Alfred Nzo District Municipality
Municipal Disaster Management Plan

Version 1

28 April 2011

In case of an emergency, the user of this document should immediately turn to the preparedness plan for guidelines on managing response.

Approval:
Council Resolution: Adopted at the meeting of the Alfred Nzo District held on _____

Resolution code:

Municipal Manager	*Date*

Executive Mayor	Date

Acknowledgement

The drafting of this report depended on input, provisioning of information, cooperation and insight of various Alfred Nzo District Municipality Stakeholders and community representatives.

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The reports and guidelines has been compiled and finalized by Johan Minnie, Carin Joyce and Zelda Els, under the supervision of Dr Elretha Louw, representing Aurecon (Pty) Ltd.

The information contained in this report was compiled using materials, information, data and evidence derived from sources believed to be reliable and correct at the time.

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It should, accordingly, not be assumed that all possible and applicable findings, information and/or measures are included in this report.

ACRONYMS

CBO	Community Based Organisation
DM	District Municipality
DMA	Disaster Management Act, 2002 (Act 57 of 2002)
DMC	Disaster Management Centre
DOC	Disaster Operations Centre
DRMC	Disaster Risk Management Centre
EMP	Environmental Management Plan
FCP	Forward Command Post
IDP	Integrated Development Plan
JOC	Joint Operations Centre
LA	Local Authority
LM	Local Municipality
MDGs	Millennium development Goals
MFMA	Municipal Finance Management Act
MMC	Member of the Mayoral Committee
ECP	Eastern Cape Province
ECPDMC	Eastern Cape Provincial Disaster Management Centre
MSA	Municipal Systems Act
ANDM	Alfred Nzo District Municipality
ANDM DMP	Alfred Nzo District Disaster Management Plan
ANDM DMF	Alfred Nzo District Disaster Management Framework
NDMC	National Disaster Management Centre
ANDMAF	Alfred Nzo District Disaster Management Advisory Forum
ANDM DMC	Alfred Nzo District Disaster Management Centre
NDMF	National Disaster Management Framework
NGO	Non-Governmental Organisation
PSC	Project Steering Committee
SANDF	South African National Defence Force
SANDMC	South African National Disaster Management Centre
SANDMF	South African National Disaster Management Framework
SAPS	South African Police Service
SAWS	South African Weather Service
SDF	Spatial Development Framework

DEFINITIONS

The following accepted disaster management definitions are applicable in this document:

"development planning" means an integrated, multi-sectoral process through which governmental institutions streamline social, economic and spatial growth.

"disaster" means a progressive or sudden, widespread or localised, natural or human- caused occurrence which:
- o causes or threatens to cause:
  - ▪ death, injury or disease,
  - ▪ damage to property, infrastructure or the environment or
  - ▪ disruption of the life of a community and
- o is of a magnitude that exceeds the ability of those affected by the disaster to cope with it effects using only their own resources.

"disaster management" means a continuous and integrated multi-sectoral, multidisciplinary process of planning and implementation of measures aimed at:
- o preventing or reducing the risk of disasters,
- o mitigating the severity or consequences of disasters,
- o emergency preparedness,
- o a rapid and effective response to disasters and
- o Post-disaster recovery and rehabilitation.

"disaster risk" means the possibility, or chance, of harmful consequences, or expected loss (of lives, people injured, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human induced hazards and vulnerable conditions.

"**disaster risk reduction**" means the conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

"**disaster risk reduction goals**" are general guidelines that explain what you want to achieve. They are usually broad policy-type statements, long term, and represent global visions, such as:
The economic vitality of the community will not be threatened by future flood events.
The continuity of local government operations will not be significantly disrupted by disasters.

"**disaster risk reduction objectives**" define strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific and measurable, such as:
Protect structures in the historic downtown area from flood damage.
Educate citizens about wildfire defensible space actions.

"**disaster risk reduction measures**" are specific actions that help you achieve your risk reduction goals and objectives. For example:
Elevate three historic structures located in the downtown district.
Retrofit the police department to withstand high wind damage.

"**disaster residual risk management**" - When the risks have been reduced to the extent that communities are not very vulnerable to risks and/or find it acceptable to live with these risks, the residual risk management phase kicks in. Residual risk management can be defined as the discipline of being prepared to manage any of the residual risks with the utmost speed and efficiency.

"emergency preparedness" means a state of readiness which enables organs of state and other institutions involved in disaster (and emergency) management, the private sector, communities and individuals to mobilize, organize and provide relief measures to deal with an impending or current disaster or the effects of a disaster.

"**hazard**" means a potentially damaging physical event, phenomenon and/or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydro meteorological and
biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location,

"impact" - The terms *Primary Impact* and *Secondary Impact* are used to describe the different causes and scales of potential impacts from a hazard event:
Primary Impacts are also called direct impacts.
Secondary Impacts are often referred to as indirect or induced impacts.
This does not imply that *Secondary Impacts* are of secondary importance ~ in many cases the effects on biodiversity and the environment from secondary impacts are much more significant than those of primary impacts.

"manageability" means the degree to which a community can intervene and manage the negative consequences of a hazard event.

"post-disaster recovery and rehabilitation" means efforts, including development, aimed at creating a situation where:
   o   normality in conditions caused by a disaster is restored,
   o   the effects of a disaster are mitigated or
   o   circumstances are created that will reduce the risk of a similar disaster occurring.

"preparedness" means activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

"**preventative measures**" - see *disaster risk reduction measures*

"prevention", in relation to a disaster, means measures aimed at stopping a disaster from occurring or preventing an occurrence from becoming a disaster.

"resilience" means the capacity of a system, community or society potentially exposed to hazards to adapt by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase this capacity for learning from past disasters for better future protection and to improve disaster risk reduction measures.

"response", in relation to a disaster, means measures taken during or immediately after a disaster in order to bring relief to people and communities affected by the disaster. Measures taken during or immediately after a disaster in order to provide assistance and meet the life preservation and basic subsistence needs of those people and communities affected by the disaster. These measures can be of immediate, short-term or protracted duration.

"risk" means the convolution of exposure, hazard and vulnerability (loss).

"vulnerability" means the degree to which an individual, a household, a community or an area may be adversely affected by a disaster (the susceptibility to losses due to exposure to a hazard).The degree to which an individual, a household, a community, an area or a development may be adversely affected by the impact of a hazard. Conditions of vulnerability and susceptibility to the impact of hazards are determined by physical, social, economic and environmental factors or processes.

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1 EXECUTIVE SUMMARY

The Alfred Nzo District Municipality (ANDM), in terms of the Disaster Management Act, 2002 (Act 57 of 2002), is required to compile a municipal disaster management plan. This document fulfils the legal requirement as set out in the Disaster Management Act and the National Disaster Management Framework and confirms the arrangements for managing disaster risk and for preparing for- and responding to disasters within the Alfred Nzo District Municipality.

The development of the ANDM Disaster Management Plan has culminated into seven main chapters which are arranged as follows:

Chapter 1 deals with the introduction and provides a background to the project. Chapter 2 describes the legal requirements that inform the disaster management responsibilities of various role-players and stakeholders and provides insight into current compliance with the relevant legislation, primarily the Disaster Management Act. The structure of the Disaster Management Plan is also explained and linked to the key performance areas and enablers of the National Disaster Management Framework. Chapter 3 addresses requirements for the establishment of integrated institutional capacity for Disaster Management within the Alfred Nzo District. The plan outlines the institutional capacity required for effective disaster management which includes the establishment of a District Disaster Management Advisory Forum, Technical Committees and a Disaster Management Centre which should incorporate a 24-hour emergency control and communications facility.

In Chapter 4 the risk profile of the District is provided based on the more detailed risk assessment report which accompanies this plan. A district-wide Disaster Risk Assessment with community-based as well as research inputs has been conducted and the key risks identified within the District include: floods; veld fires; hazardous materials incidents; transport incidents (road & rail); communicable diseases (human & animal); no or dysfunctional infrastructure and/or service delivery (sewerage, drainage, runoff); environmental pollution (water, air, ground, groundwater, illegal dumping); severe weather (especially fog); deforestation, erosion, land degradation and desertification and bush encroachment; industrial activity such as mining and the extinction of endangered/ endemic species. Risk profiles for specific local municipalities are also provided in this chapter, which concludes with a list of priority risks for the district.

Chapter 5 deals with disaster risk reduction planning to reduce those risks identified in the previous chapter. Disaster risk reduction project proposals have been formulated for priority risks, and a risk reduction process is described in the beginning of the chapter. These proposals will remain guidelines which will need to be adapted to the specific prevailing circumstances when they are put into use.

In Chapter 6 response and recovery issues are highlighted. Preparedness plans for priority risks are introduced and the preparedness capacity of the District is described which leads to the identification of certain gaps and recommendations. Subsequently, a any-hazard response procedure is presented that will form the basis of response to all major incidents and disasters. Additional hazard-specific contingency plans are listed after which the declaration of a state of disaster and disaster classification is discussed. The chapter concludes with the identification of additional gaps and recommendations.

The remaining chapters contain arrangements for the review and maintenance of the plan, a summary of the plan, as well as several annexures including contact details and additional descriptions of corporate responsibilities for Disaster Management.

A draft Terms of Reference for a Disaster Management Advisory Forum is also attached.

In summary, it can be said that several sections of the plan contain implementation actions that are required to ensure the effective implementation of this plan. The most important of these are summarized below:

- A 24-hour Communication Control Centre (Disaster Operations Centre) should be established to monitor emergency and essential services' communications and early warning information systems and identify developing emergencies and disasters so that appropriate response can be activated during major incidents and disasters.

- The municipality should institute the compulsory consideration of disaster risk management in the planning and execution stages of all IDP projects. This will ensure the integration of disaster management into the IDP, and will ensure that all plans and projects are focused on contributing to disaster risk reduction and disaster preparedness – thus reducing the impact of disasters on lives, property, community activities, the economy and the environment in the Alfred Nzo Municipality.

- In the absence of an Advisory Forum and in light with the District Institutional Arrangements in the form of Working Groups, the Working Group for Transport and Safety could serve as a District Advisory Forum for amongst others, matters relating to disasters within the municipal area.

- It is advisable that the Alfred Nzo Municipal Council adopts a formal policy for the declaration of a local state of disaster. Such a policy will replace this section of the plan which provides a general description of issues surrounding the declaration of a state of disaster.

- The municipality should regularly review and update its plan, as required by Section 48 of the Disaster Management Act, 2002. The Disaster Management Advisory Forum shall be responsible for the review of the municipal disaster management plan on an annual basis.

2 INTRODUCTION

Emergencies and disasters respect no boundaries and can destroy life and property suddenly and without warning. The South African government has recognised the need to prepare for and to reduce the risk of disasters and has made provision for such measures through the three spheres of government in partnership with the private sector and civil society.

The Alfred Nzo District is not immune to emergencies and disasters and annually suffer the impact of various human-induced and natural hazards that have the potential to kill, injure, destroy and disrupt. The District is committed to ensuring the safety of its inhabitants and the sustainability of its communities, economy and environment and therefore intends to effectively manage disaster risk within the District in close collaboration with all relevant stakeholders and especially the local municipalities within the District.

The Alfred Nzo District Municipality (ANDM) and all other district municipalities, in terms of the Disaster Management Act, 2002 (Act 57 of 2002), are required to compile municipal disaster management plans. This document fulfils the legal requirement as set out in the Disaster Management Act and the National Disaster Management Framework and confirms the arrangements for managing disaster risk and for preparing for- and responding to disasters within the Alfred Nzo District Municipality.

The key intended outcomes of this plan are the integration of Disaster Risk Management into the strategic and operational planning and project implementation of all line functions and role players within the Alfred Nzo District Municipality, the creation and maintenance of resilient communities within the District and an integrated, fast and efficient response to emergencies and disasters by all role-players.

The overall objective of this document is to define and describe the essential elements and procedures for preventing and mitigating major incidents or disasters, but also to ensure rapid and effective response and aspect specific contingency planning in case of a major incident or disaster that will:

- Save lives;
- Reduce risk exposure;
- Reduce suffering;
- Protect property;
- Protect the environment;
- Reduce economic and social losses; and
- Provide for the safety and health of all responders.

In this chapter the study area (Alfred Nzo District) will be described, after which the project for the compilation of the disaster management plan will be presented with specific attention given to the relationship between the plan and the key performance areas of the National Disaster Management Framework.

2.1 General Area Description

The Alfred Nzo District Municipality is a mountainous, landlocked district in the north eastern part of the Eastern Cape. It is the smallest district in the province, covering an area of 7952m^2 and is sub-divided into Umzimvubu and Matatiele local municipalities as illustrated in Map 1. Situated 1000 metres above sea level, the District is bordered by Lesotho and KwaZulu Natal. The main towns are Matatiele, Maluti, Mount Ayliff and Mount Frere. Mount Ayliff is the administrative centre of the District but Kokstad serves as important commercial linkage town. Kokstad lies 50km from Mouth Ayliff and lies outside the boundaries of the District, in Sisonke District Municipality, KwaZulu Natal.

Alfred Nzo has a small population of 479 395, accounting for only 7.3% of the province's population. The District remains remote and has an urbanisation rate of only 0.6%. Given the low urbanisation rate and rural character, the District is categorised as a C2 Municipality. This category also reflects the Municipality's limited budget and staff capacity. The main towns in the district are Mount Ayliff, Mount Frere and Matatiele

Map 1: Overview of the ALFRED NZO District Municipality

The Alfred Nzo District is vulnerable to the impact of natural and human-induced disasters and the population of the District has in the past suffered loss of life and injury, property destruction or damage, the interruption of socio-economic activity and damage to the environment due to disasters.

In order to minimise disaster impacts, to decrease disaster risk, to reduce hazards and vulnerability and to increase capacity and resilience, it is necessary to compile and implement a comprehensive disaster management plan.

Disaster Management is a continuous and integrated multi-sectoral and multidisciplinary process of planning and implementation of measures aimed at preventing or reducing the risk of disasters; mitigating the severity or consequences of disasters; ensuring emergency preparedness; enabling a rapid and effective response to disasters and facilitating post-disaster recovery and rehabilitation.

The Figure 1 illustrates how the various work streams within Disaster Management increase and decrease in intensity and resource requirements over time as crises approach and are dealt with. The figure demonstrates that Disaster Management involves the simultaneous management of several disaster risks in various stages of the life cycle of disaster risks.
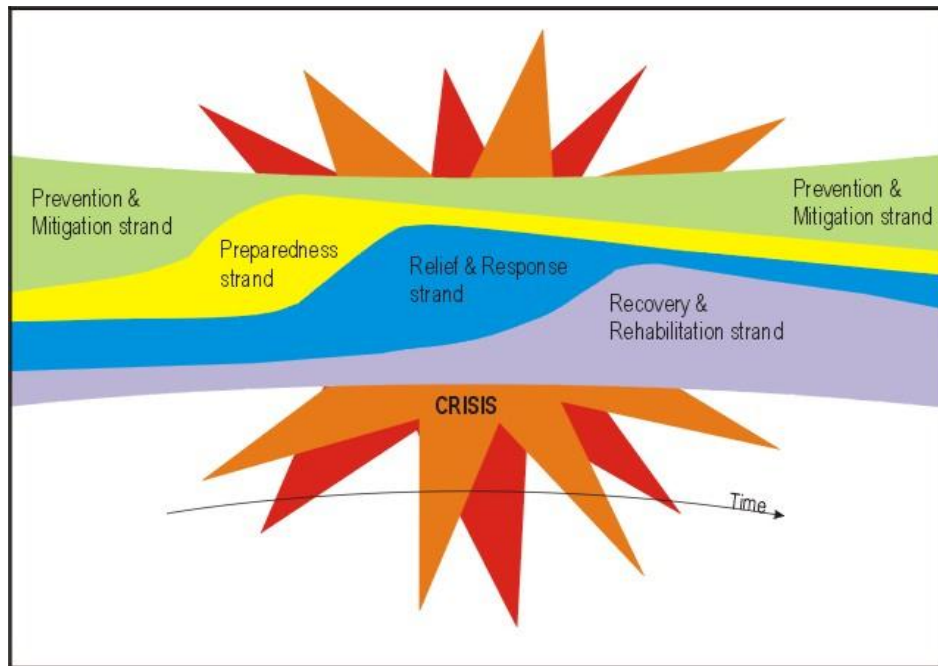
Figure 1: The expand / contract model of Disaster Management

The South African Government has responded to the negative consequences of disasters by developing legislation (The Disaster Management Act, 2002 – Act 57 of 2002) and national policy (The National Disaster Management Framework, 2005) to deal with the management of disaster risk and disaster impact.

The Disaster Management Act provides for an integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery. The Act prescribes the establishment of national, provincial and municipal disaster management centres. Most importantly in the context of this document, the Act also requires the compilation of Disaster Management Plans in all spheres of government.

The Alfred Nzo District Municipality is primarily responsible for the implementation of the Act within its area of jurisdiction, with a specific focus on ensuring effective and focused disaster risk reduction planning.

2.2 Project Description

Objectives of the Project

The SA National Disaster Management Framework indicates that the main objectives of Disaster Management in any particular jurisdiction within South Africa, such as the Alfred Nzo District, are to:

- Establish integrated institutional capacity within the District to enable the effective implementation of disaster risk management policy and legislation.
- Establish a uniform approach to assessing and monitoring disaster risks that will inform disaster risk management planning and disaster risk reduction undertaken by the District and other role-players
- Develop and implement integrated disaster management plans and risk reduction programmes in accordance with approved frameworks
- Ensure effective and appropriate disaster response and recovery

The objectives of the project are aligned to the national framework and are to develop a Disaster Management Plan for the Alfred Nzo District Municipality by focusing on:

- The development of Institutional Capacity for Disaster Management through the establishment of a District Disaster Management Advisory Forum and related management structures and processes;
- The completion of a Disaster Risk Assessment and related reports and guidelines;
- The development of Risk Reduction Planning (Strategy) and related products;
- The development of Operational Response and Recovery Plans and related products.

More detail of individual deliverables will be provided in the project outcomes description later in this section

Scope of the Project

This project falls within the paradigm of the South African- (National), Eastern Cape- (Provincial) and Alfred Nzo District Disaster Management Frameworks as well as the strategy frameworks of the Alfred Nzo District and the two Local Municipalities within the district. The project applies to the whole of the Alfred Nzo District and will influence the interaction of all spheres of government and sectors of society within the district with disaster risk and disaster impact.

The scope of the project is further defined in the Terms of Reference provided by the client.

The ANDM DMP will function as a guideline for the practical implementation of all aspects of Disaster Management within the Alfred Nzo District and will serve as management decision-making tool that will assist with the identification of disaster risks and the functional and organisational integration of disaster risk reduction as well as disaster response actions and projects.

The ANDM DMP will therefore provide disaster management stakeholders with clear guidance on activities they need to undertake to meet the objectives and targets of the National, Provincial and Alfred Nzo District Disaster Management Framework (ANDM DMF) and to reduce disaster risk and increase disaster resilience within the district.

Project outcomes

The deliverables of the project are defined in the Terms of Reference and include the following key deliverables:

Table 1: Deliverables as per the Terms of Reference

Key Deliverables
Disaster Management Guidelines
Disaster Risk Assessment Report
Disaster Management Plan

The National Disaster Management Framework (NDMF) which was published in 2005 is the legal instrument specified by the Act to address needs for consistency across multiple interest groups by providing a coherent, transparent and inclusive policy on disaster management appropriate for the Republic as a whole.

The NDMF is organised into four key performance areas (KPA's) and three enablers as illustrated in Figure 2 below.
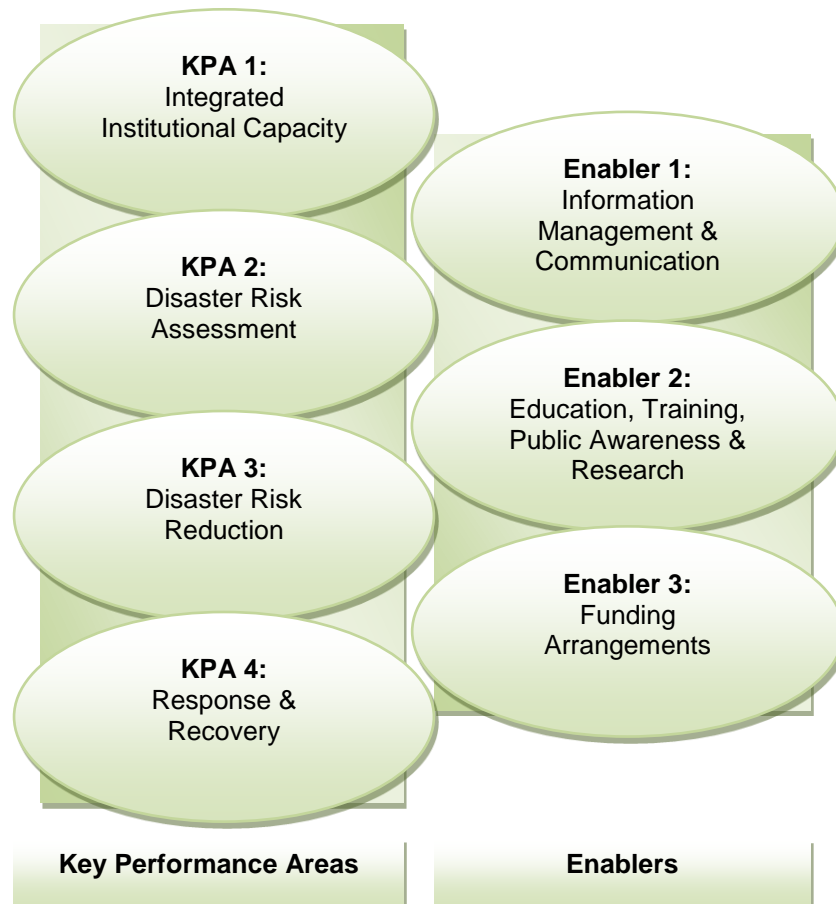
Figure 2: KPA's and Enablers of the National Disaster Management Framework

The four KPA's of the NDMF correspond with the main deliverables of the project for the compilation of the Alfred Nzo District Disaster Management Plan and will be used to structure this document.

