SA, MP		1	1	4	DK		DK	2	2	DK
11	LC	SA, MP		1	1	DK	1		1	1	1	1
12	LC	SA, MP		DK	1	DK	DK		1	1	1	DK
13	LC	SA, MP		2	DK	5	4		2	DK	4	4
14	LC	SA, MP		1	1	DK	DK		DK	DK	DK	DK
15	LC	SA, MP		1	1	DK	DK		1	1	1	DK
16	LC	SA, MP		1	1	DK	DK		1	1	1	1
17	LC	SA, MP		DK	DK	1	4		2	DK	DK	2
18	LG	SA, MP		2	2	2	2		2	3	2	3
19	LG	SA, MP		2	1	2	2		2	2	2	2
20	LG	SA, MP		2	1	2	1		1	1	1	1
21	LG	SA, MP		1	1	DK	2		1	DK	DK	DK
22	LG	SA, MP		2	1	3	3		1	1	1	1
23	LG	SA, MP		4	2	2	2		DK	2	DK	2
24	LG	SA, MP		2	1	1	1		1	1	1	1
25	LG	SA, MP		1	5	1	4		2	2	2	5
26	LG	SA, MP		2	1	1	2		2	2	1	1
27	LG	SA, MP		3	3	4	5		1	2	3	5
28	LG	SA, MP		4	1	DK	4		4	DK	5	5
29	LG	SA, MP		4	2	2	2		3	3	3	2
30	LG	SA, MP		5	2	5	5		5	5	5	5
	Question averages:			2,15	1,63	2,40	2,45		1,77	1,75	2,04	2,22
			PFA 5 average: 2,16					Cross-cutting issues average: 2,03				

E.1 Questionnaire comments

PFA 1

Yes, the disaster risk reduction must start to come to the communities to make some induction about disaster and risk.

For any community development to move faster, the Government should direct more resources to community trainings and set relevant structures for specific community programmes.

It must be properly implemented in the local level, you find that there was a fire disaster in the area, the government only assists with shelter, blankets and food of which is not enough, people need the long term shelter e.g. proper housing after the disaster.

More resources needed on ground level in particular emerging farmers and(Can't see what he has written)

Clustering of business nodes or industrial complexes and residential dwelling - though for economic development agenda should be limited to industrial zones.

Training - and the lack of - seriously impacts on progress.

Be inclusive of civil society and community leaders.

We would be happy if we can involve for training in disaster awareness.

It should be also provided to local communities and other groups to make awareness on disaster risk reduction.

The government must put in place offices where people can get info and must work with stakeholders and even develop a mass-mobilisation program in order for the benefit of the people.

Would prefer extensive involvement for participation of local communities.

The Local Government should invoice us on disaster risk reduction.

We would like to be involved in their plans. Provide training for community based organisations and financial support for our programmes.

The local authority takes little attention to this project again working in silos. At least now it is a must, there is a risk management unit even though dealing with internal risks.

Sector departments need to budget for disaster risk reduction.

The fact that most of our local government /municipalities are not financially viable it will take time to prioritize **disaster risk reduction** - Province will have to provide support.

Very good coordination exists and closer working relation is maintained on my level.

The high turnover of staff has the effect that new staff had to be trained. Lack of continuation.

Human settlement should prevent disaster- no allowing people to settle at low lying areas, allow space between houses and roads. Absence of disaster related education to community- keeping firefighting mechanism in house, swimming lessons, survival technique in case of drought.

We need to establish an integrated approach; so far we are working in silos.

A concerted and sustainable mechanism i.e. A budgeted for project should be implemented for disaster risk reduction.

Employees should be sent to disaster risk reduction courses/training.

I think that the community needs to be aware of what disaster risk reduction entails and should play a role in policy development.

Lack of underground disaster risk reduction still creates a situation of disaster management as reactive rather than preventative in the province, placing a huge burden on the province to actually manage disaster on the ground, rather than to facilitate coordinate and support.

Governance needs to introduce basic training on hygiene, economics, first aid, firefighting and environmental awareness on primary schools. Community needs to participate on planning of infrastructure and made aware of danger of building houses where survey was not done.

PFA 2

Disaster management must come to the communities first to give them induction about warning and monitoring them.

Local community representatives should be included at all levels and not to be used to rubber stamp decision made by some official.

There must be awareness campaigns to monitor and warn them. Because the people build their houses along the river bank.