The four KPA's and the three enablers are:
- KPA 1: Integrated Institutional Capacity for Disaster Risk Management
- KPA 2: Disaster Risk Assessment
- KPA 3: Disaster Risk Reduction
- KPA 4: Response and Recovery
- Enabler 1: Information Management and Communication
- Enabler 2: Education, Training, Public Awareness and Research
- Enabler 3: Funding Arrangements for Disaster Risk Management

In the table on the overleaf the KPA's and Enablers are illustrated with the main objective for each of these KPA's and enablers indicated in the right-hand column.

Table 2: NDMF KPA's, Enablers and Objectives

NDMF KPA's and Enablers	National Framework objectives translated to District-level objectives
KPA 1: Integrated Institutional Capacity for Disaster Risk Management	Establish integrated institutional capacity for Disaster Management within the Alfred Nzo District to enable the effective implementation of disaster risk management policy and legislation.
KPA 2: Disaster Risk Assessment	Establish a uniform approach to assessing and monitoring disaster risks that will inform disaster risk management planning and disaster risk reduction undertaken by organs of state and other role players.
KPA 3: Disaster Risk Reduction	Ensure all disaster risk management stakeholders develop and implement integrated disaster risk management plans and risk reduction programmes in accordance with approved National, Provincial (Eastern Cape) and District (Alfred Nzo) frameworks.
KPA 4: Response and Recovery	Ensure effective and appropriate disaster response and recovery by: • implementing a uniform approach to the dissemination of early warnings • averting or reducing the potential impact in respect of personal injury, health, loss of life, property, infrastructure, environments and government services • implementing immediate integrated and appropriate response and relief measures when significant events or disasters occur or are threatening to occur • implementing all rehabilitation and reconstruction strategies following a disaster in an integrated and developmental manner.
Enabler 1: Information Management and Communication	Development of a comprehensive information management and communication system. Establish integrated communication links with all disaster risk management role players.
Enabler 2: Education, Training, Public Awareness and Research	Promote a culture of risk avoidance among disaster management stakeholders within the Alfred Nzo District by capacitating all role players through integrated education, training and public awareness supported by scientific research.
Enabler 3: Funding Arrangements for Disaster Risk Management	Establish mechanisms for the funding of disaster risk management in the Alfred Nzo District.

Both the Eastern Cape Provincial Disaster Management Framework and the Alfred Nzo District Disaster Management Frameworks are structured around the KPA's and Enablers as set out in the National Disaster Management Framework.

A brief description of each KPA and Enabler

In this section a short description of each of the KPAs and Enablers of the National Disaster Management Framework is provided to enable the reader to contextualise the use of the KPA's and Enablers within the Municipal Disaster Management Plan of the Alfred Nzo District.

Each of these KPA's and Enablers are further elaborated upon in the Disaster Management Frameworks of the Eastern Cape Province and Alfred Nzo District.

2.2.1   KPA 1: Integrated Institutional Capacity for Disaster Risk Management

Key performance area 1 of the national disaster management framework (NDMF) establishes the requirements for effective institutional arrangements in the national sphere to ensure the integrated and co-ordinated implementation of disaster risk management policy and legislation and the application of the principle of co-operative governance. Key performance area 1 also places appropriate emphasis on arrangements that will ensure the involvement of all stakeholders in disaster risk management in order to strengthen the capabilities of national, provincial and municipal organs of state. Arrangements that will facilitate co-operation with countries in the region and the international community for the purpose of disaster risk management are also discussed.

2.2.2   KPA 2: Disaster Risk Assessment

Disaster risk specifically refers to the likelihood of harm or loss due to the action of hazards or other external threats on vulnerable structures, services, areas, communities and households within an area. Key performance area 2 addresses the need for conducting ongoing disaster risk assessments and monitoring to inform disaster risk management planning and priority setting, guide disaster risk reduction efforts and monitor the effectiveness of such efforts. It also outlines the requirements for implementing disaster risk assessment and monitoring by organs of state within all spheres of government.

2.2.3   KPA 3: Disaster Risk Reduction

The successful implementation of the Disaster Management Act critically depends on the preparation and alignment of disaster management frameworks and plans for all spheres of government. The legal requirements for the preparation of disaster management frameworks and plans by national, provincial and municipal organs of state are specified in sections 25, 38 and 52 of the Act. This key performance area addresses the requirements for disaster management planning within all spheres of government. It gives particular attention to the planning for and integration of the core risk reduction principles of prevention and mitigation into ongoing programmes and initiatives.

2.2.4   KPA 4: Response and Recovery

The Disaster Management Act requires an integrated and co-ordinated policy that focuses on preparedness for disasters, rapid and effective response to disasters and post-disaster recovery and rehabilitation. When a significant event or disaster occurs or is threatening to occur, it is imperative that there should be no confusion as to roles, responsibilities, funding arrangements and the procedures to be followed. This section addresses key requirements that will ensure that planning for disaster response and recovery as well as rehabilitation and reconstruction achieves these objectives.

2.2.5   Enabler 1: Information Management and Communication

Disaster risk management is a collaborative process that involves all spheres of government, non-governmental organisations, the private sector, a wide range of capacity-building partners and communities. Integrated disaster risk management depends on access to reliable hazard and disaster risk information as well as effective communication systems to enable the receipt, dissemination and exchange of information. It therefore requires capabilities to manage risks on an ongoing basis, and to effectively anticipate, prepare for, respond to and monitor a range of natural and other hazards. It further requires systems and processes that will enable all role players to make timely and appropriate decisions during emergencies. These systems and processes must also inform disaster risk management and development planning processes by all stakeholders.

2.2.6   Enabler 2: Education, Training, Public Awareness and Research

Sections 15 and 20(2) of the Disaster Management Act specify the promotion of education and training, the encouragement of a broad-based culture of risk avoidance, and the promotion of research into all aspects of disaster risk management. This key performance area addresses the development of education and training for disaster risk management and associated professions as well as the inclusion of disaster risk management and risk-avoidance programmes in school curricula. It also outlines mechanisms for awareness creation and the development of a national disaster risk research agenda.

2.2.7   Enabler 3: Funding Arrangements for Disaster Risk Management

The provision of funding for disaster risk management is likely to constitute the single most important factor contributing to the successful implementation of the Disaster Management Act (DMA) by national, provincial and municipal spheres of government. The DMA, with the exception of Chapter 6 on funding of post-disaster

recovery and rehabilitation, does not provide clear guidelines for the provision of funding for disaster risk management. In order to give effect to the requirements of the DMA, four key performance areas and three enablers have been identified in the disaster risk management framework to guide the implementation of the DMA. Accordingly, funding from a range of sources for the different aspects of disaster risk management outlined in the key performance areas and enablers will be required. Enabler 3 builds on the recommendations made by the Financial and Fiscal Commission on funding arrangements in its Submission on the Division of Revenue 2003/04, and describes the disaster risk management funding arrangements for organs of state in the national, provincial and local spheres of government.

From the perspective of the Alfred Nzo District Municipality it is important that all the enablers and key performance areas are adequately addressed in the framework and the disaster management plan of the district.

In this plan, the key performance areas are reflected in specific dedicated chapters, while the enablers are interwoven into all chapters of the plan.

The figure on the next page illustrates the relationship between the chapters of the plan and the KPAs and enablers of the National Framework.
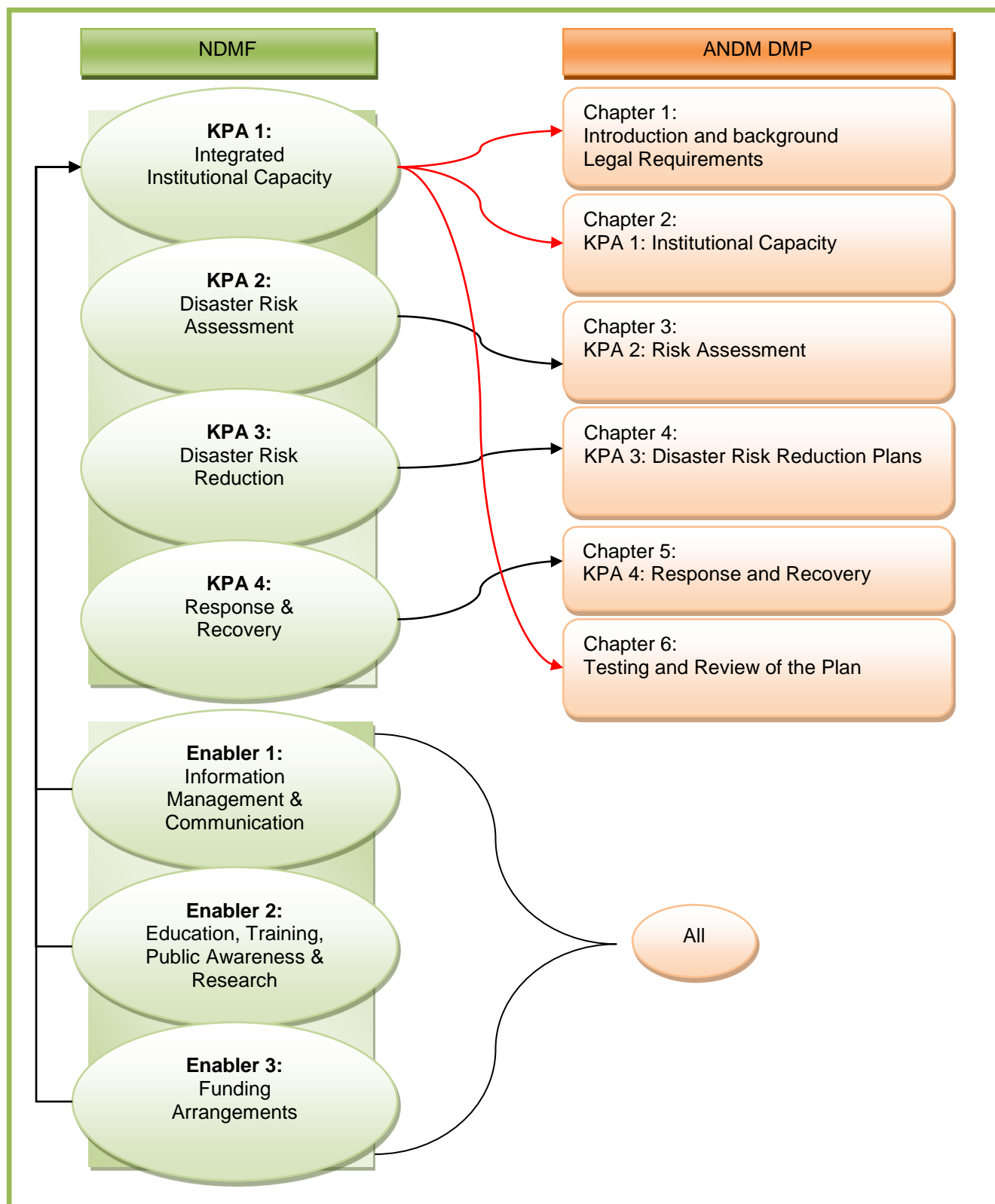
Figure 3: The Interrelationship between the NDMF and the ANDM DMP

In the next section the project approach and methodology used to develop the ANDM DMP will be described.

Project approach and methodology

The main goal of the project is to arrive at a practically implementable Disaster Management Plan for the District. Although other activities and processes need to be completed in order to arrive at a completed plan,

the plan itself is seen as the core deliverable of this project. Therefore, the final product of the project contains the plan as primary document with peripheral supporting documentation.

The methodology used during this project is aligned with existing methodologies and practice utilised within the Eastern Cape Province and is aligned with the National Disaster Management Framework.

The overall approach combines participatory-consultative aspects with expert opinion based on research and experience. The responsibility for data collection and analysis rests with the consulting team members, but guidelines are provided to enable sustainable future maintenance of the plan by Alfred Nzo District. The consulting team has sourced relevant information from all available sources.

The following reporting requirements have been established:
- Progress reports are submitted to the Project Manager (Alfred Nzo) by electronic and hard copy communication or by means agreed to in writing between the parties;
- Working documents and minutes of meetings are sent electronically and hard copies are distributed to all members of the PSC and other stakeholders whenever necessary;
- Draft and final reports developed by the consulting team members are sent electronically to all members of the PSC and whenever necessary to other stakeholders, within reasonable time frames;
- Draft and Final Reports shall in addition be sent to Alfred Nzo Disaster Management in hard copies and full colour and accompanied by a signed cover letter.

Stakeholder Consultation

The approach for managing this project entailed a close collaboration and liaison with the Alfred Nzo Project Manager, the top management of Alfred Nzo Disaster Management and the Disaster Management representatives from the local municipalities within the district.

The Project Steering Committee (PSC) for the project consisted of:
- Alfred Nzo DM – Senior Manager Community Development Services
- Alfred Nzo Disaster Management (Project Manager)
- Service provider – Project Leaders

The PSC met as and when required to discuss project progress and administration.

Reporting requirements for the project was set at monthly progress reports in the terms of reference but was renegotiated at the Kick-off meeting and subsequent discussions. Regular progress reports are provided and a checklist of deliverables is used to indicate project progress.

The relevance and quality of the AND DMP is reliant on inputs from a wide variety of stakeholders and a series of stakeholder consultation workshops were held, two at district level and one in each local municipality.

Alfred Nzo District took responsibility for inviting stakeholders to the workshops. The workshops were facilitated by the service provider using participative methodologies to identify and assess risks. The attendance register of all workshops are available in electronic format and hard copy and all names have been entered into an electronic database that will be provided to the client.

The results of workshops were captured in risk assessment sheets which have been included in the risk assessment report and the risk profile component of this plan.

Continued consultation will occur through the establishment of the Advisory Forum and Technical Task teams, and opportunity to comment on the final draft of the plan will be provided to all interested parties.

Collection of data and literature review

Existing information and data was collected in hardcopy where possible, as well as in electronic format and from the Internet for review. The existing and relevant Disaster Management legislation and policy frameworks, together with the Alfred Nzo IDP and other documents, studies, policies, frameworks and strategies formed a point of departure.

Available information has been supplemented with the service provider's own research and information database as well as leads and references provided by the Client and the PSC.

In the next section the legal requirements related to Disaster Management within the ANDM will be defined and the current compliance with these legal requirements will be discussed.

2.3 Legal requirements

Legal requirements applicable to the Alfred Nzo District

South Africa is prone to a variety of natural and human-induced hazards, which occasionally lead to loss of property and lives. In the past decade, these hazard occurrences have become more frequent and severe.

The Constitution of the Republic of South Africa (Act 108 of 1996) gives everyone the right to a safe environment. In section 24 it is stated that everyone has the right to an environment that is not harmful to their health or well-being.

The National Government recognised a need to establish an institutional framework that allows for risk prevention and rapid action during an occurrence and has taken certain steps towards this end, such as:

- **White Paper on Disaster Management**: The White Paper introduced a new paradigm in the management of disasters, by placing an emphasis on risk reduction and preparedness.
- **Disaster Management Act (DMA)**: The White Paper led to the promulgation of the Disaster Management Act, Act 57 of 2002, which is the regulatory framework for disaster management in South Africa. The Department of Provincial and Local Government (DPLG), through the National Disaster Management Centre (NDMC), administers the Act.
- **National Disaster Risk Management Framework**: The NDMC has prepared a National Disaster Management Framework, which aims to guide the development and implementation of disaster management in the country.
- **National Disaster Risk Management Centre Guidelines**: The NDMC has developed guidelines for the establishment of disaster management centres (DMC's).
- **Provincial Disaster Management Generic Plans**: The PDMC has appointed a service provider to compile generic disaster management plans that will assist districts and local municipalities with the compilation of their plans using standardised action lists.

The Disaster Management Act

The Disaster Management Act, Act 57 of 2002 (abbreviation DMA), requires that, inter alia, the three spheres of government prepare *Disaster Management Plans* (Sections 39 and 53 of the Act).

Section 39 of the Disaster Management Act addresses the disaster management planning requirements for Provinces, namely:

"*(1) Each province must-*

(a) prepare a disaster management plan for the province as a whole:
(b) co-ordinate and align the implementation of its plan with those of other organs of state and institutional role-players; and
(c) regularly review and update its plan.

(2) A disaster management plan for a province must-

(a) form an integral part of development planning in the province;

(b) anticipate the types of disaster that are likely to occur in the province and their possible effects;

(c) guide the development of measures that reduce the vulnerability of disaster-prone areas, communities and households;

(d) seek to develop a system of incentives that will promote disaster management in the province;

(e) identify the areas or communities at risk;

(f) take into account indigenous knowledge relating to disaster management:
(g) promote disaster management research;

h) identify and address weaknesses in capacity to deal with possible disasters:
(i) provide for appropriate prevention and mitigation strategies;

(j) facilitate maximum emergency preparedness; and

(k) contain contingency plans and emergency procedures in the event of a disaster, providing for-

> *(i) the allocation of responsibilities to the various role-players and*

> *(ii) prompt disaster response and relief;*

> *(iii) the procurement of essential goods and services:*

> *(iv) the establishment of strategic communication links;*

> *(v) the dissemination of information; and*
> *(vi) other matters that may be prescribed.*

(3) Municipal organs of state in the province, to the extent required by the province, may be requested to co-operate with the province in preparing a disaster management plan for the province.

(4) A province must submit a copy of its disaster management plan and of any amendment to the plan to the National Centre and each municipal disaster management centre in the province."

Section 53 of the Disaster Management Act addresses the disaster management planning requirements for Municipal
 Entities, namely:

"*(1) Each municipality must, within the applicable municipal disaster management framework-*
> *(a) prepare a disaster management plan for its area according to the circumstances prevailing in the area;*
> *(b) co-ordinate and align the implementation of its plan with those of other organs of state and institutional role-players;*

> *(c) regularly review and update its plan; and*
> *(d) through appropriate mechanisms, processes and procedures established in terms of Chapter 4 of the Local Government:*
>> *Municipal Systems Act, 2000 (Act No. 32 of 2000), consult the local community on the preparation or amendment of*

>> *its plan.*

(2) A disaster management plan for a municipal area must-

> *(a) form an integral part of the municipality's integrated development plan;*
> *(b) anticipate the types of disaster that are likely to occur in the municipal area and their possible effects;*
> *(c) place emphasis on measures that reduce the vulnerability of disaster-prone areas, communities and households;*
> *(d) seek to develop a system of incentives that will promote disaster management in the municipality;*

> *(e) identify the areas, communities or households at risk;*

> *(f) take into account indigenous knowledge relating to disaster management;*

> *(g) promote disaster management research;*

> *(h) identify and address weaknesses in capacity to deal with possible disasters;*

> *(i) provide for appropriate prevention and mitigation strategies:*

> *(j) facilitate maximum emergency preparedness; and*
> *(k) contain contingency plans and emergency procedures in the event of a disaster, providing for-*
>> *(i) the allocation of responsibilities to the various role-players and co-ordination in the carrying out of those responsibilities;*

>> *(ii) prompt disaster response and relief;*

>> *(iii) the procurement of essential goods and services;*

>> *(iv) the establishment of strategic communication links;*

>> *(v) the dissemination of information; and*
>> *(vi) other matters that may be prescribed.*

(3) A district municipality and the local municipalities within the area of the district municipality must prepare their disaster

management plans after consulting each other.
(4) A municipality must submit a copy of its disaster management plan, and of any amendment to the plan, to the National Centre,
the disaster management centre of the relevant province, and, if it is a district municipality or a local municipality, to

every municipal disaster management centre within the area of the district municipality concerned."

The current understanding of the DMA as it relates to **Disaster Management Plans** is that Municipalities must plan for the following:

Disaster Risk Reduction (Disaster Mitigation) Planning: *Disaster Risk Reduction Plans* should reduce the risks to which vulnerable communities are exposed to acceptable levels (*described in Sections 39 (2) and 53 (2) (a); (b); (c); (e); (f); (h) and (i) of the DMA*). In preparing their Risk Reduction Plans, Municipalities should apply their minds and come up with cost-effective and innovative risk reduction solutions. The majority of these plans will be linked to the **Integrated Development Plan** (IDP) as projects and programmes.

Disaster Preparedness (Response & Relief) Planning: *Disaster Preparedness Plans* (*described in Sections 39 (2) and 53 (2) (b); (e); (f); (h) (j) and (k) of the DMA*), should address response and relief actions to be implemented should a disaster hit a community that is not particularly vulnerable to risks and/or find it acceptable to live with such risks.

Disaster Impact Assessment and Recovery (Recovery, Rehabilitation & Reconstruction) Planning: *Disaster Impact Assessment and Recovery Planning* should focus on assessing the impact of a disaster; identifying appropriate reconstruction and rehabilitation measures; and monitoring the effectiveness of the reconstruction and rehabilitation measures.

According to section 53 of the DMA, the Alfred Nzo District Municipality is legally obliged to prepare a disaster management plan for its area according to the circumstances prevailing in the area; to co-ordinate and align the implementation of its plan with those of other organs of state and institutional role players; and to regularly review and update its plan. The municipality must also consult the local municipalities within its area and local communities on the preparation or amendment of its plan.

Section 53(2) (a) of the DMA specifies that the disaster management plan for a municipality must form an integral part of the municipality's Integrated Development Plan (IDP).

Section 26(g) of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) lists "applicable disaster management plans" as core components of an IDP.

The linkage between the Disaster Management Plan and the IDP will be explored in later sections of this chapter (From Section 2.4).

According to Section 53(4) of the DMA the Municipality must submit a copy of its Disaster Management (DM) plan, and of any amendment to the plan, to the Disaster Management Centre of the Eastern Cape Province and the National Disaster Management Centre.

Additional legislative requirements to that of the Disaster Management Act that will inform the way in which the Alfred Nzo District Municipality approaches the management of disaster risks within its jurisdiction include the Municipal Structures Act of 1998 (Act 117 of 1998). According to Section 84(1)(j) of this act, the Alfred Nzo district municipality is responsible for the provision of fire fighting services serving the area of the district municipality as a whole.

This section has focused on the implications of the Disaster Management Act for the Alfred Nzo District, but the Act also provides for the responsibility of other stakeholders to attend to Disaster Management. The Disaster Management planning responsibilities of national departments and parastatals operating within the jurisdiction of the Alfred Nzo District will be described in the next section.

Requirements for national departments and parastatals to compile plans

The Alfred Nzo District working on its own and in isolation of other organs of state and the private sector would not be able to significantly reduce the variety of disaster risks which confront the inhabitants of the District. Disaster Management is truly everybody's business and collaboration and cooperation would be required to reduce disaster risk.

The success of the ANDM DMP depends on effective planning by several other stakeholders as illustrated in the figure below.
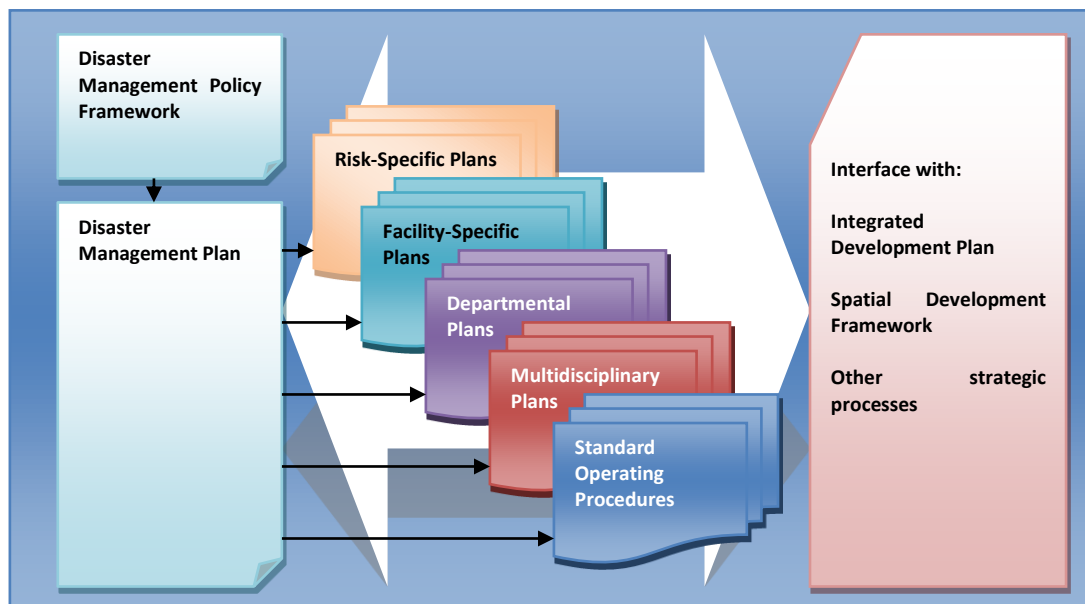
Figure 4: The relationship between plans

National government departments and parastatals operating within the boundaries of the Alfred Nzo District can make considerable contributions to disaster risk reduction within the district through the compilation of their own disaster management plan. This sub-section describes the legal requirement for national departments and parastatals conduct disaster management planning.

Part 2, Section 25 of the DMA governs the preparation of disaster management plans by national organs of state:

(1) Each national organ of state indicated in the national disaster management framework must prepare a disaster management plan setting out (i) the way in which the concept and principles of disaster management are to be applied in its functional area;(ii) its role and responsibilities in terms of the national disaster management framework; (iii) its role and responsibilities regarding emergency response and post disaster recovery and rehabilitation; (v) its capacity to fulfil its role and responsibilities; (vi) particulars of its disaster management strategies: and(vi) contingency strategies and emergency procedures in the event of a disaster, including measures to finance these strategies; co-ordinate and align the implementation of its plan with those of other organs of state and institutional role-players; and regularly review and update its plan.

(2) The disaster management plan of a national organ of state referred to in subsection (1) must form an integral part of its planning.

(3) (a) A national organ of state must submit a copy of its disaster management plan and of any amendment to the plan to the National Centre. (b) If a national organ of state fails to submit a copy of its disaster management plan or of any amendment to the plan in terms of paragraph (a), the National Centre must report the failure to the Minister, who must take such steps as may be necessary to secure compliance with that paragraph, including reporting the failure to Parliament.

Section 1 of the DMA describes a national organ of state as a national department or national public entity defined in section 1 of the Public Finance Management Act, 1999 (Act 1 of 1999).

A national department is described in the same section as (a) a department listed in schedule 1 of the Public Service Act, 1994 (Proclamation No 103 of 1994), but excluding a provincial administration; or (b) an organisational component listed in Schedule 3 of that Act. The schedules are available at http://www.acts.co.za/public_service_act_1994/index.htm.

According to Section 1 of the Public Finance Management Act, 1999 (Act 1 of 1999), a national public entity means (a) a national government business enterprise or (b) a board, commission, company, corporation, fund or other entity (other than a national government business enterprise) which is (i) established in terms of national legislation; (ii) fully or substantially funded either from the National Revenue Fund, or by way of a tax. Levy or other money imposed in terms of national legislation; and (iii) accountable to Parliament.

In the same section a national government business enterprise is defined as an entity which (a) is a juristic person under the ownership control of the national executive; (b) has been assigned financial and operational authority to carry on a business activity; (c) as its principal business, provides goods or services in accordance with ordinary business principles; and (d) is financed fully or substantially from sources other than (i) the National Revenue Fund; or (ii) by way of a tax, levy or other statutory money.

All national departments and parastatals operating within the Alfred Nzo District therefore has a responsibility to have Disaster Management plans in place and can be engaged with in this regard.

Disaster Management planning does not stop with government and organs of state. The private sector is also encouraged to develop disaster management plans and is legally required to at least ensure occupational health and safety and to have emergency planning in place.

Requirements for commerce and industry to compile plans

Disaster Management requires multi-sectoral cooperation and it is therefore critical that business also contributes to the reduction of disaster risk in communities. District and local municipalities must therefore maintain strong relationships with business, especially where commerce and industry can provide resources that can contribute to disaster risk reduction.

Commerce and industry can contribute directly to disaster risk management through memorandums of understanding or direct assistance, but could also choose to use corporate social investment vehicles for this purpose.

It is in the interest of any business to ensure that it is reducing its exposure to disaster risk and that it is able to response quickly and effectively to any incident that may affect its ability to conduct business and generate income.

There is a strong link between the resilience of commerce and industry within a specific area and the ability of communities to bounce back from adversity. Communities rely on commerce and industry for livelihoods and for the commercial provision of daily necessities. It is therefore in the interest of Alfred Nzo Disaster Management to support emergency and disaster management planning by commerce and industry.

The desire of commerce and industry to stay in business and maintain profit levels is enough motivation for this sector to assess their risks and devise plans to avoid, reduce or respond to risks which could affect their ability to continue with business. Additional to this motivation out of self-interest, good practice and corporate social responsibility also dictates that commerce and industry assess and manage risk including disaster risk. The King II and III Reports (www.iodsa.co.za) focus on risk management in companies and place an emphasis on the triple-bottom line of Financial, Social and Environmental aspects. The King reports underline the importance of risk management and business continuity planning and provides a basis for interaction between the Alfred Nzo District and commerce and industry within the Alfred Nzo District on issues of risk and joint efforts to reduce risk or to respond to disasters.

More formally, the Occupational Health and Safety Act (No. 85 of 1993) and the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977) with their respective regulations and codes of practice and associated standards require compliance to many safety-related aspects. With particular reference to the mining sector which is well-represented within the District, the Mine Health and Safety Act, 1996 (Act 29 of 1996) also bears mentioning. Compliance with these acts and their regulations, codes and standards will protect the interests of the private sector.

Of particular importance within the OHS Act are sections 7 (Health and Safety Policy); 8 (General Duties); 9 (people not in employ who may be directly affected); 17 and 18 (Health and safety representatives); 19 and 20 (Committees) and the Major Hazard Installation Regulations proclaimed under the Act.

The prescriptions of the National Building Regulations (updated in 2008) and SANS 10400:1990 – Code of practice for the application of the National Building Regulations provides for safe buildings that will reduce vulnerability, increase resilience and therefore decrease disaster risk.

Other legislation that requires commerce and industry as well as government to actively pursue disaster risk reduction includes the National Environmental Management Act (NEMA), the Mineral Resources Act, and the National Veld and Forest Fires Act that regulates the establishment of Fire Protection Associations (FPA's).

In summary it can be said that there is a clear need and legal foundation for all organs of state and the private sector to assess their disaster risk, to address this risk through mitigation actions, and to be prepared to respond to major incidents and disasters affecting them.

Current compliance with the Disaster Management Act

While the District is required to have a Disaster Management Framework (Section 42 of the Act), a Disaster Management Plan (Section 53 of the Act), a Disaster Management Centre (Section 43 of the Act) and to have an appointed Head of the Disaster Management Centre (Section 45), local municipalities are only required to have a Disaster Management Plan.

A Disaster Management Advisory forum is not required at District or Local level but is recommended best practice (Section 51 of the Act).

Table 3 below describes the current status quo of compliance of the Alfred Nzo District Municipality and the local municipalities within the District with the requirements of the Disaster Management Act.

The information in the table is based on personal interviews with Disaster Management staff or role-players in each local municipality. Although most local municipalities have some form of disaster management plan, none of these have been approved by the relevant Councils. Council approval is a necessity if the plan is to inform the integrated development planning process of the local municipalities.

Requirements of the Disaster Management Act are listed at the top of the table. The priority of each requirement is then indicated, and this priority emanates from whether the requirement in the Act is a "must" or a "may", with other words compulsory or optional. For example, a Framework is compulsory for a district municipality but optional for a local municipality. The status for each requirement is also indicated. The status is dependent on the priority of the requirement and indicates non-compliance, progress or compliance with requirements, be these requirements compulsory or optional. Shades of green indicate the status of compulsory requirements, and shades of blue indicate the status of optional, best-practice requirements.

Table 3: Status of compliance with Disaster Management Act within Alfred Nzo District

District / Local Municipalities	REQUIREMENTS According to Disaster Management Act, 2002 (Act 57 of 2002)									
	Disaster Management Framework (Section 42)		Disaster Management Plan (Section 53)		Advisory Forum (Section 51)		Disaster Management Centre (Section 43)		Head of Disaster Management Centre (Section 45)	
	Priority	Status	Priority	Status	Priority	Status	Priority	Status	Priority	Status
Alfred Nzo District Municipality	Must	Yes	Must	Yes	May	No	Must	No	Must	No
Umzimvubu Local Municipality	May	No	Must	No	May	Yes	May	No	May	No
Matatiele Local Municipality	May	No	Must	No	May	No	May	No	May	No

Key:

Priority	
	Best practice, not legal requirement
	Legal requirement

Status	
	Non-compliance with best practice
	Progressing to compliance with best practice
	Compliance with best practice
	Non-compliance with legal requirement
	Progressing to compliance with legal requirement
	Complying with legal requirement

Although local municipalities are not legislatively required to have specific Disaster Management coordinating structures, it is unlikely that a local municipality would be able to effectively conduct a participative disaster management planning process in the absence of some or other disaster management coordinating structure within the municipality. It is suggested that each local municipality should at least have an internal disaster management coordinating body such as an Inter-departmental Disaster Management Committee. The additional establishment of an advisory forum is strongly recommended to coordinate disaster management policy within the municipality and enable stakeholder involvement in disaster management matters.

Disaster Management has become one of the key components of the IDP's credibility. Section 26(g) of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) lists "applicable disaster management plans" as core components of an IDP. The next section focuses on the relationship between Disaster Management and the Integrated Development Plan.

2.4 Linkage with the Integrated Development Plan of the Alfred Nzo District

The Systems Act defines the Integrated Development Plan to be the single, inclusive and strategic plan "for the development of the municipality".

The Disaster Management Plan has become one of the criteria for determining a credible IDP document. Thus, disaster management is being elevated from the periphery of planning into the core of determining allocation of resources.

To ensure success the disaster management planning process involves:
- In the first phase of the disaster management planning process, as in the IDP process, communities and stakeholders are given the chance to indicate/highlight the problems they experience and to determine their priorities (community based risk assessment), with inputs from Disaster Management. The outputs of this phase are a list of the intolerably high risks, the high risks and the tolerable risks for each of the wards / clusters in the municipality.
- The intolerably high risks and the high risks are addressed in Phase 2 of the project. In this phase, the Advisory Forum, in conjunction with the technical task teams, will have to make recommendations on the most appropriate way(s) to address the intolerably high risks and the high risks, as well as, to ensure that project proposals are designed, which can be implemented.
- The tolerable risks are addressed. The Advisory Forum, in conjunction with the technical task teams, must identify and recommend the minimum preparedness and contingency planning requirements to be in a position to address tolerable risk manifestation.
- The Municipality, especially the IDP Manager and the Head of Disaster Management, has to make sure that the disaster risk reduction project proposals are in line with the objectives and the agreed strategies of the IDP of the Council.

Linkage with the Spatial Development Framework of the Alfred Nzo District

A Spatial Development Framework (SDF) is a prerequisite in terms of the Local Government Municipal Systems Act, 2000 (Act 32 of 2000) and a core component of an Integrated Development Plan and "must include the provision of basic guidelines for a land-use management system for the municipality".

An SDF is established by the municipality for implementation within the district by all role-players.

An SDF should be environmentally informed and sustainability-based, incorporating pro-poor policies rather than only being a spatial indication of IDP proposals. The collectives of the social, political, economic and environmental elements that underpin present-day society are regarded as fundamental informants to an SDF in order for spatial planning to complement economic growth and development.

A District SDF is an intervention at a critical planning level to facilitate progressive connectivity between activities in lower and higher order planning domains. Furthermore it is to be a proposal of spatial guidelines to take effect within the municipal area in order to direct future spatial interventions as a result of growth, development and policy and to reduce developmental disparities.

The Integrated Development Plan (IDP) of the Alfred Nzo District Municipality would be the key informant of the formulation process of the SDF. The IDP must accommodate the visionary statement of the Council that needs to direct all activities of all role-players that perform activities within the municipal area.

The figure below illustrates the context of the Regional SDF in relation to other regional processes and subsequent products, but also with regard to the cyclical nature of the development agenda.
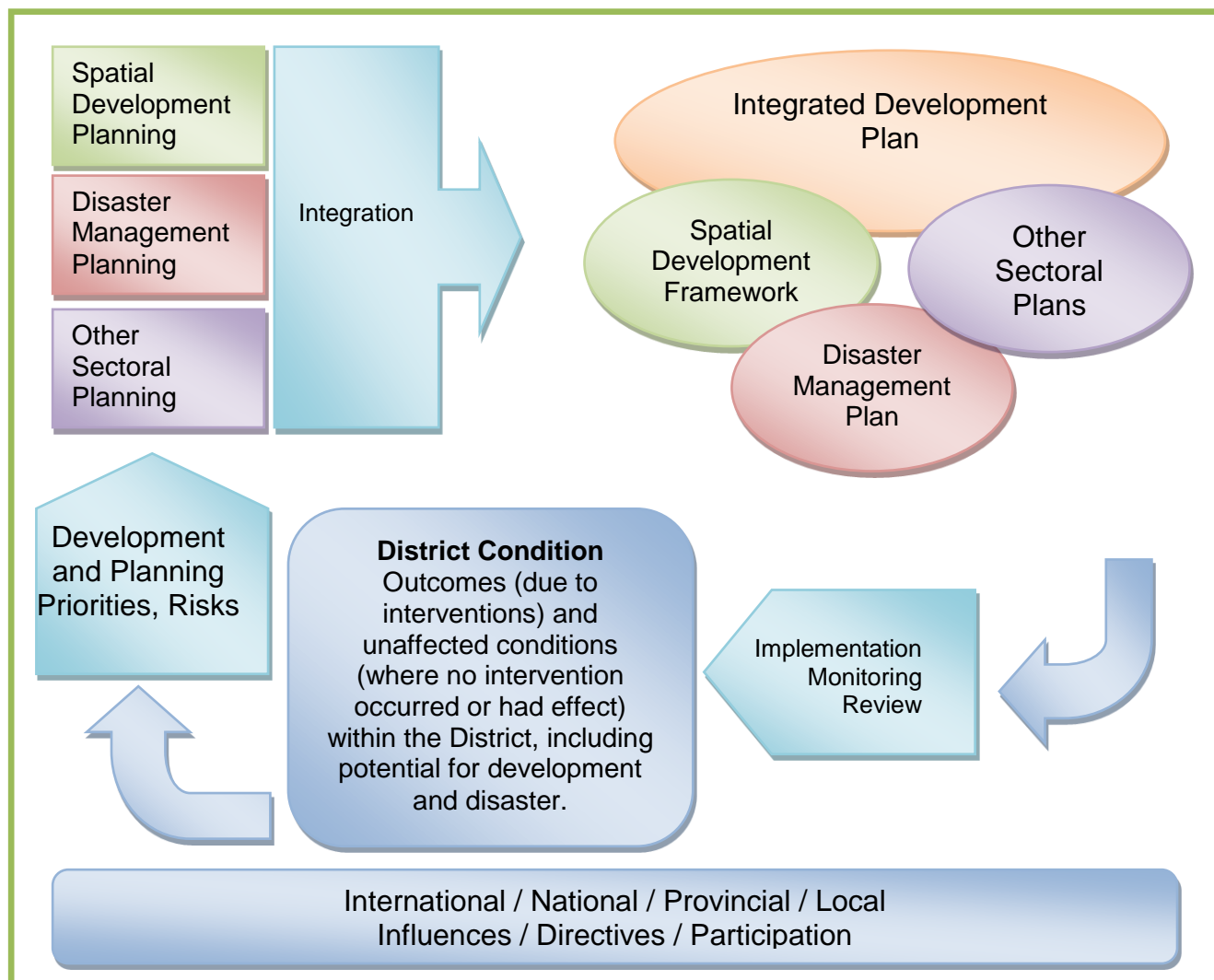
Figure 5: The Relationship between the SDF, IDP and Disaster Management Plan

The relationship between disasters and development

This section expands upon the relationship between disasters and development to illustrate why disaster management projects should be included within the development planning of a district, and why the planning and prioritisation of IDP projects in general should take disaster risk and the possible influence of the project on disaster risk in consideration.

It can be said that disasters and development have both a negative and positive relationship, and this relationship needs to be recognised and managed to achieve sustainable development.

In a negative sense, disasters can destroy development and uncontrolled, improper development can cause disasters. In a positive sense, disaster can create an opportunity for improved, more resilient development, and proper development can reduce the risk of disasters occurring.

Badly planned development in a floodplain increases disaster risk by making the new community vulnerable to flooding and thus disaster. The development of well-planned and effective flood defence measures can decrease the vulnerability of the community and thus contribute to disaster risk reduction. If a disaster actually occurs and major flooding impacts on the community, the development can be damaged or destroyed. If the lessons learnt from the flooding event are however incorporated in developing a new community outside the flood plain or if flood risk reduction is incorporated into the planning of a new community in the same setting, but this time from the outset, disaster risk reduction can also be achieved.
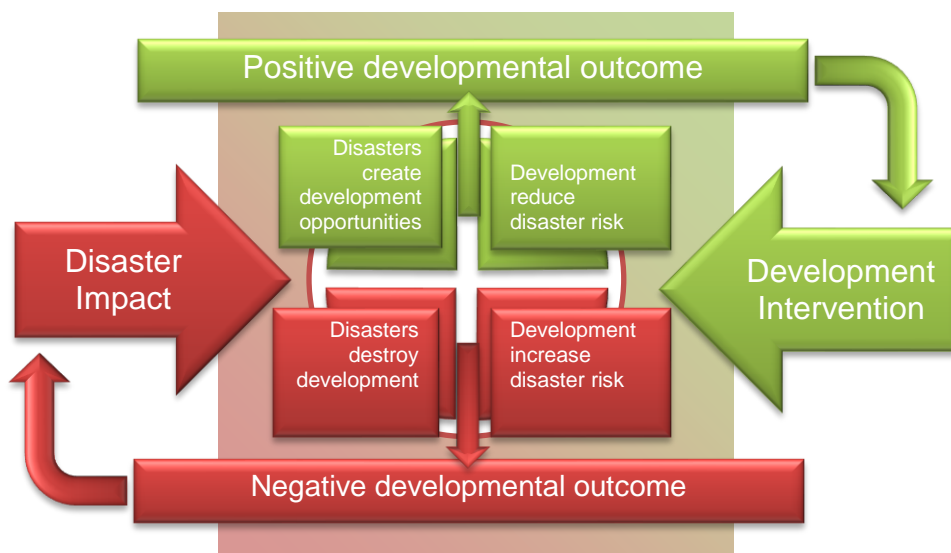
Figure 6: The relationship between disasters and development

In recognition of the possible negative or positive relationship between disasters and development, both the Municipal Systems Act and the Disaster Management Act requires the inclusion of a municipal disaster management plan in the Integrated Development Plan (IDP) of municipalities.

Integrating development and disaster management planning

Based on the previous discussions of the relationship between disaster management, the spatial development framework and the IDP, it is clear that the process for developing a disaster management plan should be integrated with the IDP process.

Such a process is shown below. **Figure 7** illustrates the planning process for the development of municipal disaster management plans as well as the integration of such plans into the integrated development plan of a municipality.