There is a lot of technology and the provincial government must assist in the funding of these projects.

Resources - Both human and financial are in direct need.

Community involvement could be improved.

Communicate with communities.

No early warnings in place as we association we need to be warned before we ask to be educated.

I think this should be done on regular basis not when there is disaster.

The local municipality must have systems in place in every community to assist with monitoring and warning and even to use media for the community to be always up to date.

The process must be put in place and disaster management be introduced to local communities as they will always remain vulnerable.

The municipality is in the process of installing the GIS system for monitoring

Local Municipalities need to budget for disaster management.

Lack of human source capacity in municipalities need to be addressed to achieve the above.

Warning systems are insufficient- reactive montrive coop. (WE COULDN'T READ WHAT HE HAD WRITTEN!)

There should be an assessment, monitoring and warning in my situation.

There is a reporting system in place where data of specific diseases (mostly water + food borne) are recorded weekly and all health facilities report this weekly. Each facilities info is added and should the threshold be exceeded the department react and investigate + inform other stakeholders.

Any available information or activities on disaster management is office based the community is kept informed. There are no billboards that provide information on who to contact in the case of fire, a leaking pipe, a pot hole etc. those small things which might end up creating disaster- take care of small things of great one to take care of themselves.

There is no instrument used to measure the responsiveness of the early warning information. We had to develop a monitoring and evaluation tool. Assessing and quantifying the impact of disaster is still a problem, training has to be conducted.

Authorities (local/provincial) should monitor and coordinate activities concerning disaster risk management.

Ward communities should train via municipality to be able to assess and monitor any risk in their communities.

Information about hazards and the vulnerability of a community must be shared with that particular community which is at risk in order to reduce the impact of a hazard. Risk hazard assessment must be a continuous activity and community must be involved.

Challenge in rural provinces due to lack of adequate infrastructure to enable communication. Large rural settlements are a vulnerable sector.

Sometimes warning are in place but are not properly obeyed and not enforced from relevant people. No effective risk assessments on our road infrastructure as number of school kids are continuously killed. Municipalities need to build walkway with steel barrier and overhead bridges.

PFA 3

Yes, disaster risk reduction must come to communities to give them training and skills, again to assist the community on Ward XX to build the school because there is no school.

More efforts should be on capacity building among communities more special the disadvantage in deep rural area.

Need for the public awareness campaigns (because only at the district level and municipality offices they have knowledge).

Funding for these projects urgently needed.

Planning, systems and maintenance capacity should be beefed.

General awareness is not existent, could be improved.

This has to be done and taught to all communities so that everybody should be aware and have sufficient knowledge on disaster.

They must able to join hand with community organisations and even have workshops to educate the leaders and even every stakeholder so that people can benefit to that program, e.g. church, leaders, teachers, chiefs, businessmen.

As above, involvement and participation of communities.

We wish to be part of the awareness's that we can learn more.

I would request that the local government should train the locals.

We wish to partake

Knowledge is very much limited to the disadvantaged communities- the issue of informal settlement can explain that and traditional leaders must be involved.

I support the view that disaster management taught at school.

Government need to spread education in disaster management. Currently is very limited. Most of our people do not know about reducing disasters.

There is a public awareness initiative informing community about disaster risk and it needs improvement.

Involvement of schools must increase. Teachers must receive training in disaster management to ensure that specific knowledge is transformed to learners.

Disaster issues should be taught at school. That should complete with survival skills like swimming firefighting etc.

Modules of disaster risk management had to be incorporated into their high school curricula for effective risk reduction purposes. Awareness campaigns need also to be done in all municipalities.

Education and road shows should be funded so as to educate and inform the general public.

The municipality should be the one that conduct awareness workshops for the community.

It is very important to ensure that disaster management is incorporated into the school syllabus and also arranged quality workshops to educate members of the community about hazards, vulnerability and risk reduction.

Province active, but local municipalities to a large extent not. Not seen as a priority due to budget pressure for basic service delivery.

As I have mentioned that some of the basic needs to be implemented from primary level e.g. environmental law, first aid, firefighting, economics, and occupational hygiene.

PFA 4

Due to land shortage there has been lot of hazard that emanates from service delivery concerns around the province. There has been lots of damage.

Local authorities (municipal) (Protected areas) must get more involved and support their local fire protection association and pay their membership.