While a synchronization of the Disaster Management Planning process was not possible for this project, it is recommended that long-term planning for future IDP cycles should include the disaster management planning steps indicated below.
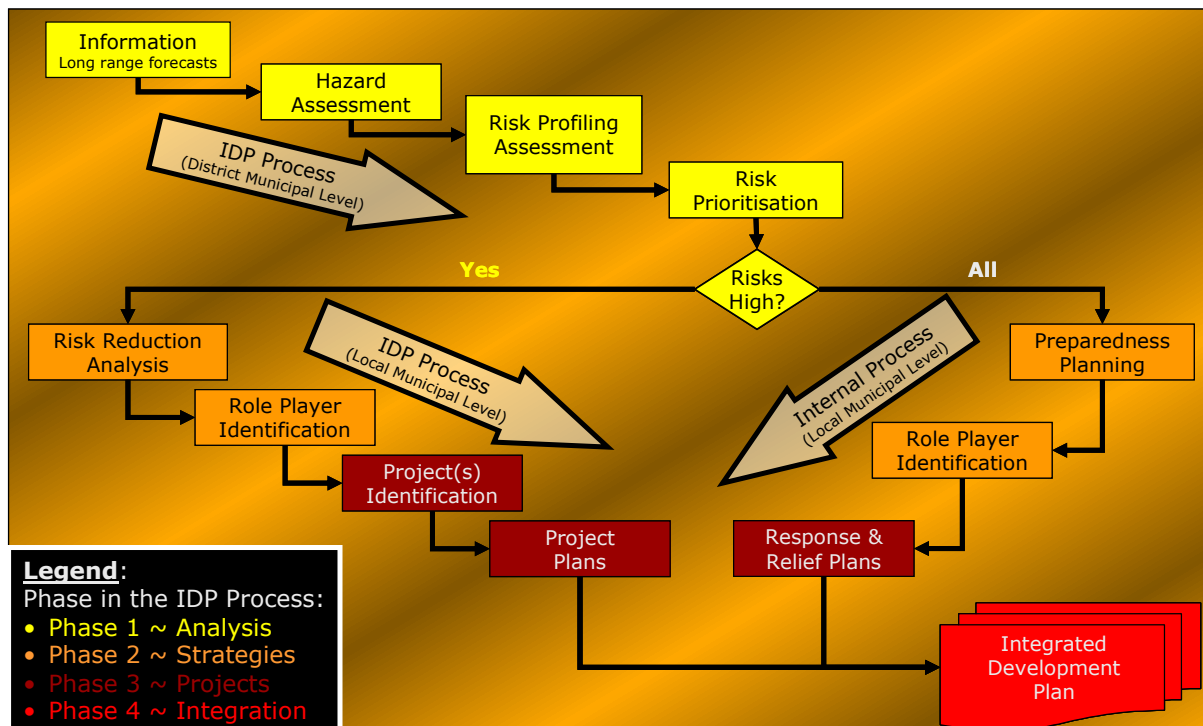
Figure 7: Planning Process for developing a DMP

The Municipal Systems Act and the Disaster Management Act requires the inclusion of the Disaster Management Plan of the Alfred Nzo District Municipality into the Integrated Development Plan (IDP) of the Municipality.

2.5 Structure of the Alfred Nzo Disaster Management Plan

The Municipal Disaster Management Plan of the Alfred Nzo Municipality is based on the legal requirements described above and consists of the components as indicated in Figure 8.

This structure is based on the requirements of the Section 53(2) of the Act, Section 3.1.1.2 of the NDMAF, and the proposed outlay of a Disaster Management Plan from the Alfred Nzo District Disaster Management Framework.

Several peripheral documents will support the Plan, the most important being the Risk Assessment Report. It is important to note that this plan is prepared at a strategic level for inclusion within the IDP process and can therefore not contain too detailed operational planning. Lower level and more specific plans are seen as supporting documents external to the plan.

In order to comply with the National Disaster Management Framework (NDMF), the Alfred Nzo District Disaster Management Plan is structured around the four KPA's of the NDMF which is also reflected in the provincial and Alfred Nzo Disaster Management Frameworks.
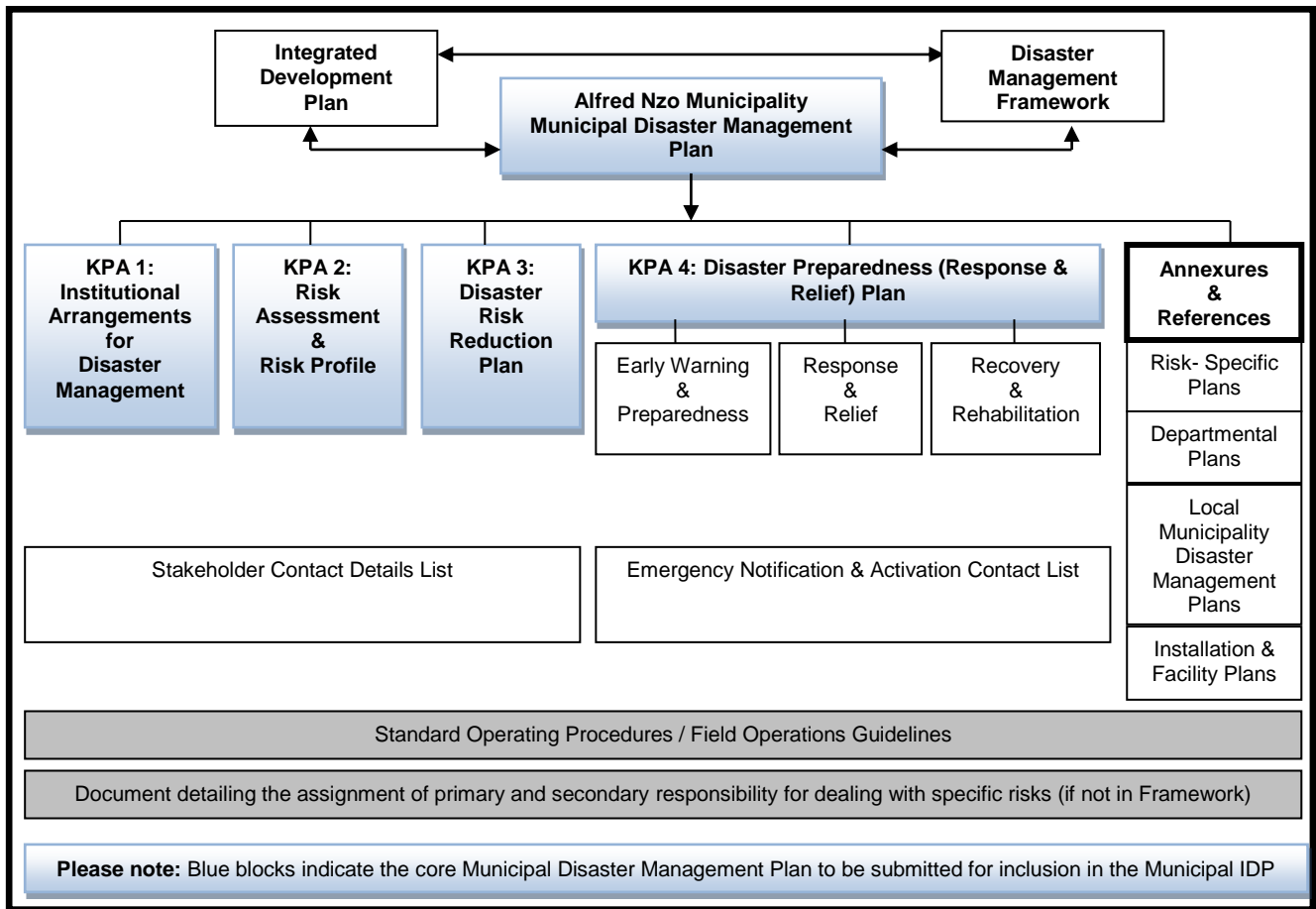
Figure 8: Structure of the Alfred Nzo Municipal Disaster Management Plan

The four key components of the plan are:
- KPA 1: Institutional arrangements for Disaster Management (Institutional Capacity)
- KPA 2: Risk Assessment and Risk Profile
- KPA 3: Disaster Risk Reduction
- KPA 4: Disaster Preparedness (Response & Relief) Plan

Each of these key components will be discussed in more detail from the next section.

3 KPA 1: INSTITUTIONAL CAPACITY

This section describes the planning for institutional capacity for Disaster Management within the Alfred Nzo District Municipality, in accordance with KPA 1 of the National Disaster Management Framework.

3.1 Current Institutional Arrangements within ANDM

The Alfred Nzo District Municipality is composed of a political structure (Council) consisting of proportional and ward councillors, supported by an administrative structure of officials..

The Council elects a Mayor who appoints a Mayoral Committee with defined responsibilities collected into portfolios for members of the Mayoral Committee as illustrated in the figure below. Disaster Management is located within the Community Development Services department. The District has not yet formally appointed any person in the statutory post of Head of Disaster Management for the District.
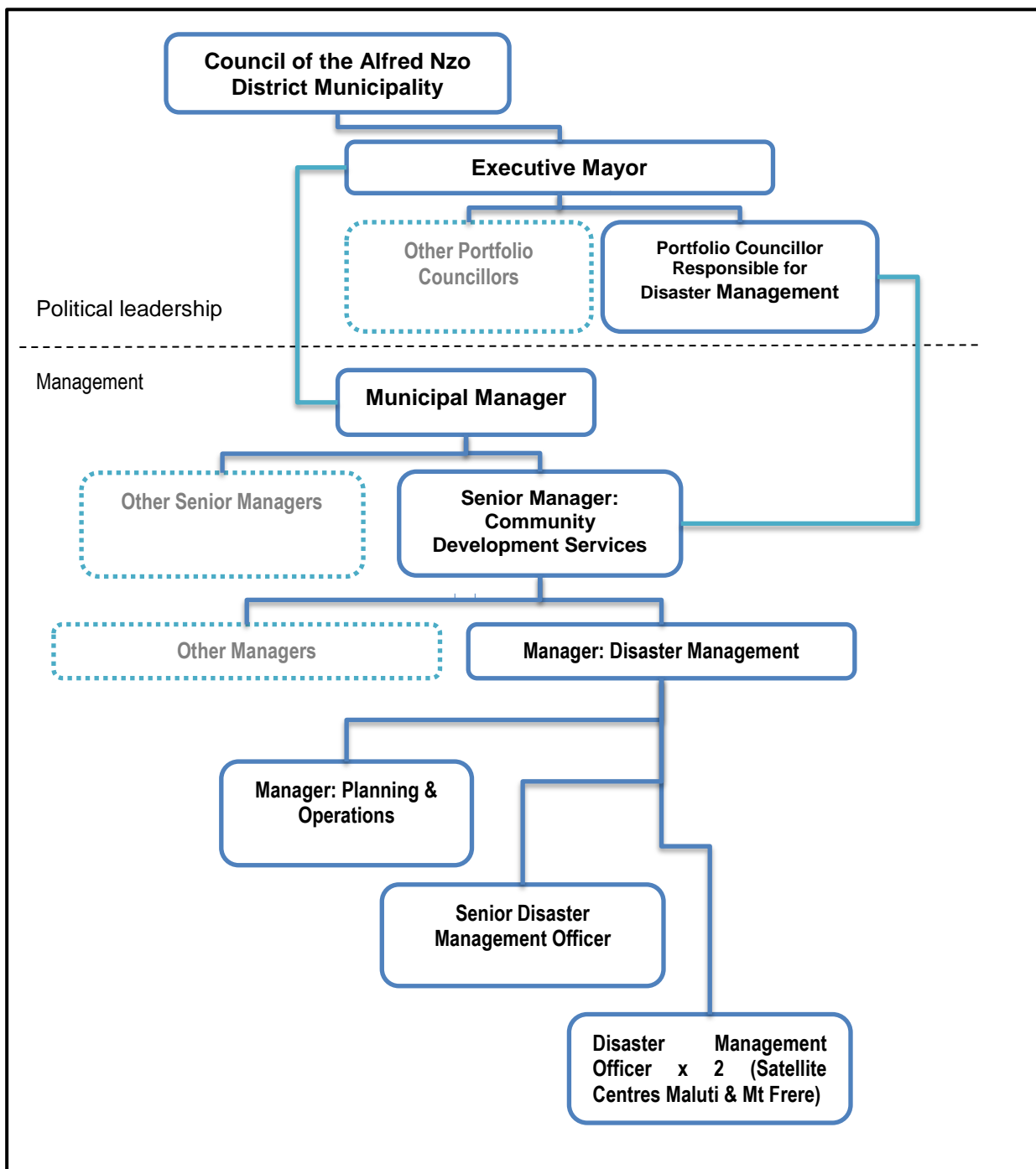
Figure 9: The Placement of Disaster Management in ANDM

Within the framework of the Constitution, the White paper on Local Government (1998) establishes the basis for a new developmental local government system which is committed to working with the citizens, groups and communities to create sustainable human settlements which provides for a decent quality of life and meet the social, economic and material needs of communities in a holistic fashion. Developmental local government is focused on working with local communities to find sustainable ways to meet their needs and improve the quality of their lives. This is realizable through the Integrated Development Plan.

Each of the local municipalities situated within the District also have their own political and administrative structures. The number of Disaster Management personnel in the local municipalities range from one in Umzimvubu to zero in Matatiele.

While there is evidence of a lack of human resources dedicated to Disaster Management within the District, it is not easy to correct such a shortage over the short term. A phased approach of increasing dedicated Disaster Management would be a more realistic recommendation.

It is noted that the Alfred Nzo District does not currently have a formally established Disaster Management Centre. The Alfred Nzo District Disaster Management Centre is located in the Municipal Offices in Mount Ayliff, with a satellite office in Mount Frere, and one satellite office in Maluti.

Fire and Rescue services are traditionally closely linked to Disaster Management although there is no legal requirement or recommendation for such a close relationship between Disaster Management and one of the many line functions it must interact with. The linkage has been more of a matter of convenience and possibly cost savings than it has been a matter of correctly placing and capacitating Disaster Management to serve its cross-sectoral coordination purpose.

Fire and Rescue service within the District are performed on District Level. Only Matatiele has veld fire capacity.

Table 4: ANDM Disaster Management and Fire & Rescue Services Resources

Vehicle type	Make	Number	Based at
Fire Services:			
Samil 50 Water tanker	Samag	1	Maluti
Mercedes Ateco medium pumper (3500litres)	Mercedes	1	Maluti
Toyota Hilux Single Cab 4x4 skid unit (500litres)	Toyota	1	Maluti
Mercedes major pumper (3500 litres)	Mercedes Ateco	1	Mt Ayliff
Toyota Hilux D/Cab 4x4 skid unit (500litres)	Toyota	1	Mt Ayliff
Samil 50 Water	Samag	1	Mt Frere
Toyota Hilux D/Cab 4x4 skid unit (500litres)	Toyota	1	Mt Frere
Toyota Hilux D/Cab Rescue Vehicle	Toyota	1	Mt Frere
Disaster Management:			
Toyota Hilux D/Cab 4x4 Response vehicle	Toyota	1	Maluti
Toyota Hilux D/Cab 4x4 Response vehicle	Toyota	1	Mt Frere

(This table to be reviewed on a regular basis)

As indicated above, there are 2 dedicated Disaster Management vehicles within the district. If more Disaster Management staff is appointed, it will be necessary to ensure their mobility and their ability to rapidly reach any part of the district.

Emergency preparedness within the District is a challenge with so little staff and the following recommendations can be made:
- A standby roster should be established where other staff (from Community Development Services, other departments within the District or even Local Municipality Disaster Management Staff within the District) are added as first and second call duty officers for the District in order to ensure that limitations on standby periods are not exceeded and that the function can continue in the temporary absence of the incumbent.
- Persons who are put on the standby list should be provided with adequate training and equipment and must be familiar with this plan.

- Standby lists for the Alfred Nzo District should be linked to standby lists at Eastern Cape provincial level, from where assistance could be requested if Alfred Nzo's capacity is exceeded.
- Mutual aid agreements with adjoining district or metropolitan municipalities can improve emergency preparedness and is in the process of being compiled for approval by the various councils.

3.2 New demarcation of the Alfred Nzo District in 2011

Two additional local municipalities, Mbizana and Ntabankulu, will be incorporated into the Alfred Nzo District after the 2011 local government elections in terms of a new demarcation.

This new local government dispensation will have a marked influence on the required institutional arrangements for Disaster Management within the District and will also affect the risk profile of the District.

Although the new demarcation will be effected after the completion of this document and is outside the scope of this project, some recommendations can be made in this regard. Such recommendations are made in the following sub-sections.

The approved structure for Disaster Management after the demarcation is presented overleaf. It is noted that no provision is yet made for the statutory post of Head: Disaster Management Centre and that the Disaster Management function is in the unfortunate position of reporting to a line function (Fire Services in this case) while Disaster Management itself is a cross-functional co-ordination service that needs to pull together the energy of various internal and external line functions towards disaster risk reduction, preparedness and response. The organisational position envisaged for Disaster Management may thus hamper it in realising its full potential to reduce disaster risk in the District.
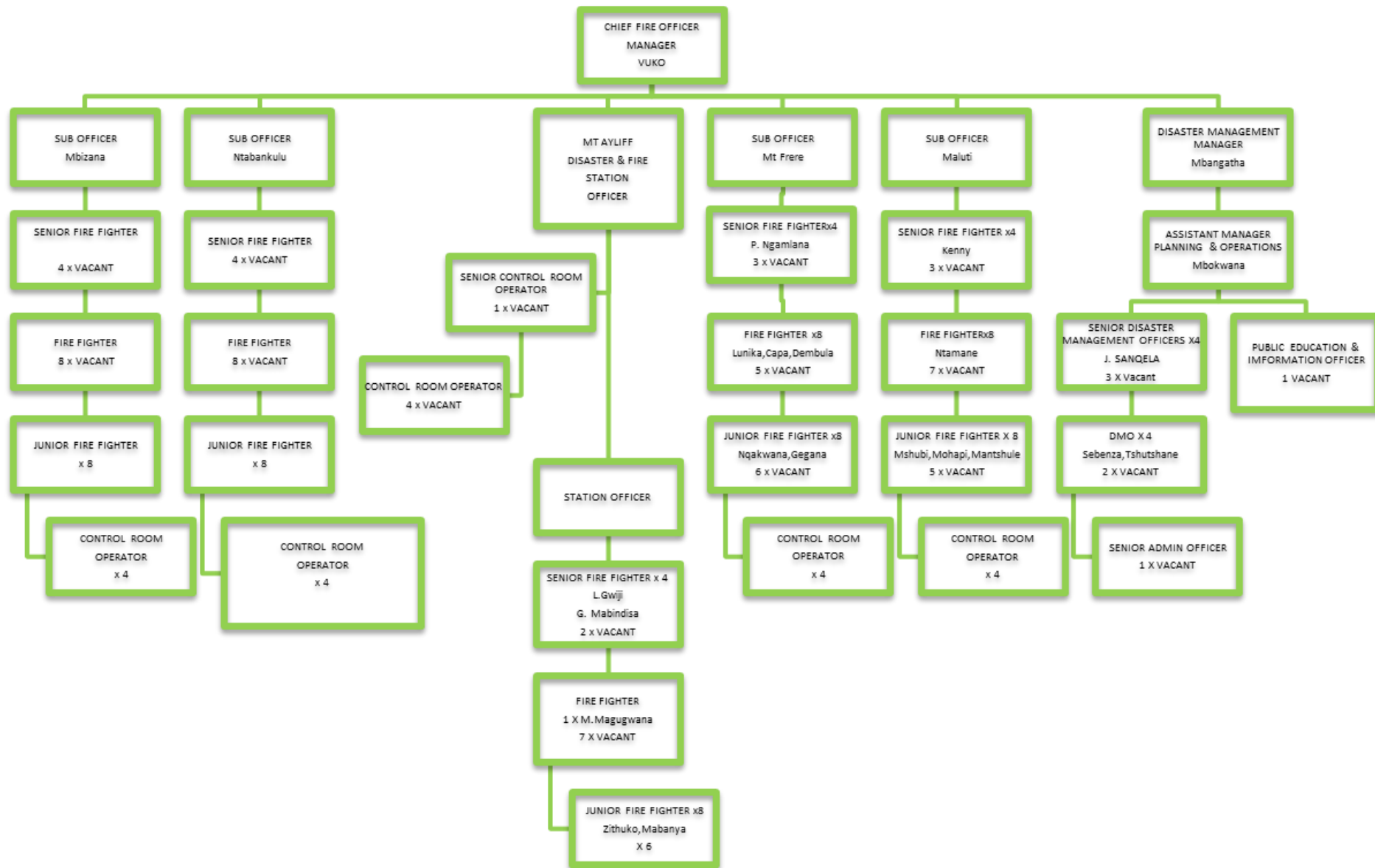
Figure 10: Approved ANDM Fire and Disaster Management Structure after new demarcation in 2011

Experience has shown that disasters do not respond well to individual effort, therefore it is important to have an inclusive approach to Disaster Management, where all roleplayers and stakeholders work together with Disaster Management officials to reduce disaster risk.

The need to spread the responsibility for Disaster Management wider than the a few incumbents within the District is a necessity, and is based on the idea that there is a shared responsibility for disaster management.

3.3 Shared responsibility for disaster management

The responsibility for reducing disaster risk, preparing for disasters, and responding to disasters is shared among all departments and employees of the Alfred Nzo District Municipality, local municipalities within the Alfred Nzo District Municipality, all departments and employees of the Alfred Nzo Municipality, all provincial and national organs of state operating within the municipality, all sectors of society within the municipality and, perhaps most importantly, all the residents of the municipality.

Key outcomes of the Disaster Management Plan

The Disaster Management Plan of the Alfred Nzo District Municipality seeks to achieve the following key outcomes:

- Integration of Disaster Risk Management into the strategic and operational planning and project implementation of all line functions and role players within the municipality;
- Informing planning and allocation of resources by municipalities to enable the reduction of community vulnerability;
- Resilient communities;
- An integrated, fast and efficient response to emergencies and disasters by all role-players.

Focal points for disaster management

Although the municipal department within the Alfred Nzo Municipality assigned with the Disaster Management function should direct and facilitate the disaster risk management process, it cannot perform the whole spectrum of disaster risk management activities on its own. Disaster risk management is everybody's business. It is therefore recommended that each municipal department within the district Municipality and each local municipality within the district assign a person or section within the department / local municipality to be the focal point for disaster management activities in that department / local municipality. The same applies to national and provincial departments operating within the municipality.

The disaster management activities to be performed within departments and local municipalities include participation in disaster risk reduction as well as preparedness and response.

Action: The Disaster Management Centre of the Alfred Nzo Municipality will circulate forms on an annual basis requesting role-players to indicate their focal points for disaster management. The forms shall provide space for indicating the department, position and full contact details (also after hours) of the focal point and at least one alternate contact person.

Departments with primary responsibility for specific hazards and disaster risks

Where a department has primary responsibility for a specific hazard, the department's role in disaster risk management for that specific hazard will be more than mere participation: it will have to lead risk reduction as well as preparedness activities due to its expertise in the field. Section 3.5 from page 37 described the responsibilities of specific departments within the District in terms of Disaster Management.

Alfred Nzo Disaster Management can support such a department with advice, information, facilitation and coordination.

Action: Alfred Nzo Disaster Management will maintain a list of hazards that may affect the municipality with associated primary role-players indicated for risk reduction as well as preparedness for each specific hazard. (See next section for the process of assigning such responsibility.)

The plans for disaster risk reduction and preparedness compiled by these primary role-players should be attached to this plan or should be referenced as supporting documentation as indicated in Figure 8: Structure of

the Alfred Nzo Municipal Disaster Management Plan. These documents must be easily accessible to all relevant role-players.

Assignment of responsibility to deal with specific disaster risks

Departments that are responsible for specific services in normal conditions will remain responsible for such services during disasters. The declaration of a state of disaster and the tighter coordination instituted during disasters does not absolve any agency of its assigned responsibilities.

Legislation assigns responsibility for most disaster risks to specific departments or functions. There are however grey areas related to some disaster risks, for example there may be some debate around who should be the lead agent for a hazardous materials incident that involves crime / terrorism and injured persons. In order to ensure clear roles and responsibilities and enhance integrated disaster risk management efforts, such grey areas must be addressed and clearly assigned responsibilities must be confirmed.

Action: The risk profile of the Alfred Nzo Municipality will be considered by the Alfred Nzo Disaster Management Advisory Forum and primary and supporting role-players will be identified for each identified risk. Such allocation of primary and supporting roles will be done in consultation with all relevant role-players, will be informed by existing legal frameworks, and assignment will be done on a consensus basis.

The above assignment of responsibilities will be revisited and confirmed on an annual basis, and will be recorded and distributed in the format indicated in **Table 5** below.

Table 5: Assignment of primary and supporting role-players for disaster risks

Description of disaster risks identified in the risk profile of the municipality (Complete one table per risk)	Primary role-player in **risk reduction** to be indicated here	Supporting role-players
	Primary role-player in **preparedness** to be indicated here.	Supporting role-players
	Primary role-player in **response and relief** to be indicated here.	Supporting role-players
	Primary role-player in **recovery & rehabilitation** to be indicated here.	Supporting role-players

The document assigning responsibilities can become an annexure of the Municipal Disaster Management Plan of the municipality, if such assigning of responsibilities have not been dealt with in the Municipal Disaster Management Framework.

The assignment of responsibility for specific hazards or disaster risks will be informed, but not determined, by the assignment of responsibility for risks within the National Disaster Management Advisory Forum. The conditions prevailing within the District will be the determining factor.

The number and responsibilities of task teams under the Advisory Forum will be determined by the priority disaster risks identified within the District. This is discussed under the Advisory Forum in section 0 on page 32.

3.4 Disaster Management Structure for the Alfred Nzo Municipality

In this section a Disaster Management structure for Alfred Nzo District Municipality is proposed.

The corporate structure for Disaster Management will extend beyond only the department directly responsible for Disaster Management to other internal and even external stakeholders that can contribute to the reduction of disaster risk. This section is therefore not solely concerned with the organogram of the Alfred Nzo District Disaster Management Centre. Other relationships and key stakeholders must also be described.

The current Disaster Management structure within Alfred Nzo consists of a Senior Manager within the Community Development Services, as illustrated above.

While facilities are in existence for a Disaster Management Centre, the organisational structure for a Disaster Management Centre able to perform Disaster Management duties as envisaged within the Disaster Management Act and Disaster Management Framework is not yet in existence.

The Disaster Management structure for the Alfred Nzo Municipality must deal with both pro-active and reactive disaster management issues and encompasses more than the department which is responsible for the function. From the next sub-section the proposed structure for the ANDM Disaster Management Centre will be described. The structure can include the elements described but may be collapsed into a smaller number of elements if less complexity is required.

Alfred Nzo Disaster Management

"Alfred Nzo Disaster Management" refers to the department within the municipality assigned with the Disaster Management function. This organisational component should be formally established as the Alfred Nzo Disaster Management Centre to comply with the Disaster Management Act. The Disaster Management Centre of the Alfred Nzo District Municipality must aim to prevent or reduce the risk of disasters, mitigate the severity or consequences of disasters, prepare for emergencies, respond rapidly and effectively to disasters and to implement post-disaster recovery and rehabilitation within the municipality by monitoring, integrating, co-ordinating and directing the disaster risk management activities of all role players.

A fully established and functioning Municipal Disaster Management Centre is a key element of this plan.

Action: The Alfred Nzo Municipality will consider the establishment and maintenance of a fully staffed and resourced Disaster Management Centre.

Figure 11 indicates the suggested organisational design for a Disaster Management centre which uses a combination of functional specialisation and area-based management.

This structure is based on best practice and the recommendations contained within the National Disaster Management Framework, taking into consideration existing capacity and that capacity may have to be built in phases over time.
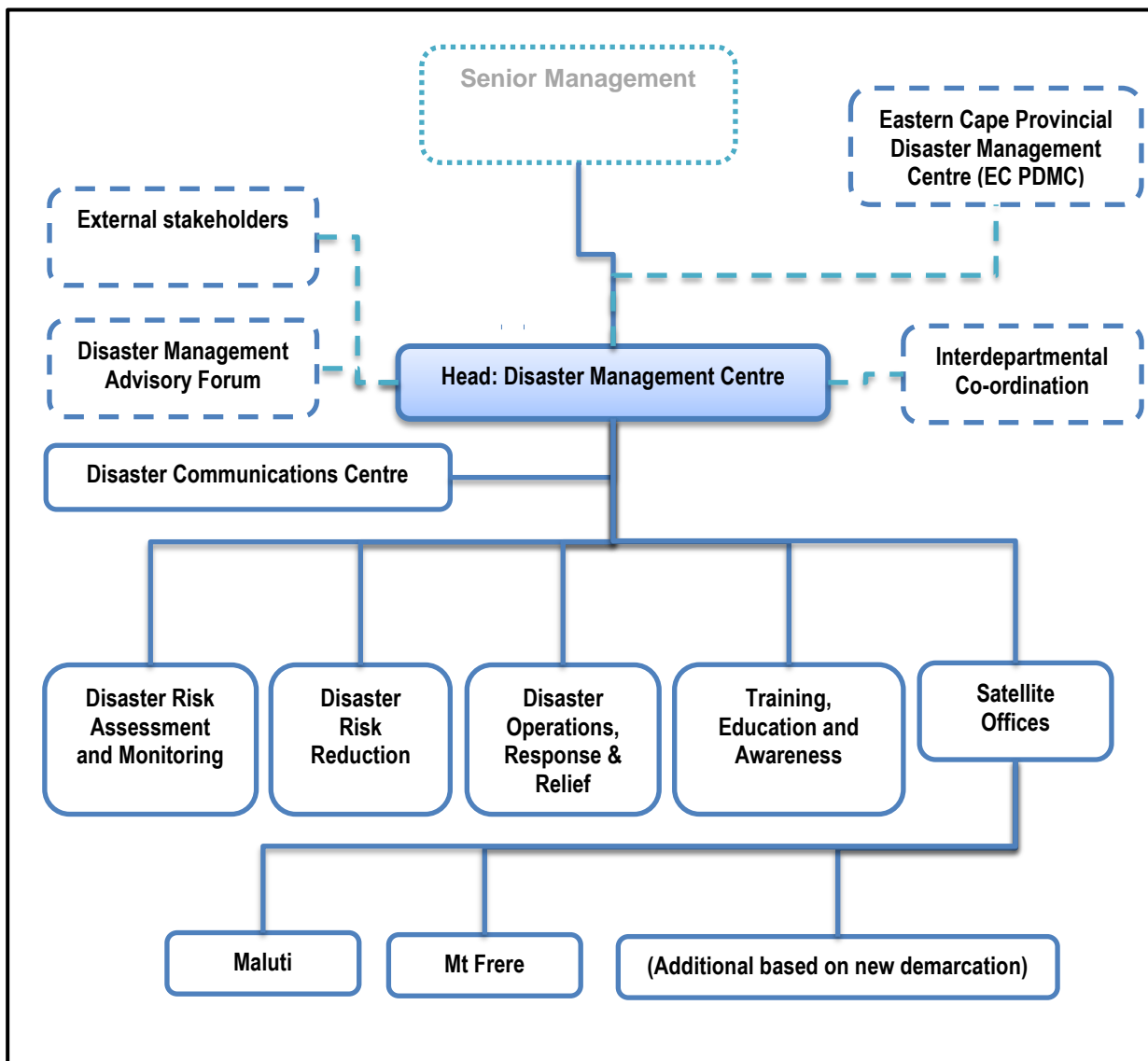
Figure 11: Suggested design for the DMC

Solid outlined elements refer to the categories of functions to be performed and not individual posts. Depending on resources, each category of functions can be expanded into several post descriptions or rolled up into fewer separate positions. Solid lines refer to lines of authority and reporting within the District. Elements with dashed outlines refer to co-ordination, consultation and policy-making structures while dashed connecting lines refer to lines of consultation and collaboration.

Alfred Nzo District Disaster Management Advisory Forum

The Alfred Nzo District may establish a District Disaster Management Advisory Forum as described in Section 51 of the Disaster Management Act, 2002. It is advantageous for a district to establish such a forum to coordinate strategic issues related to disaster management such as risk assessments and to approve and/or review the disaster management plan for the municipality before it is submitted to Council. The frequency of meetings of such a body is 2-4 times per year or as required. Once established, such a forum can play an important role in setting policy and priorities for Disaster Management within the District, and reviewing risk assessments and plans from time to time. The Terms of Reference of the Forum is its founding statement and will determine its functioning. Alternative existing coordination structures may also be used to perform the functions of an Advisory Forum, thereby reducing administration and costs.

Where other existing coordination structures are available to perform the envisaged functions of an Advisory Forum, it would be prudent to reduce costs and administration and use existing structures instead of creating a new dedicated structure.

Action: The Alfred Nzo District Municipality will consider the establishment of a District Disaster Management Advisory Forum and act upon its decision in this regard.

A draft terms of reference document for the Advisory Forum has been compiled and is contained within the Disaster Management Guidelines compiled as part of this project.

Interdepartmental Disaster Management co-ordination

Internal coordination will occur at manager level where instructions and identified projects from the Advisory Forum can be implemented and tracked. Municipal top-management meetings can serve as a coordination forum or Steering Committee for disaster management issues within the municipality. Although a dedicated structure can be created for this purpose, this role will be performed by the top management team of the municipality to reduce the complexity of the disaster management structure. Ad-hoc external representation may form part of the deliberations upon invitation.

Action: The Alfred Nzo District Municipality will consider the establishment of a dedicated body for interdepartmental Disaster Management coordination, or will assign this responsibility to the top management team (of officials) of the municipality.

Focal points for disaster management within municipal departments

Refer to section 3.3 above.

Departmental planning groups

This element relates to planning groups that can be established within departments within the Municipality to deal with internal disaster management issues such as the compilation of departmental or local municipal disaster management plans and contingency plans for facilities and services of the department or local municipality. The disaster management focal points of such departments or local municipalities will be involved in these planning groups.

In a less complex design these groups can be integrated with others to become technical task teams.

Action: Focal points will be empowered and supported by their departments / organisations to establish, manage, and participate in departmental and/or local municipal planning groups.

Risk reduction project teams

These are multi-disciplinary project team convened to address and reduce a specific disaster risk. The teams are convened by the primary role-player for the risk and supported by Disaster Management.

In a less complex design these teams can be integrated with others to become technical task teams.

Action: The primary role-players for specific hazards or disaster risks, in collaboration with Alfred Nzo Disaster Management, will establish and manage risk-reduction project teams as required or when requested by the Disaster Management Advisory Forum. (Existing structures should be used as far as possible to prevent duplication and reduce the meeting burden on role-players.)

Preparedness planning groups

A multi-disciplinary planning group convened to ensure a high level of preparedness for a specific disaster risk. Convened by the primary role-player for the risk and supported by Disaster Management.

In a less complex design these groups can be integrated with others to become technical task teams.

Action: The primary role-players for specific hazards or disaster risks, in collaboration with Alfred Nzo Disaster Management, will establish and manage preparedness planning groups as required or when requested by the Disaster Management Advisory Forum. (Existing structures should be used as far as possible to prevent duplication and reduce the meeting burden on role-players.)

Joint response & relief management teams

Mostly flowing from a preparedness planning group, this is a team that is mobilised to deal with the immediate response & relief required during or immediately after major incidents and disasters. Such teams will normally convene in the Disaster Operations Centre (see description below).

In a less complex design these teams can be integrated with others to become technical task teams.

Action: The preparedness planning group for each hazard will detail how the activation of a joint response and relief management team for that specific hazard will be managed, and who will form part of the team.

Recovery & rehabilitation project teams

These are project teams managing recovery and rehabilitation after disasters, mostly on a project-management basis. Disaster recovery and rehabilitation must focus on risk elimination or mitigation. Departments who are responsible for the maintenance of specific infrastructure are also responsible for the repair or replacement of such infrastructure after disasters.

In a less complex design these teams can be integrated with others to become technical task teams.

Action: The preparedness planning group for each hazard will detail how the activation of recovery and rehabilitation project teams for that specific hazard will be managed, and who will form part of the teams.

Technical Task Teams

The Disaster Management Act, Sections 44 and 47, calls for a coordinated approach for prevention and mitigation that encourages risk-avoidance behaviour by organs of state, the private sector, on-governmental organisations, communities, households and individuals in the municipal area.

Thorough disaster risk management planning, refer Sections 52 and 53 of the Disaster Management Act, and effective co-ordination is the key to saving lives and limiting damage to property, infrastructure and the environment. This is also necessary for the optimal utilization of available resources.

The following four task teams will ensure hazard specific research, risk prevention and reduction, mitigation and preparedness measures.

- Natural Hazards: This task team will consider all potential geological and hydro meteorological hazards that can manifest in the Alfred Nzo District Municipality e.g. earthquake, floods, severe storms and drought.

- Biological Hazards: Strictly speaking biological hazards form part of the natural hazard grouping, but due to the expert scientific knowledge needed for human, fauna and flora disease identification and control this must be handled as a separate task team. Examples include typhoid fever, rabies, TB and influenza strains.

- Environmental Degradation: This task team will study and analyse processes induced by human behaviour and activities (sometimes combined with natural hazards), that damage the natural resource base or adversely alter natural processes or ecosystems. Such processes, if not altered, will negatively impact on sustainable livelihoods and the continued use of natural resources and examples include water, air and soil pollution.

- Technological Hazards: This task team will evaluate the danger originating from technological or industrial accidents, dangerous procedures or certain human activities, which may cause the loss of life or injury, property damage, social and economic degradation. Examples include dam failure, road / rail / aircraft accidents and hazardous materials spills.

Methodology:

All identified hazards must be evaluated and prioritised according to the methodology contained in the risk assessment chapter in that each identified hazard will be assessed in term of its probability and severity of occurring, manageability and vulnerability.

Each task team must identify a lead agency and or department and the enabling agencies or departments that will assist with the assessment of the identified hazards.

The task teams must ensure the identification of resources needed to address the potential threat of hazards. This refers to capacity (material resources) and capability (trained individuals) to ensure that risk reduction initiatives are put in place.

The respective task teams must operationalise the plans and evaluate the success of implemented measures.

Written reports regarding activities must be submitted to the Head of the ANDMC who in turn will submit it to the Alfred Nzo Disaster Management Advisory Forum.

In the case of large incidents or threatening or realised disasters the respective technical task teams will advise the ANDMC on appropriate actions and management requirements.

Alfred Nzo Disaster Management Communications Centre

This is the centre providing 24-hour emergency and essential services contact points to the public within the municipal area. The Centre is responsible for day-to-day emergency response by municipal departments and for the establishment of strategic communication links. The Alfred Nzo Disaster Management Communications Centre will liaise closely with the Emergency Control Centres / Groups of the local municipalities and other stakeholders within the Alfred Nzo Municipality on an on-going basis.

It would be possible to reduce costs and increase inter-service collaboration by combining the responsibilities and functions of district-wide emergency services, fire control centres and law enforcement control centres in one facility with the Disaster Management Communications Centre.

Action: Alfred Nzo Disaster Management will establish and maintain a fully staffed and resourced Disaster Management Communications Centre and if required collaborate with other agencies to maintain 24-hour per day, 7 days per week public emergency call-taking capacity.

Alfred Nzo Disaster Operations Centre (DOC) / Joint Operations Centre (JOC)

The Alfred Nzo DOC is a facility equipped to serve as command and coordination centre during disasters, where the joint response & relief management team will convene. Alternative facilities should be identified as back-up to the primary DOC. The term JOC for Joint Operations Centre can also be used for this facility.

Action: Alfred Nzo Disaster Management will identify, establish and maintain a fully staffed and resourced Disaster Operations Centre for activation as required and will identify fall-back or alternative facilities for the same purpose.

The figure on the next page illustrates how the components described above would interact with each other. It is important to note that this is a proposed organisational structure, but rather a proposal in terms of lines of communication and collaboration.

Eastern Cape Provincial Disaster Management Centre

Alfred Nzo Municipality Political Leaders & Top Management

Alfred Nzo District Disaster Management Advisory Forum

Alfred Nzo District Disaster Management Centre

Alfred Nzo Municipal Departments & Local Municipalities in District

Alfred Nzo Top Management Team
(Interdepartmental Disaster Management co-ordination)

Disaster Management in Local Municipalities within District

Focal points for disaster management within municipal departments

Departmental Planning Groups

Risk Reduction Project Teams

Preparedness Planning Groups

Joint Response & Relief Management Teams

Recovery & Rehabilitation Project Teams

External Disaster Management Role-players:

SAPS
SANDF
Prov EMS
Prov Traffic
Eskom
DWA
NGO's

Alfred Nzo Disaster Management Communications Centre
Disaster Management
Fire
Municipal Police
Essential Services (Water, Sewerage, Electricity, Solid Waste, Engineering)

Alfred Nzo Disaster Operations Centre

(Activated in case of major incidents or disasters)

Figure 12: District Disaster Management Coordination and Collaboration

3.5 Institutional Responsibilities

The main Alfred Nzo District Municipal Stakeholders have specific responsibilities with regards to disaster prevention/risk elimination projects and disaster response scenarios.

The primary objective of each municipal stakeholder must be to contribute, from their specific areas of expertise, to the prevention of the occurrence of emergencies or disasters that threaten life, property, the environment or economic activity in the Alfred Nzo District Municipality in keeping with Chapter 5 and Section 52 of the Disaster Management Act.

Executive Mayor

The Executive Mayor is ultimately in charge of the emergency / (threatening) disaster. The Executive Mayor or Acting Executive Mayor, as Head of Council, is also responsible for:

- Declaring a state of disaster to exist.
- Notify the MEC of Local Government of the declaration of a local state of disaster and the termination of the declaration of a state of disaster.
- With the assistance of Municipal staff, ensure that the Municipal Councillors are advised of the declaration and termination of declaration of the state of disaster and are kept informed of the (potential) impact of the event(s).
- Ensuring that the public, the media and neighbouring municipal officials are also advised of both the declaration and termination of a state of disaster.

Municipal Manager

To ensure disaster prevention, risk reduction and disaster preparedness, the Municipal Manager must ensure that the disaster management function is executed in an effective and efficient manner in the area of the Alfred Nzo District Municipality.

Before, during and after emergencies or disasters it will be the responsibility of the municipal manager to personally, or through a designated official:

- Report, liaise and consult with the Executive Mayor and external provincial and national government departments on emergency impact and response to the Mayor,
- Report on event impact and response to the councillor(s) for the affected area(s),
- Report on event impact and response to the remaining Councillors,
- Notify next of kin when a District employee is injured, missing or killed,
- Authorize extraordinary expenditures,
- Identify persons/organizations to receive recognition for contributions to emergency response.

Manager Disaster Management / Head of the Centre

The Head of the Centre is responsible for the compilation, maintenance and distribution of the District Disaster Management Plan and it's supporting risk-specific and incident management plans.

The Head is also responsible for the performance of the Centre with regards to its disaster management functions and to implement and co-ordinate the Disaster Management Act.

The Head is also responsible to ensure that disaster risk reduction institutional arrangements address all capability (skills) and capacity (resource) needs, which includes, but is not restricted to:
- a dedicated disaster risk management communication system,
- community based risk assessment at regular intervals,
- community based aspect specific skills enhancement,
- high risk hazard research through the advisory forum technical task teams,
- access to emergency supplies,
- exercise response and contingency plans,
- ensure "memoranda of understanding" and "mutual aid agreements" with neighbouring local government and private entities.

Additional management responsibilities are described in Annexure C (Section 0 from page 94).

Management responsibilities include information management, which is an important aspect of institutional capacity. In the next section information management will be discussed.

3.6 Information Management

The Alfred Nzo District currently uses off-the-shelf business tools for electronic communication and information management. Such standard tools can be used successfully if the right information is captured at the right time and place and shared with the right people.

There is however always room for improvement and would be appropriate for the district to invest in information management infrastructure that supplements its current information technology infrastructure and enables the rapid sharing of critical information during emergencies, and the comprehensive collection of risk information to inform risk reduction efforts.

Essential Elements

Three essential elements of a complete information infrastructure are:

- Knowledge infrastructure. Encompasses the systems of measurement, methods of data visualization and exploitation, information analysis, event forecasting, knowledge modelling and data and information management.
- Interconnectivity infrastructure. Encompasses the modes of communication employed to retrieve and distribute data and to disseminate the information products, knowledge and understanding developed within the knowledge infrastructure.
- Integration infrastructure. Encompasses the process needed to ensure that the "mechanical" parts of the system are synchronized and that the "human" parts of the system are cooperating. The integration infrastructure is key to an effective overall information infrastructure as it addresses:
  - The tracking of system performance to user requirements.
  - The definition of standards and protocols necessary to ensure system interfaces are understood.
  - The methods, processes, and procedures to ensure quality and reliability of the knowledge base.
  - The training needed to ensure users can effectively use the system.

Information Cycle

Information management is a systematic cycle:

- Needs identification. The first steps in establishing any information management system are to:
  - Monitor the external environment to identify problems as they evolve and to be responsive to issues that are identified from outside the system.
  - Define the problems to be addressed.
  - Identify the information requirements that flow from them.
  - Identify who is to benefit from the information.

- Collection. The collection plan (data gathering) should focus on the essential elements of information that have been identified, with collection priorities flowing from the profiles of need. In the process of data gathering it is important to employ all the data capture resources available (quantitative and qualitative). As part of the collection process the gathered information must be supplied to those who need it. Another important aspect is to involve the end users of the information in the construction and development of the collection process too not only ensure that their needs are satisfied, but to also maximise acceptance of the process by the users as well as the establishment of solid baseline. Important management functions include planning, organizing, controlling and influencing the collection process.