It should be treated with high priority as some of the schools are the risk themselves.

Most of the buildings are being rebuilt by private sectors but there must be a valuation process to the entire community infrastructure and rebuild those in threat of hazard.

Disaster management must be extended to the periphery of townships (peri-urban).

The process of development disaster plan to municipalities has started which will provide the real situation in our area in terms of risk and plans to address.

Many informal settlements exist with structures not complying with building requirements + are built in the flood lines. These structures can also be near waste sites etc. With no or little water available + poor sanitation. To correct all the above two points is a major challenge.

The Masibuyele Emasimini program is a good program to address poverty it needs to be strengthened so that disability is realised. Relevant policies should be taken to communities.

Risk disaster management practitioners need a lot of training to be enabled to effective and efficiency in implementing the program.

Buildings regulations and standards should emphasise the need to strictly adhere to risk/ disaster prevention.

Education can play a major role to address all issues regarding disaster management.

This for the most part is still only action on a national level. On high level planning levels are not realised on local ground level (talk - no action).

Municipalities need to control higher level of informal settlement, where people building houses without proper infrastructure e.g. electricity, roads, sewage. Community and up doing electrical unsafe illegal connections which leads to electrical chocks of small kids.

PFA 5

Yes, disaster must include the organisation and the community to the program that they plan.

There should be clear open communication in local municipality's budget for such cases and communities must be aware of such.

Disaster team should not only jump and run when there is disaster but make sure that there are plans to reduce the risk and educate communities on how to reduce the risk.

There must be an office to each local municipality which deals with any disaster programs that may occur and where it will act as an information desk.

The community needs more visibility rather than being kept in limbo.

There are measures in place but not everybody are well informed on response except provincial government.

Usually response takes place after the disaster. Staff turnover - brain drain. For the FIFA 2010 World Cup the response was good + rehearsals done. But to sustain is a challenge.

Local authorities should build internal capacities to response to disaster. Disaster responses should not be subjected to attending process- the soldiers (army) - police (SAPS) and public works should have internal capacity to response to any form of disaster.

The financial and human resource is not enough when responding to disasters, some devastated communities are left unattended.

The department should have a section dedicated to disaster/ risk management - reduction programme.

In some municipalities the readiness is there, but the response time is not effective as they normally take time to respond due to the distance and the uneven roads of the community. Still reactive rather than proactive. Province is still seen as front face of actual management of disasters.

Only training drills need to be improved.

Cross-cutting issues

Poor communities are being exploited with the hope that they will be recognised in the future by those in high positions for better jobs or any employments.

Education in all cross cutting issues.

Volunteers in South Africa do not work because of poverty constraints.

We didn't involve in such activities.

We need to make sure that stakeholders are part and communication should play a big role so that information can be exchanged and also learned from others. Workshop and training should also be done for ordinary citizens.

There's nothing will help rather than for the government to come on ground to hear and get real issues to the community and develop programs and projects or assist the existing programs that are being run by the communities at the moment. The youth is ready.

Re-emphasise that cards must be played openly and not reactionary only when disaster has struck.

No involvement at all.

Mbombela local municipality established a unit called Transversal that mostly deal with social, gender and cultural issues.

The completion of disaster plans is very key as it will address all these factors.

Local communities are not informed with regard to the roles and responsibility that they need to play. Attempts need to be made to take in consideration and educate local people and volunteers in disaster management issues and training needs to be consulted.

Different communities must be handled differently to obtain the desired outcome. All messages to be gender + cultural sensitive. In many cases are the parents, grandparents of the children illiterate. The method used to be in such a way that these adults will accept the message. To change a practice in any community is very difficult. When people are doing a specific action for years, there is no guarantee that after they received additional information that their practice will change (HKAP).

My view is that the community is not involved in any planning or implementation or risk reduction.

We need to pull our resources together as government organs, private sector and all stakeholders in approaching disasters. More emphasis should be placed on risk reduction strategies development with the involvement of the local communities.

The cross cutting issues are not taken in consideration and can be improved by involvement at community level.

Community participation shall always be limited to a certain gender group because of traditional beliefs, commitments to other social chores, i.e. religion, politics etc. and that certain gender groups may be deemed not fit to do certain jobs.

Once again affected by capacity and financial restrictions evident in municipalities. Disaster management still not entrenched in high level or IDP planning processes (including disaster risk management & preventative planning)

Excellent!