- Processing. During this stage answers to the various questions are developed by converting data into information. This calls for a system that facilitates the collation, analysis, evaluation and interpretation of the data collected.

- It is crucial to ensure that information processing for disaster management is not totally dependent on technology or the skill and experience of one person. Information processing is not the sole responsibility of the disaster manager. Specialists could process data, but the end results need to be

made available in a format that is easily understood and applicable. Therefore the aim is to supply the decision maker with information that can clarify particular problems and to make informed choices. As much as possible processing could and should be done during the pre-disaster risk reduction phase so as to ensure effective and timely hazard specific mitigation, prevention and preparedness. The most important attributes of information processing are:

- o Timeliness – the delivery of data and information in time to drive decision-making.
- o Consistency – delivery of data and information in a consistent and uniform manner.
- o Understandability – delivery of data and information in a manner that is appropriate and understandable in the target community.
- o Accuracy- precision in measurement and observation.
- o Flexibility, adaptability to multiple situations.

- Dissemination. The final process in the cycle is the timely distribution of information to those who need it to make decisions. The inherent ability of modern distribution systems to present processed information in a variety of formats greatly assists the dissemination of information and also contributes to better understanding. It is of no use to only know end user information needs, as these needs have to be satisfied and could, *inter alia*, be addressed via:
  - o Simple text descriptions – easily understood and uncomplicated verified facts.
  - o Levels of warning – brief explanation of the hazard, its progression, cautionary advice and status.
  - o Simple diagrams – locality maps, north point, scale, full key that is faxable or printable, preferably in black and white.
  - o Imagery – photographs, aerial photographs, and satellite imagery.
  - o Interpreted imagery as maps – reflecting pertinent items such as flood lines, lava flows and access/egress routes.
  - o Contact details – e-mail addresses, telephone/fax numbers of persons, services and installations.
  - o Registering for automatic updates – via telephone, e-mail and/or fax – in order to obtain latest developments.
  - o Meteorological data – updating on changing weather conditions.
  - o Hazard onset speed/rates – predictions on hazard movement/impact such as flood fronts and fire fronts in order to extrapolate events.
  - o Web links, addresses/phone/fax indicating "further information" which should include explanations as to value and information type.
  - o Information on other technology – web sites that refer to radio bulletins and vice versa.
- Documents (downloadable, printable copy-able) publications covering warning notices, access maps and daily bulletins for display/distribution and personal accreditation/identity cards.

Functions

The information management system must be able to perform all of the following functions:
- Hazard, vulnerability and risk analysis.
- Quantitative and qualitative research coordination.
- Data administration.
- Baseline data identification.
- Effective communication and secure data sharing.
- Monitor preparedness, mitigation and preventative planning and implementation.
- Volunteer administration.
- Operate an early warning network.
- Early warning evaluation.
- Event mapping.
- Emergency response and specific tasking (activation).
- Resource deployment and monitoring.
- Monitor and evaluate:
  - o Response.
  - o Rehabilitation.
  - o Reconstruction.
- Executive Briefings.
- Control documentation – Standard Operating Procedures (SOPs), protocols, reports, framework for strategic decision taking, job descriptions, checklists etc.
- Identification of gaps in information.

In addition to the above the municipal disaster management centre must communicate all its findings to the District Disaster Management Centre to ensure an up to date regional indicative risk profile of the disaster threat.

Information and Geographical Information System

As a proactive measure to prepare for event response, a geographical information management system must be utilized to enter crucial data into prior to a disaster to provide a base map for change detection, probable damage assessment, and the presentation of scientific verifiable impacts.

GIS can, for risk assessment purposes, be applied as follows:

- Hazard mapping. A very common use of GIS in risk assessment is the preparation of hazard maps e.g. for cities, regions or an entire country and large tracts of space. Hazard maps serve as risk zone identifiers, are easy to understand and are of great help to planners and developers, since they serve as a quick identifier of risk prone areas.
- Threat maps. The purpose of threat maps is to quickly communicate the risks to people and can be overlapped with population and land use maps to arrive at meaningful conclusions. These maps could be supplied to the media for effective warning communication.
- Government planning for disaster management. It is well known that regional planners require sophisticated risk assessment tools and GIS can not only reflect spatial and non-spatial data, but can also contain built in risk assessment programmes that allow planners and disaster management functionaries to simulate disaster scenarios and graphically view the potential damages and affected areas as well as plan rescue operations.

Community Information Needs

The disaster manager must make sure that community information needs will:
- Increase their capacity to prepare, prevent and mitigate for and respond and recover from a disaster in their specific environment.
- Address social, cognitive and organizational needs in the pre- and post-disaster phases as well as response needs.
- Support the changing roles of individuals and organizations, as there is a need to adapt to shifting needs during disasters without compromising established disaster management guidelines.

The disaster management centre must provide information to communities in a form that will allow them to make their own decisions. Emergency managers need the knowledge, skills and attitudes to enable them to work with communities rather than just for them. This statement implies a partnership between the disaster manager and the different communities in the area of responsibility.

3.7 Gaps and recommendations

Various required actions were identified throughout this chapter that will address gaps in the current institutional capacity for Disaster Management within the district. These identified actions are summarised as recommendations in the table below for easy reference:

Table 6: Recommendations for Institutional Capacity in the ANDM

Action	Description
1	An annually revised database of the responsible persons in the sector departments be maintained by ANDM.
2	Alfred Nzo Disaster Management will maintain a list of hazards that may affect the municipality with associated primary role-players indicated for risk reduction as well as preparedness for each specific hazard.
3	The risk profile of the Alfred Nzo Municipality will be considered by the Alfred Nzo Disaster Management Advisory Forum and primary and supporting role-players will be identified for each identified risk. Such allocation of primary and supporting roles will be done in consultation with all relevant role-players, will be informed by existing legal frameworks, and assignment will be done on a consensus basis.
4	The Alfred Nzo Municipality will establish and maintain a fully staffed and resourced Disaster Management Centre.
5	The Alfred Nzo District Municipality will consider the establishment of a District Disaster Management Advisory Forum and act upon its decision in this regard.

6	The Alfred Nzo District Municipality will consider the establishment of a dedicated body for interdepartmental Disaster Management coordination, or will assign this responsibility to the top management team (of officials) of the municipality
7	Focal points will be empowered and supported by their departments / organisations to establish, manage, and participate in departmental and/or local municipal planning groups
8	The primary role-players for specific hazards or disaster risks, in collaboration with Alfred Nzo Disaster Management, will establish and manage risk-reduction project teams as required or when requested by the Disaster Management Advisory Forum. (Existing structures should be used as far as possible to prevent duplication and reduce the meeting burden on role-players.)
9	The primary role-players for specific hazards or disaster risks, in collaboration with Alfred Nzo Disaster Management, will establish and manage preparedness planning groups as required or when requested by the Disaster Management Advisory Forum. (Existing structures should be used as far as possible to prevent duplication and reduce the meeting burden on role-players.)
10	The preparedness planning group for each hazard will detail how the activation of a joint response and relief management team for that specific hazard will be managed, and who will form part of the team.
11	The preparedness planning group for each hazard will detail how the activation of recovery and rehabilitation project teams for that specific hazard will be managed, and who will form part of the teams.
12	Alfred Nzo Disaster Management will establish and maintain a fully staffed and resourced Disaster Management Communications Centre and if required collaborate with other agencies to maintain 24-hour per day, 7 days per week public emergency call-taking capacity.
13	Alfred Nzo Disaster Management will establish and maintain a fully staffed and resourced Disaster Operations Centre for activation as required and will identify fall-back or alternative facilities for the same purpose.

Implementing the recommendations listed in the table above will establish robust institutional capacity for Disaster Management within the district that will be able to confidently reduce disaster risks threatening the communities of the Alfred Nzo district.

In the next chapter the disaster risk profile of the District will be discussed.

4   KPA 2: RISK ASSESSMENT

Disaster risk assessment is the first step in planning an effective disaster risk reduction programme. A Disaster Risk Assessment examines the likelihood and outcomes of expected disaster events. This includes investigating the related hazards and conditions of vulnerability that increase the chance of loss.

The risk assessment done for the purpose of this Disaster Management Plan included a literature review, the identification and consulting of sources of historic information, and workshops and focus groups with subject specialists and Disaster Management stakeholders within each of the 6 local municipalities within the District.

4.1 Risk Profile of the Alfred Nzo Municipality

Various disaster risks have been identified and assessed during 2009 and 2010, as set out in detail in the Risk Assessment Report accompanying this document. The guidelines accompanying this document describe the risk assessment methodology.

The first step in developing a risk profile is hazard identification. A hazard is a potentially damaging physical event, phenomenon or human activity, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards are typically categorised into Natural, Technological and Environmental hazards.

Natural hazards are natural processes or phenomena occurring in the biosphere that may constitute a damaging event. Natural Hazards are typically classified into:

- *Geological Hazards*: Natural earth processes or phenomena in the biosphere, which include geological, neo-tectonic, geo-physical, geo-morphological, geo-technical and hydro-geological nature.
- *Hydro Meteorological Hazards*: Natural processes or phenomena of atmospheric, hydrological or oceanographic nature.
- *Biological Hazards*: Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances.

Technological hazards constitute danger originating from technological or industrial accidents, dangerous procedures or certain human activities, which may cause the loss of life or injury, property damage, social and economic degradation.

Environmental hazards are processes induced by human behaviour and activities (sometimes combined with natural hazards), that damage the natural resource base or adversely alter natural processes or ecosystems.

To identify the typical hazards in the Alfred Nzo District, a checklist was compiled which was completed by all municipalities during the consultative workshops. These checklists were returned to the Project Team listing the hazards as indicated in **Table 7**.

Table 7: Identified hazards in ALFRED NZO District Municipality

Natural Hazards	
Hydro Meteorological Hazards	
Drought	Hail storms
Erosion	Severe storms
Fire	Violent wind
Flood	
Biological Hazards	
Swine Flu	Measles
Foot and Mouth	Rabies (Animals)
Flu	Rabies
HIV/AIDS	TB
Geological Hazards	
Earthquake	
Landslides	
Technological Hazards	
Sewerage and drainage Infrastructure failure	
Road accidents	
Illegal Dumping	
Hazardous material by road	
Industrial accidents	
Environmental hazards	
Air pollution	Soil contamination
	Water pollution

The following disaster risks were identified as priority risks at a district level, to be addressed by disaster risk reduction as well as preparedness plans:

• Floods
• Veld fires
• Hazardous Materials Incidents
• Transport incidents (Road & Rail)
• Communicable diseases (Human & Animal)
• Sewerage/drainage failure
• Environmental Pollution (Water, Air, Ground, Groundwater, Illegal dumping)
• Severe weather
• Deforestation

The above lists illustrate the types of disasters that pose the highest risks within the area of the Alfred Nzo Municipality and their possible effects. The communities at risk can be derived from the risk lists, and are also shown in the risk assessment that was conducted for the area.

More detailed risk descriptions, inclusive of hazards, vulnerability and capacity descriptions, are available in the detailed risk assessment document which accompanies this plan.

Relative Risk Priorities

To ensure that all the parameters (Hazard Score; Vulnerability Score; Coping Capacity Score) required for calculating risk were equally weighted, all their respective scores were reclassified and rated from 1 to 3.

Calculate Relative Risk Priorities: The following simple mathematical model was used to calculate the relative priorities of the risks to which the communities in each region are exposed:

> **Relative Risk Priority Score = Hazard rating X Vulnerability rating / Coping Capacity Score**

Extremely High Risks *(Relative Risk Priority ≥ 7)*: Should the relative risk priority of a particular hazard event impacting on a community be higher than or equal to 7, that community faces a potentially ***destructive*** risk with a high probability of occurrence, for which they are ***unprepared***. This combination equates to an **extremely high risk** and is a disaster in the making. For these **extremely high risks** you must prepare **urgent risk reduction interventions.**

High Risks *(4.5 ≤ Relative Risk Priority < 7)*: If the relative risk priority of a particular hazard event impacting on a community is between 4.5 and 7, the risks to which these communities are exposed are potentially destructive, but the community is modestly prepared for the hazard event occurrence. This combination equates to a **high risk** and you must prepare a combination of **risk reduction interventions** and **preparedness plans** for these risks.

Tolerable Risks *(2 ≤Relative Risk Priority < 4.5)*: Relative risk priorities of a particular hazard event impacting on a community between 2 and lower than 4.5 translate into an acceptable risk for a largely prepared community. This combination equates to a **tolerable risk** and you must prepare **preparedness plans** for these risks

Low Risks *(Relative Risk Priority < 2)*: Relative risk priorities of a particular hazard event impacting on a community lower than 2 translate into a very small risk for a largely prepared community. This combination equates to a **low risk** and **any hazard preparedness plans** are sufficient for these risks.

Hazard Type	Hazard			Vulnerability Indices					Managability									Managability Rating	Risk	Priority
	Score: 3=Likely 2=Normal 1=Unlikely	Score: 3=Extreme 2=Moderate 1=Insignificant	Hazard Rating	Score: 1=Not Vulnarable 2=Vunlerable 3=Extremely Vulnerable				Vulnerability Rating	Score: 1=Poor 2=Modest 3=Good											
	Probability	Severity		Societal	Economic	Environmental	Critical Facilities		Resource	Training	Early Warning Systems	Response	Existing Risk Reduction	Municipal Management	Public Participation	Legislative Framework	Awareness			
River/Flash flood	3	3	3.000	3	3	3	3	3.000	1	1	1	1	2	1	3	2	2	1.556	5.7857	high
Severe storms (strong winds, tornados)	3	3	3.000	2	2	1	2	1.750	1	1	1	1	1	1	1	1	1	1.000	5.25	high
Lightning/thunderstorm	3	3	3.000	3	1	3	3	2.500	1	1	1	1	1	1	3	2	2	1.444	5.1923	high
Groundwater pollution	3	3	3.000	3	3	3	1	2.500	1	1	1	1	2	1	3	2	2	1.556	4.8214	high
Illegal dumping	3	3	3.000	3	2	3	2	2.500	1	1	1	1	2	1	3	2	2	1.556	4.8214	high
Sewerage/drainage	3	3	3.000	3	2	3	2	2.500	1	1	1	1	2	1	3	2	2	1.556	4.8214	high
Water pollution	3	3	3.000	3	3	3	1	2.500	1	1	1	1	2	1	3	2	2	1.556	4.8214	high
Hazardous materials spillage	2	3	2.000	3	3	3	2	2.750	1	1	1	1	1	1	1	2	2	1.222	4.5	high
Veld fires	3	2	2.000	2	3	3	1	2.250	1	1	1	1	1	1	1	1	1	1.000	4.5	high
Drought	3	3	3.000	2	3	3	1	2.250	1	1	1	1	2	1	3	2	2	1.556	4.3393	tolerable
Stray animals	3	3	3.000	3	3	2	1	2.250	1	1	1	1	2	1	3	2	2	1.556	4.3393	tolerable
Roads Accidents	2	3	2.000	3	3	3	2	2.750	1	1	1	1	2	1	3	2	2	1.556	3.5357	tolerable
Cold Snap (snow)	3	3	3.000	2	2	1	2	1.750	1	1	1	1	2	1	3	2	2	1.556	3.375	tolerable
Fog	3	2	2.000	3	3	1	3	2.500	1	1	1	1	2	1	3	2	2	1.556	3.2143	tolerable
Air pollution	3	2	2.000	2	2	2	1	1.750	1	1	1	1	2	1	3	2	2	1.556	2.25	tolerable
Deforestation	3	2	2.000	2	1	2	2	1.750	1	1	1	1	2	1	3	2	2	1.556	2.25	tolerable
Erosion/Land degradation	3	2	2.000	2	1	2	2	1.750	1	1	1	1	2	1	3	2	2	1.556	2.25	tolerable
Landslide/mudflow	2	2	1.333	2	2	3	2	2.250	1	1	1	1	2	1	3	2	2	1.556	1.9286	low
Human disease	3	3	3.000	3	2	1	1	1.750	3	3	2	3	3	3	3	2	3	2.778	1.89	low
Water table flood	2	2	1.333	1	1	2	1	1.250	1	1	1	1	2	1	3	2	2	1.556	1.0714	low
Earthquake/Ground Motion	1	2	0.667	2	2	2	3	2.250	1	1	1	1	2	1	3	2	2	1.556	0.9643	low
Desertification	1	2	0.667	2	1	2	2	1.750	1	1	1	1	2	1	3	2	2	1.556	0.75	low
Heat wave	1	2	0.667	2	1	1	1	1.250	1	1	1	1	2	1	3	2	2	1.556	0.5357	low

Table 8: Risk Prioritisation for the Alfred Nzo District Municipality

Total Risk Maps

The total vulnerability, hazard and risk maps of Alfred Nzo are illustrated in maps 21 to 23 of the Risk Assessment Report. The vulnerability maps include the total societal, environmental, economic and critical facilities vulnerability, which were overlaid and recalculated to produce the total vulnerability map.

The data used to create these maps was taken from ENPAT, RAVA, StatSA and from the municipality. All the data is represented in separate maps preceding this section. The following maps were created using the data from the previous maps by using all the information and overlaying it onto one map. The weighted sum of all the hazards and vulnerabilities were calculated by the mapping software and the results were divided into three classes (i.e. least to most vulnerable).

For example, the total environmental vulnerability map can be calculated by overlaying the following layers and calculating the weighted sum:

Sensitive areas + conservation areas + eroded areas = Total environmental vulnerability

The results are thus based on the amount of GIS data available at the time and will therefore change if more data is added or removed from the calculation. Due to the lack of data, the situation in reality may differ from the situation indicated on the map.

Map 2, **Map 3** and
Map 4 indicates the total aggregated hazard, vulnerability and risk, respectively for ALFRED NZO DM.
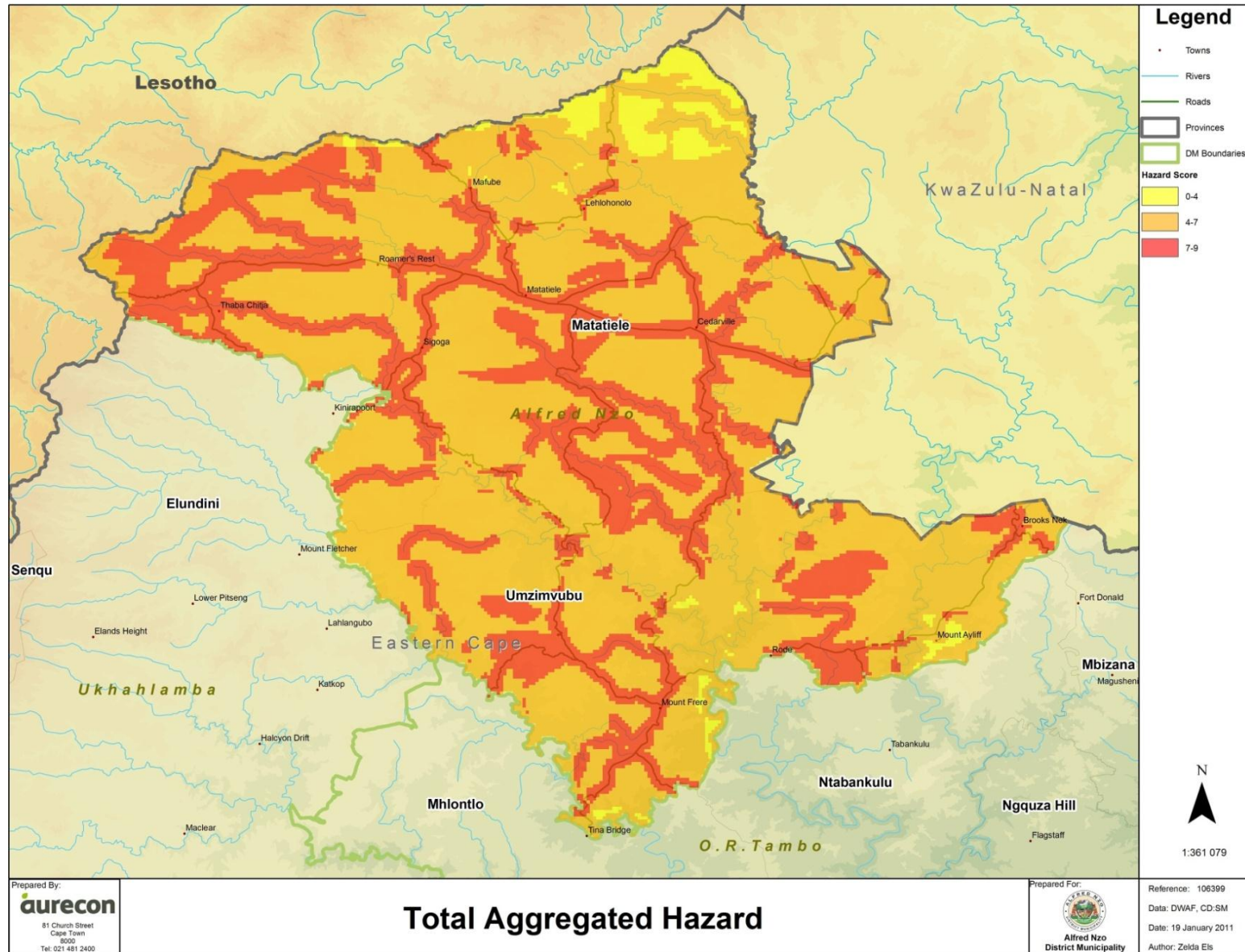
Map 2: Total Aggregated Hazard
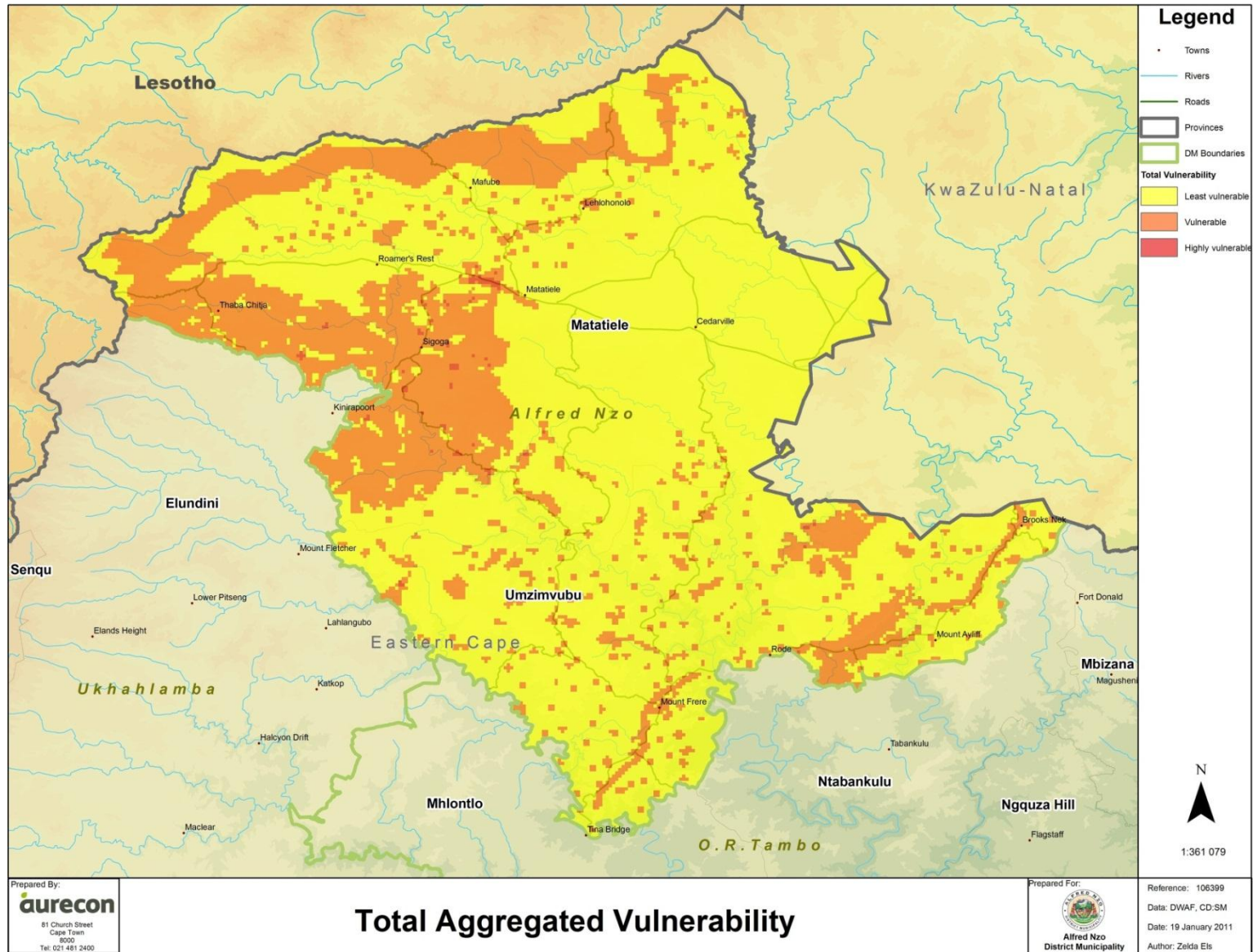
Map 3: Total Vulnerability
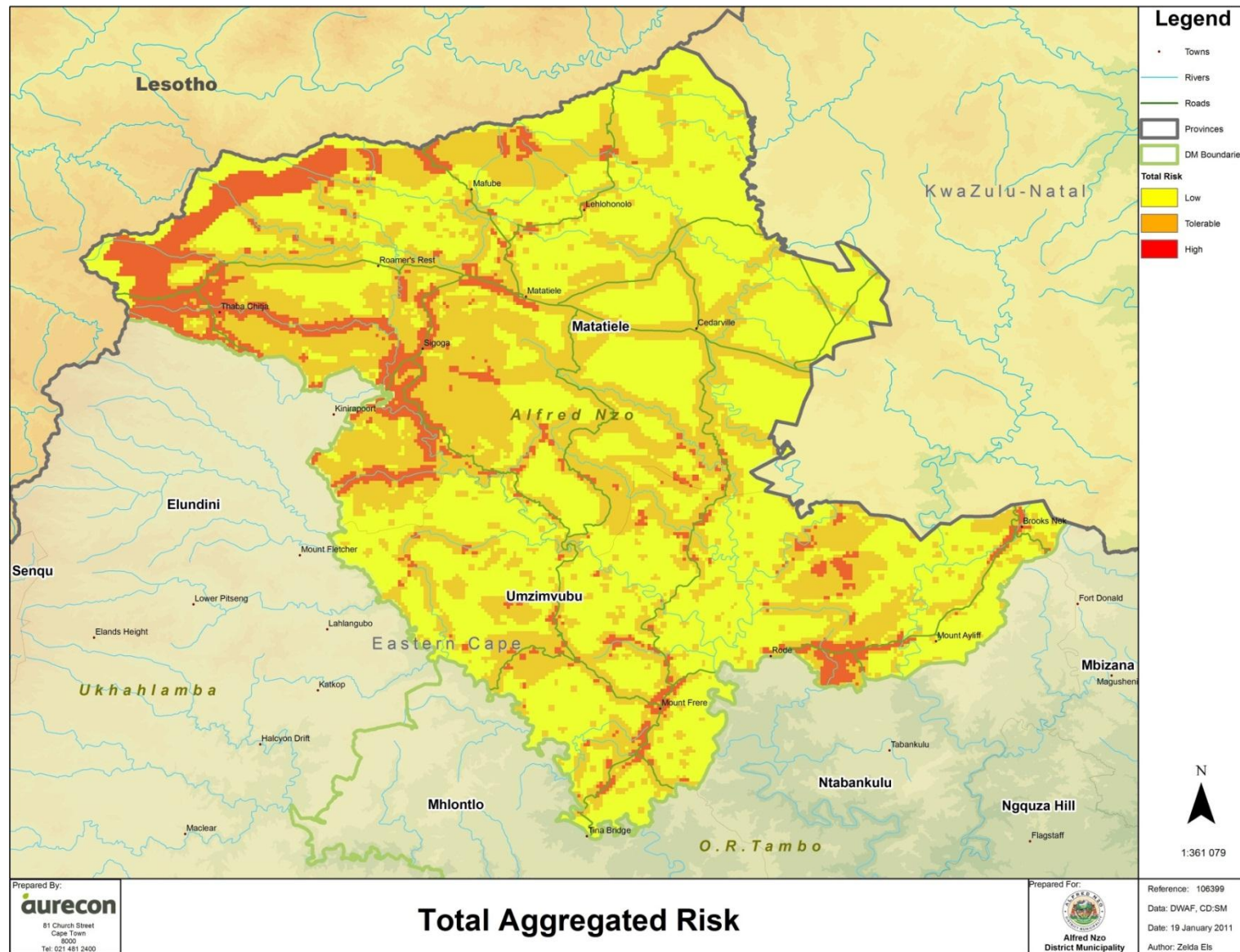
Map 4: Total Risk

Risk Summary

In this section the results of the risk assessment conducted within the Alfred Nzo District Municipality are summarised.

The table below provides a district-wide view of which hazards were found to be most prevalent within the district, influencing the majority of local municipalities.

Table 9: ANDM Common Hazards

Natural Hazards	
Hydro Meteorological Hazards	
Drought	Hail storms
Erosion	Severe storms
Fire	Violent wind
Flood	
Biological Hazards	
Swine Flu	Measles
Foot and Mouth	Rabies (Animals)
Flu	Rabies
HIV/AIDS	TB
Geological Hazards	
Earthquake	
Landslides	
Technological Hazards	
Sewerage and drainage Infrastructure failure	
Road accidents	
Illegal Dumping	
Hazardous material by road	
Industrial accidents	
Environmental hazards	
Air pollution	Soil contamination
	Water pollution

Key findings

The main hazards identified across the Alfred Nzo District Municipality include**:**

- Flash Floods
- Severe Storms
- Lightning/thunderstorm
- Groundwater pollution
- Illegal Dumping
- Sewerage/drainage
- Water pollution
- HazMat Spill
- Veldt Fires

The above lists illustrate the types of disasters that pose the highest risks within the area of the Alfred Nzo Municipality and their possible effects. The communities at risk can be derived from the risk lists, and are also shown in the risk assessment that was conducted for the area.

Summaries of the risks:

Groundwater Pollution
Groundwater pollution was highlighted as a hazard in all the municipalities. Poor sewerage treatment and sanitation have a negative impact on groundwater resources; both are common throughout the Alfred Nzo DM.

Illegal Dumping
The entire Alfred Nzo District is wrought with illegal dumping. Many households still have no refuse removal services and must rely on their own dump for this purpose. The poor road infrastructure limits access to these areas, thereby rendering these areas largely without any refuse removal services.

Severe Storms (Lightning/thunderstorm & Cold snaps)
Alfred Nzo is subject to such extreme weather and has in the past also been affected by tornadoes and cold snaps. Severe weather affects social and economic infrastructure as well as impacting the natural environment and sensitive ecosystems[1]. According to reports by ANDM, intensity and frequency of such events were relatively high between 1999 and 2005. Most of the events were not declared disasters but the District suffered tremendous damage to already lacking infrastructure and financial loss.

River/flash floods
Floods have been identified in both local municipalities as a hazard. People living along the low-lying areas along the rivers are mainly influenced by floods in the Municipality. During the consultative workshops flooding was highlighted as a concern within Matatiele Local Municipality. Riverine floods were identified in areas along the Kinira River to the northwest of the Alfred Nzo District Municipality and areas along the Umzimvubu River close to the town of Cedarville. Floods also occur in the town of Matatiele and the surrounding area. Water table floods have been indicated in the area between the towns of Matatiele and Uplands, along the length of the P604 road.

Sewerage/drainage failure
Sewerage problems have been highlighted as a major hazard throughout the Alfred Nzo DM. In terms of bulk sewer supply, the District is faced with many challenges. The failure and lack of sewerage infrastructure has contributed to the outbreak of various water-borne diseases in the past.

Water pollution
It is important to understand that the quantity and quality of both stagnant and flowing water within the water bodies of a catchment are directly affected by the land-use activity occurring within that catchment. Salinisation[2], eutrophication[3], erosion and sedimentation[4] also play huge roles in affecting water quality. These processes are usually caused by the increase in human populations resulting in an increase in industrial activities, urban sprawl, resource degradation and the loss of habitat. Urban wetlands, estuaries and rivers (also riparian vegetation) are particularly threatened by development, canalisation and the hardening of floodplains. Sources of water pollution include urban farming, mining, waste dumping and sewerage disposal.

Surface water pollution was identified as a hazard throughout the Alfred Nzo DM. The main causes of surface water pollution are urban farming, waste dumping and sewerage dumping which are all prevalent throughout the district. Due to the lack of refuse removal services most communities resort to dumping their refuse in rivers or on fields. Urban farming and inefficient sewerage infrastructure is also common in the district and contributes to the contamination of surface water resources.

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[1] Alfred Nzo DM Disaster Report
[2] Definition: The accumulation of soluble salts in soil or water so that they become unfit for their normal uses, such as growing plants or providing drinking.
[3] Definition: The process by which lakes and ponds become enriched with dissolved nutrients, resulting in increased growth of algae and other microscopic plants.
[4] Definition: The deposition or settling of soil particles suspended in water.

HazMat Transportation

Where ever hazardous materials are transported by road and rail, it poses a hazard, both to the population and to the environment. Spillage of hazardous materials can result in death or injury due to contact with toxic substances, resulting explosions and/or fires. Where spillage occurs in environmental sensitive areas, it can result in death of fauna and flora and can cause severe contamination of resources, such as groundwater and surface water. Areas dependant on groundwater sources (boreholes) is specifically vulnerable, as this may be the only water source for a community.

Veldt Fires

ANDM experiences strong winds in the winter months. This is also the time of the year when the grass is dry and the risk of veld fires increases, exacerbating the vulnerability of communities.

The winds, combined with the presence of dry grass in the municipal area, results in ravaging veld fires particularly in the Mount Frere, Mount Ayliff and surrounding areas.

4.2 The dynamic nature of disaster risk

Although the utmost care was taken to ensure that all hazards were identified and risks assessed, it must be noted that some unforeseen risks, new to the area, may have been omitted. Risks change over time, as does the vulnerability of the community. It is also important to note that Climate Change was not included as part of this assessment. It is expected that Climate Change will increase the severity and frequency of extreme weather events, such as drought and severe storms. It is recommended that this phenomenon be closely monitored during the next few years and assessed as part of future Disaster Risk studies.

4.3 Risk communication

The identification of risks and the description of such risks within official reports are of little help to the residents of the district if the information is not communicated to the relevant communities at risk so that they can be aware and prepared. Risk communication is an important part of disaster risk reduction and forms part of the information management and communication enabler from the National Disaster Management Framework (NDMF).

Risk communication is indicated as the responsibility of the Disaster Management Centre in the NDMF and will be a key performance area of the institutional capacity created for Disaster Management within the district. Lead departments for specific hazards will still remain responsible for risk communication within their specific fields of expertise.

Risk communication may include public awareness and preparedness campaigns, more detailed and applied education and training, or drills and exercises. Marketing and public relations can be implemented towards improving public awareness.

The results of this risk assessment forms a knowledge base from which risk communication materials can be produced.

Action: Risk communication responsibility will be assigned to a specific position within the Disaster Management Centre.

4.4 Gaps and recommendations

The goal of this disaster management plan is to reduce disaster risk. The risks identified within this chapter and in the more detailed risk assessment report will be addressed in the following chapters and will need to be addressed with the full attention of the institutional capacity defined in the previous chapter.

A key recommendation is that the risk profile of the district, as identified within this chapter and the more detailed risk assessment report, must be maintained and regularly updated with additional risk assessments. The risk profile of the district must also be actively communicated to communities at risk to enable them to reduce their own vulnerability.

5   KPA 3: DISASTER RISK REDUCTION

Disaster risk reduction involves focused activities to reduce vulnerability, increase capacity and resilience, and avoid or reduce hazards that may affect specific elements at risk.

Disaster risk reduction plans providing for prevention and mitigation strategies have been compiled based on best practice and capacity within the district.

5.1   Risk reduction process

The success of risk reduction efforts will rely heavily on the results of a thorough disaster risk assessment (hazard and vulnerability assessment). The completion of a detailed risk assessment is a prerequisite for this process. Community-based risk mapping and risk assessments can also provide valuable information to base risk reduction planning on.

Using the risk assessment, the first step in risk reduction will be to identify priority risks.

For each priority risk, the following process should be followed:

- Analyse the risk, through consultation if required
- Determine stakeholders who can influence the risk (hazard / vulnerability / capacity)
- Convene stakeholders meeting
- Determine primary and secondary responsibility on a consensus basis (this might already be in place – see Institutional Capacity chapter)
- Develop risk reduction strategy options in a participative manner
- Evaluate the developed risk reduction strategy options
- Decide on most viable risk reduction strategies and describe these in detailed project proposals.
- Submit project proposals to ANDMAF.
- Upon project approval from the ANDMAF, perform project initiation (if the project is within the mandate of the District it can be submitted to the IDP office at this stage for inclusion in the IDP process)
- Convene a project team
    - Appoint a project manager (from discipline with primary responsibility for the hazard, vulnerability or capacity)
    - Appoint an internal project facilitator / manager within the ANDMC
    - Confirm project team (Stakeholders)
    - Confirm project sponsor
    - Confirm project champion
- Perform project scoping:
    - Develop work breakdown structure
    - Determine milestones and objectives
    - Confirm critical path
    - Establish monitoring & evaluation mechanism
    - Determine budget required
- Project implementation
    - Implement, monitor & evaluate
    - Project review and change control
    - Project close-out

5.2 Risk reduction proposals for the Alfred Nzo Municipality

Risk reduction project proposals for priority risks are listed in the tables below. The Alfred Nzo District Disaster Management Guidelines expand on the definitions of the categories of risk reduction measures (left-hand-column) and how to take risk reduction project proposals from identification (as in the right-hand column) to detailed project plans. This process is summarised in the previous sub-section. It is important that these proposals are shared with the relevant planning and implementing agencies.

Disaster Risk Project Proposals: Fire

Risk Reduction Category	Risk Reduction Project Proposals	
Physical Planning Measures	1	Build fire stations
	2	Plan and provide for buffer zone between residential and vegetation areas
	3	Plan and provide access roads for fire trucks in informal settlements
	4	Plan to prevent Illegal electricity connections in informal settlements
	5	Plan fire services in line with new development needs
	6	Ensure that development of dwellings does not take place before adequate bulk services are provided
	7	Encourage and facilitate Integrated catchment management planning
Engineering & Construction Measures	8	Ensure compliance with fire regulations and by-laws
	9	Install fire alarms in buildings
	10	Plan and provide fire escape routes and doors
	11	Plan and provide fire breaks in high risk vegetation areas
	12	Provide suitable roads as evacuation routes in informal settlements
	13	Provide informal areas with fire-resistant materials
	14	Plan and develop fire early warning systems
	15	Provide additional fire hydrants
	16	Research and upgrading / improvement of firefighting equipment/ trucks/ hydrants
	17	Provide fire hydrants in informal settlements
	18	Install watch towers, fire breaks, fire extinguishers in forestry areas
	19	Improve the quality and provide appropriate of firefighting equipment at all levels
	20	Ensure that fire hydrant water supply is sufficient in higher lying areas

Risk Reduction Category	Risk Reduction Project Proposals	
Economic Measures	21	Provide for capital projects in municipal budget
	22	Provide funds for upgrading of fire equipment
	23	Fines for illegal electrical connections
	24	Implement program to decrease high risk housing
	25	Authorities to develop a project to make fire extinguishers more affordable for every household, as well as a means of making the maintenance thereof less expensive
	26	Rural areas property rebates for areas under conservation
	27	Action plans in place
	28	Reaction plan in place
Management & Institutional Measures	29	Train fire marshals for commercial/industrial complexes
	30	Appoint / train appropriate staff
	31	Conduct fire and evacuation drills
	32	Ensure evacuation doors are unlocked
	33	Running of programs for prevention of arson
	34	Maintenance program for fire extinguishing equipment
	35	Identify and procure appropriate equipment
	36	Structured and sustained fire-prevention inspections
	37	Cleaning of undergrowth around buildings
	38	Train and deploy fire fighting volunteers at fire stations and road works
	39	Identifying high risk fire areas (hotspots)
	40	Identify safer alternatives for cooking and lighting i.e. stoves, lamps etc
	41	Ensure correct storage of combustible materials
	42	Develop and implement maintenance programs for of access routes in high risk fire areas
	43	Train and develop fire response teams
	44	Training at all levels to improve the implementation of incident command system as a standard operating procedure

Risk Reduction Category	Risk Reduction Project Proposals	
	45	Develop a management policy for the sale of paraffin
	46	Establish and support Fire Protection Association
	47	Develop area fire management plans
	48	Refrain from using recycling cardboard containers for recycling of paper
	49	Revisit policy for evicting shack dweller
	50	Maintenance programme
Societal Measures	51	Develop fire evacuation procedures for commercial/industrial complexes
	52	Declare non-smoking areas
	53	Prohibit fires in high risk areas
	54	Conduct fire hazard awareness programs
	55	Conduct community awareness programs in communities
	56	Implement community based programs for the proper care/maintenance of electrical equipment
	57	Include fire prevention education in school curriculum
	58	Include disaster risk management in school curriculum
	59	Implement fire education, fire risk awareness, recruitment of volunteer fire fighters, social responsibility, ownership system e.g. hydrants

Disaster Risk Project Proposals: HazMat Incidents

Risk Reduction Category	Risk Reduction Project Proposals	
Physical Planning Measures	1	Zoning for MHI's (Building codes)
	2	Proactive hazmat classification of installations
	3	Proper planning into the placement of factories and plants
	4	Manage development around MHI's
	5	Limit population figures around MHI's
	6	Enforcement and evaluation of risk assessment for major hazardous installations
	7	Enforcement and evaluation of EIA's for MHI's
	8	Enforcement of proper labeling of chemicals and poisons (labels)
	9	Monitoring and restricting and managing routes for hazmat materials in transit (railways/roads)
	10	Safe packaging and storage to prevention of leakage and seepage of hazmat and poisons
	11	Specific parking areas for hazmat vehicles along the roadside
	12	Increased hazmat capabilities allocated to areas on main routes where hazmat freight vehicle parking areas are to be found
Engineering & Construction Measures	13	Enforcement of Construction needs to be determined by type of particulates being used and stored
	14	Identification of Containment sites and measures
	15	Ensure Vehicle Safety
	16	Plan Truck By-Passes around Central Business Districts
Economic Measures	17	Fines for non-compliance
	18	Awards to compliant companies
	19	Fines for not having correct signage when transporting hazmat
	20	Fines for not having correct paperwork when transporting hazmat
	21	Spiller pays fine structure for hazmat spillage, and enforcement thereof
	22	Polluter pays
	23	Local economic development, assistance to non-compliant small businesses to comply

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Compliance with storage and handling specifications
	25	Annual compliance certificate for hazmat/lpg coupled with an inspection, using of approved/certified service providers
	26	Declaration of what is being transported, and enforcing escorts for high risk cargo
	27	Informing of LM's what cargo is passing through it's boundaries, especially if alternate routes are used
	28	Regulation of overnight stops for trucks transporting hazmat
	29	Introduction of measures which regulate the times at which hazmat can be transported
	30	Spiller to use accredited/competent mop up teams
	31	Create capacity for regular site inspections
	32	Create capacity for regular Vehicle inspections
	33	Enforcing Registers of hazmat on the premises
	34	Increased monitoring by law enforcement (road/railway)
	35	Regular Training of rescue personnel and transport personnel (Drivers)in contact and handling of with hazmat
Management & Institutional Measures	36	Education campaign for local cellars and farmers who transport spirits as mixed loads.
	37	Identify and manage Nodal points of inspection ~ yard/ weighbridges/ destination
	38	Regulation of bulk sale of fuel
	39	Enforce Occupational Health and safety adherence
	40	Registration/compliance of all hazmat and hazardous material installations (databases)
	41	Identification and register of all MHI's / inspection and liasing per area.
	42	Enforcement of storage regulations
	43	Enforcement of AVCASA regulations for pesticides
	44	Shift from reactive to proactive measures
	45	Annual compliance certificate for hazmat/lpg coupled with an inspection, using of approved/certified service providers
	46	Effective communication of Hazmat / poisons requirements
	47	Operational plans/ and response teams that are trained and practiced at hazmat installation

Risk Reduction Category	Risk Reduction Project Proposals	
	48	Training exercise to improve response management skills
	49	Address lack of capacity at times of detours when passing small poor towns (Resource skills distribution)
	50	Monitoring and accreditation and registration of cleanup teams and disposal sites, and a contact database
	51	Enforcement of NEMA Section 30
	52	Enforcement of spiller pays regulation of using approved service providers
	53	Simplified coding system for Hazmat
	54	Promoting Cooperative governance between organs of state responsible for control of hazardous materials
	55	Simplifying recognition system of cargos to effect quicker and correct response in case of incident
Societal Measures	56	Community/individual training
	57	Regular Awareness published in news papers
	58	Education of farm workers how to handle/store hazmat/ poisons/ protective clothing
	59	Information sessions on pesticide poisonings on farms / misuse / misapplication
	60	Notification of times of "in-line" dosage of pesticides and poisonings
	61	Early warning system for spills/exposures.
	62	Community based training/awareness

Disaster Risk Project Proposals: Flooding

Risk Reduction Category		Risk Reduction Project Proposals
Physical Planning Measures	1	The enforcement of Environmental Impact Assessment with all development projects (EIA)
	2	Plan for the Upgrading of existing infrastructure to cope with new developments.
	3	Identification and plotting of vacant high risk flood areas for future reference and avoid human settlements in such areas
	4	Avoid development and settling of communities along rivers and within the flood line
	5	Apply and update Zoning regulations regularly
	6	Identify alternate suitable venues/facilities for emergency services
	7	Apply Low intensity land use in 1:100 flood line areas
	8	Study and understand the impact of climate change on development
	9	Signage
	10	Asset management
	11	Maintenance
Engineering & Construction Measures	12	Study EIA to inform construction and building measures
	13	Identifiable flood measuring and early warning systems
	14	Plan and Build retention dams to reduce risk of flooding
	15	Restore and maintain water catchment areas
	16	Build retaining walls to protect buildings
	17	Improve and upgrade storm water reticulation systems regularly
	18	Develop and maintain Early warning systems
	19	Develop and maintain sustained cleaning programs for rivers and dams
	20	Plan bigger capacity dams to regulate flow of water
	21	Implement programs and measures to prevent erosion
	22	Plan and erect Visible warning signs in low lying areas
Economic Measures	23	Provide for disaster relief funds

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Adequate provision for the for maintenance of storm water systems
	25	Farmers developing areas for agricultural use in flood prone areas should pay increases insurance on crops in those areas
Management & Institutional Measures	26	Plan for the support for affected communities
	27	Develop and maintain flood Emergency response teams
	28	Develop and supervise Maintenance programs
	29	Ensure that SOP for disasters are developed and maintained
	30	Facilitate Strategic planning of resources to cover all areas during emergencies
	31	Plan and ensure Strategic distribution of disaster management resources across area
	32	Ensure the provision of Emergency flood kits
	33	Mutual aid agreements to be established for relief and response
	34	More command centre vehicles
	35	Quality assessments
	36	Asset management
Societal Measures	37	Develop Awareness training and workshops in high risk areas
	38	Develop and inform communities of response actions to early warning systems
	39	Ensure Coordination and cooperation with NGO's
	40	Community awareness
	41	Early warning systems: include indigenous knowledge for early warnings

Disaster Risk Project Proposals: Illegal dumping

Risk Reduction Category		Risk Reduction Project Proposals
Physical Planning Measures	1	Plan adequate waste management facilities
	2	Plan easily accessible public drop-off facilities
	3	Establish and maintain an Integrated Waste Management Plan
Engineering & Construction Measures	4	Build and maintain solid waste management facilities
	5	Erect signage at illegal dumping hotspots
	6	Provide refuse bins or skips at hotspots or at alternative easily accessible sites, inform communities
	7	Block access to illegal dumping areas
Economic Measures	8	Encourage waste recycling for money
	9	Establish waste recycling drop-off points or mobile recycling collection vehicles where community members and informal recyclable waste collectors can drop off recyclable waste and receive payment.
	10	Establish and enforce fines for illegal dumping
	11	Force perpetrators to rehabilitate illegal dumping sites
Management & Institutional Measures	12	Law enforcement and investigation of illegal dumping
	13	Ensure awareness of fines
	14	Improve refuse removal services
	15	Identify illegal dumping hotspots, waste origins and main perpetrators
	16	Implement and review Integrated Waste Management Plan
	17	Establish illegal dumping task team to focus on the problem for a defined period of time
	18	Provide ad-hoc solid waste removal service and encourage public and commercial use of the service for instances when large amounts of refuse is generated outside normal collection times
	19	Establish illegal dumping "hotline" for public to report dumping
Societal Measures	20	Raise public awareness of dangers of illegal dumping
	21	Awareness: Link illegal dumping with pollution and spreading of disease
	22	Awareness: Link illegal dumping with stormwater blockage and flooding
	23	Encourage awareness and adoption of waste minimization, recycling and re-use

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Encourage communities to identify illegal dumping hotspots
	25	Organise clean-up days, where local authority joins community in rehabilitating prioritized illegal dumping hot-spots
	26	Competition among schools to limit littering in their surrounding areas / access roads
	27	Anti-littering campaign
	28	Education on public and community health impacts of littering and illegal dumping
	29	Encourage community pride in clean neighborhoods

Disaster Risk Project Proposals: Storms / Severe Weather

Risk Reduction Category	Risk Reduction Project Proposals	
Physical Planning Measures	1	Enforcing of building codes to ensure buildings can withstand severe weather prevalent in area
	2	Considering weather conditions and storm / severe weather occurrence in development planning, zoning and land-use management.
	3	Identification and plotting of vacant high risk areas for future reference to avoid human settlements in such areas
	4	Retro-fitting of vulnerable buildings to ensure resilience to storms and severe weather
	5	Implement storm attenuation measures such as windbreaks in high risk areas.
	6	Identify alternate suitable venues/facilities for emergency services
	7	Study and understand the impact of climate change on development
Engineering & Construction Measures	8	Develop and maintain severe weather early warning systems
	9	Lightning conductors on roofs in high risk areas
	10	Implement robust construction methods according to building codes and known severe weather occurrence
	11	Provide robust community facilities that are less vulnerable to severe weather and can be used as temporary emergency shelter
	12	Ensure known severe weather occurrences are considered in all municipal infrastructure construction projects
Economic Measures	13	Pro-active maintenance
	14	Adequate provision for the maintenance buildings to reduce vulnerability to severe weather
	15	Procure insurance on important infrastructure that can be damaged by severe weather
	16	Institute and enforce fines or other punitive measures for non-adherence to building codes
Management & Institutional Measures	17	Plan for the support of affected communities
	18	Develop and maintain storm damage and search & rescue emergency response teams
	19	Develop and implement preventative maintenance programs
	20	Ensure that standard operating procedures for disasters are developed and maintained
	21	Facilitate strategic planning of resources to cover all areas during emergencies
	22	Plan and ensure strategic distribution of disaster management resources across area
	23	Educate building inspectors and infrastructure maintenance teams on known severe weather threats

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Mutual aid agreements to be established for relief and response
	25	Ensure availability of mobile command vehicles
	26	Identifying hotspots / high risk areas – develop database of severe weather events and damage / impact experienced.
Societal Measures	27	Develop Awareness training and workshops in high risk areas
	28	Develop and inform communities of response actions to early warning systems
	29	Ensure Coordination and cooperation with NGO's
	30	Community awareness
	31	Collect community-based information on past severe weather events and make publicly available for school and research projects.

Disaster Risk Project Proposals: Ground water pollution

Risk Reduction Category	Risk Reduction Project Proposals	
Physical Planning Measures	1.	Reduce density of pi latrines (requires reducing the density of informal settlements)
Engineering & Construction Measures	2.	Line VIP pits
	3.	Pit content removal or chemical treatment (Issue of affordability, chemicals may also affect ground water)
	4.	Lining of graves
	5.	Urinal diversion / bio digesters / anaerobic process. Left with fertilizer
Management & Institutional Measures	6.	Law enforcement and monitoring and investigation of illegal dumping
	7.	Ground Water Pollution Management Plan
	8.	Improve solid waste removal services
Societal Measures	9.	Education (understanding of ground water pollution)

Disaster Risk Project Proposals: Sewage/Drainage

Risk Reduction Category	Risk Reduction Project Proposals
Engineering & Construction Measures	1. Build bigger diameter pipes under low-water bridges and ensure proper design
	2. Treat waste before discharging
Economic Measures	3. Budget for infrastructure and maintenance
Management & Institutional Measures	1. Keep rivers clean and cleared (flotsam can block pipes under bridges)
	2. Outsource cleaning or waste treatment services
Societal Measures	3. Education (understanding of sanitation and hygiene)

The risk-specific risk reduction project proposals mentioned in the table above will, if properly planned and implemented, contribute towards the reduction of disaster risk within the Alfred Nzo District.

The risk reduction plans outlined here which are implementable must be considered for inclusion within the IDP projects of the municipality and if included must be budgeted for in terms of the operating and capital budgets of the municipality. Each project should be evaluated to determine which municipal department can lead its implementation. When a lead department is assigned through consensus in the ANDMAF, such a lead department must manage all planning and budgeting processes for said project. The Disaster Management department of the Alfred Nzo District Municipality must assist in this regard.

Where the proposed project falls outside the mandate of the municipality, the municipality should establish a lobbying and monitoring mechanism to motivate the need for the project in the correct governmental or societal sector and to track progress on the project. It is anticipated that many projects will need to be executed on a partnership level, and in such cases the department of the municipality responsible for service delivery partnerships should take the lead with support from the Alfred Nzo Disaster Management Centre.

5.3 Risk reduction capacity for the Alfred Nzo Municipality

The organisational structure for risk reduction within the municipality includes Alfred Nzo Disaster Management, Disaster Management representatives of each local municipality within the District, the Alfred Nzo District Disaster Management Advisory Forum, the top management team of the Alfred Nzo District, the focal points for disaster management within municipal departments within the municipality, departmental planning groups, risk reduction project teams and preparedness planning groups

The total structure of the municipality, with every member of personnel and every resource should also be committed to disaster risk reduction.

On-going capacity building programmes will be required to ensure the availability of adequate capacity for risk reduction.

5.4 Gaps and recommendations

The implementation of the project proposals contained within this chapter will in all likelihood require more project management capacity and personnel than what is available at this time. Even with active involvement from other departments and agencies who address the risk reduction projects that fall within their mandates, the Alfred Nzo District would need to invest in additional human capital to actively pursue risk reduction and mitigation within the district.

Interim measures could be to prioritise only specific aspects for risk reduction, and to implement only very specifically targeted risk reduction interventions, tailoring risk reduction projects to existing capacity.

This concludes the discussion on Risk Reduction (KPA 3). The next section of the plan is committed to Response and Recovery (KPA 4).

6 KPA 4: RESPONSE AND RECOVERY

Response and recovery is concerned with ensuring effective and appropriate disaster response and recovery by:

- implementing a uniform approach to the dissemination of early warnings
- averting or reducing the potential impact in respect of personal injury, health, loss of life, property, infrastructure, environments and government services
- implementing immediate integrated and appropriate response and relief measures when significant events or disasters occur or are threatening to occur
- implementing all rehabilitation and reconstruction strategies following a disaster in an integrated and developmental manner.

The first part of this section will focus on preparedness planning for priority risks, and the second part will describe an any-hazard response procedure. In the final part of the section, the declaration and classification of a disaster will be discussed

6.1 Preparedness Plans of the Alfred Nzo District Municipality

Preparedness plans are compiled in order to enable fast and efficient response to predicted and unpredicted emergencies. Preparedness plans should be compiled for known priority risks.

Risk-specific preparedness plan proposals for priority risks are listed in the tables below. The risk-specific preparedness plans have been compiled based on the capacity assessment within the district as well as best practice.

6.2 Disaster Preparedness Plans

Disaster Preparedness Plan: Fire Structural fire and Veld fire

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
1	Inform Fire Services	First person to notice incident	Local authority fire call centre	Immediately	To respond resources
2	Respond resources	Fire Services Control Centre	Local authority fire call centre	Immediately	To limit impact
3	For facilities: Activate facility fire teams	Facility manager or as per plan	Facility manager's office	Immediately when the incident is reported	To contain situation
4	For facilities: Fire team to extinguish small fires	Trained fire team	At the point of incident	ASAP	To prevent / minimise the chance of the fire spreading
5	For facilities: Evacuate facility	Evacuation teams / SAPS / Fire	At facility	ASAP	To prevent injury/deaths
6	For facilities: Check the name list of all evacuated people	Trained control team	At specific control points (assembly areas) outside the building / facility	ASAP after evacuation	To ensure everyone is out of the building / facility
7	Assess Situation	First Responders on scene	At scene	On arrival	To determine needs
8	Request additional resources	First Responders on scene	From scene through local authority fire call centre	After assessment	To manage situation
9	Implement appropriate emergency intervention	First responders on scene	At scene	On arrival	To protect life and property and neutralize any impacting hazard
10	Setup command post	Senior officer on site	Safe area on site	Immediately	To plan and implement correct immediate responses
11	Establish incident management plan per service	Services on scene	On scene	ASAP	To effect appropriate immediate response and relief actions
12	Assess impact	Services on scene	On scene	Immediately	To determine future relief and recovery actions
13	Notify Disaster Management team if major incident	Services on scene / Senior officer on scene	From command post	As soon as required	To facilitate multidisciplinary co-ordination and major incident management support

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
14	Crowd and traffic control	SAPS, Traffic, Law Enforcement, Private security if appropriate	Around scene	Immediately	To control people and traffic at the incident
15	Assemble joint incident management team	Senior representatives of all services on scene	At appropriate single command post, in case of fire incident preferably at fire command post	Immediately once more than one service working on scene	To ensure multidisciplinary coordination that enables effective response and relief
16	Design joint incident action plan	Joint incident management team	Command post / FCP	ASAP	To manage situation
17	Implement joint plan of action	Joint incident management team	On scene	ASAP	To normalize situation
18	Seek missing people	Search team/ Fire/ EMS/ SAPS	Through the whole building / facility / affected area	ASAP once missing people have been reported	To rescue missing persons
19	Treat injured people	Trained first aid team/ EMS / Fire	At the first aid post / triage area	Immediately when injury is reported	To treat injuries
20	Inform next of kin of injured people	Facility manager / SAPS / EMS	At the facility manager / director's office / from scene	Immediately when injury is reported	To inform family members of the conditions of the injured relative and how to reach them
21	Monitor actions	Joint incident management team	On scene	Ongoing during incident management	To ensure effective planning and execution
22	Area /Facility clean-up	All services	On site	On completion of rescue/ immediate emergency actions	To prevent further incidents/ environmental impacts
23	On-site inspection	EMS/ Traffic/ Fire / SAPS forensics	On scene	On completion of emergency actions	To ensure site is safe for use again
24	Stand down	All services	On scene	Once site is declared safe	To normalize services operations
25	De- brief	All role-players	Pre-determined venue	Within one week	To evaluate actions and improve future response
26	Update plans and procedures	All role-players	At service HQ	ASAP	Effective service delivery

Additional hazard-specific contingency options could include:

- Strengthen fire fighting capacity and capability in high risk areas;

- Implement environmental monitoring stations;
- Improve acquisition and activation of fire fighting resources;
- Enhance community-level teams with fire fighting training and basic equipment to act as first responders. Determine the need for emergency shelter;
- Determine the need for emergency sustenance and transport.

Disaster Preparedness Plan: Flooding Floods

	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
1	Notify response teams (Municipal engineering, SAPS, Fire & Rescue, EMS, Dept Water Affairs, SAWS)	Local Authority	24 Hour Call centre	Immediately	To activate response teams
2	Activate response teams	District Disaster Management and Services Standby Teams	From locations/ standby positions	Immediately	To assess impact and actions required
3	Identify affected and damaged area	District Disaster Management and Services Standby Teams	In affected area	Immediately	To determine the extent of the damage in order to assess the affected area
4	Determine impact	District Disaster Management and Services Standby Teams	At affected area	Immediately	To determine the actions and level of response required
5	Implement appropriate emergency intervention	First responders on scene	At scene	On arrival	To protect life and property and neutralize any impacting hazard
6	Activate JOC	Head of DMC and senior management of all services / jurisdictions involved.	DMC or alternative	Immediately if major flooding incident	To plan strategically and coordinate multidisciplinary response, relief and rehabilitation
7	Assess information	All services	JOC	Immediately	To plan actions
8	Design plan of action	DM Co-ordination Team / JOC Team	JOC	After assessment	To facilitate response and relief
9	Implement response actions	District Disaster Management Team, SANDF, SAPS, EMS	Affected area	ASAP	To prevent injury / mortality and to provide basic needs / services
10	Provide relief	Relevant Stakeholders	At affected area / relief centre	After assessment	To minimize impact
11	Mopping up	Relevant Stakeholders	Affected area	ASAP	To normalize community

	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
12	Assess possibility of further flooding	District Disaster Management Team, SAWS	Entire area	Immediately	To minimize and/or prevent further disruption / damage
13	Issue early warning to areas vulnerable to further flooding	District Disaster Management Team, SAWS	Vulnerable areas	Immediately	To minimize and/or prevent further disruption / damage
14	Institute recovery measures	PDMC, Treasury, Relevant Departments	JOC	Once situation is under control	To restore normal activities in area
15	Road closures	Municipality / Prov Traffic	On Site	ASAP	To prevent loss of life and property
16	Communication with population of affected areas	Municipality / Media / Disaster Management / SAPS	On-site media liaison point / Media Centre close to JOC	ASAP	To prevent loss of life and property though public communication
17	Arrange temporary accommodation	Municipality / Social services/ NGO's	Available venues	When needed	To provide temporary accommodation – emergency shelter
18	Organize medical search parties	EMS / Fire & Rescue	On site	ASAP if people reported missing / unaccounted for	To treat medical cases
19	Flood management	Department of Water Affairs	On site and downstream	ASAP	To manage the effects of the flood
20	Rapid initial impact assessment	Municipal engineer and Provincial roads engineer	In affected area	Once flooding has subsided, if infrastructure damage suspected	To establish impact and immediate required repair to infrastructure as well as assistance required from province / national
21	Prioritize, plan and implement emergency repairs to infrastructure	Infrastructure owner	Areas with damaged infrastructure	ASAP – depending on prioritization and available resources	To restore critical and essential services
22	Verification of impact assessment	Province / NDMC / Contracted impact assessment team	Areas with damaged infrastructure	ASAP after rapid initial impact assessment	To quantify and verify infrastructure damage and repair / replacement cost in monetary terms

Additional hazard-specific contingency options could include:
- Mobilising swift water rescue capacity;
- Mass evacuation;
- Monitoring for water-borne diseases;
- Determine the need for emergency shelter;
- Determine the need for emergency sustenance and transport.

Disaster Preparedness Plan: Hazardous Materials Incidents

	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
1	Notify Fire Dept / SAPS	Member of public or official observing incident 1st person on scene	On site - safe distance from incident	ASAP	To action response
2	Notify Hazmat team and Fire/ Local, Prov Traffic/ EMS / SAPS / Transnet	Emergency call centre / Fire dispatcher	Call centre	ASAP	To activate response
3	Identify type of hazmat	Responding agencies / Hazmat technician	On site	ASAP	To determine appropriate response
4	Identification of affected area	Responding agencies / Hazmat technician	On site	ASAP	To determine appropriate response
5	Assess and set up on-site command centre	Hazmat team	On site	Immediately	Co-ordination
6	Removal of hazardous material	Hazmat team e.g. within the fire department or contractor	On site	ASAP	To increase the safety of the area
7	In case of rail, notify Transnet	Fire dispatcher	Call centre	ASAP	To activate response
8	Assess the situation	Hazmat crew	On site (at a safe distance)	Once on scene	To facilitate plan of action, and assess situation
9	Saving of lives	Hazmat crew /primary respondent	On site	ASAP	To save lives
10	Secure the area	Traffic/ SAPS / Spoornet	On site	Once on scene	Personnel and public and environmental safety
11	Evacuation	SAPS / Fire / Traffic	On site	Immediately once determined necessary	To protect life
12	Command vehicle / Establish incident management team	Fire dept dispatcher / Fire Dept / senior fire officer on duty	On site	Once area layout is established	To facilitate coordination / draw up a plan of action
13	Deploy contaminant specialist	Spoornet or transport company	On site	After area is secured	To ensure correct measures are taken
14	Stopping leakage, if any	Hazmat crew	On site	ASAP	To stop further leakage
15	Containment of spill	Hazmat crew	On site	ASAP	To contain spill

	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
16	Activate cleanup specialist	Command vehicle / incident management team	On site	If extent of incident requires it	To clean up properly
17	Notify DWAF	Command vehicle / incident management team	Command vehicle / incident management team	ASAP	To analyze water quality
18	Notify and caution downstream Water users association / Agricultural unions/ Local / District and Neighbouring Municipalities	Command vehicle / incident management team	From site (via control centres)	Once nature of spill confirmed	To prevent usage of affected water
19	Notify DEA	Command vehicle / incident management team	From site (via control centres)	Once nature of spill confirmed	Analyze water quality
20	Notify Nature Conservation	Command vehicle / incident management team	From site (via control centres)	Once nature of spill confirmed	Analyze water quality
21	Re-assessment	Command vehicle / incident management team	On site	Regularly during incident management	To determine effectiveness and appropriateness of current response
22	Mobilize cleanup specialist. If rail – Transnet recovery unit	Command vehicle / incident management team	On site	If extent of incident requires it	Final cleanup
23	Incident stand down	Command vehicle / incident management team	On site	Once situation normalized and under control	To close incident and restore normal operations
24	On site Debriefing	Command vehicle / incident management team	On site	After stand-down	Compilation of detailed incident report.
25	Final De-briefing	Incident Management Team	Appropriate meeting venue	Within 1 week of incident	To learn from mistakes, update plans
26	Follow up testing of soil and water	DEA	In situ, follow ups after the incident	As required	Follow up studies

Disaster Preparedness Plan: Illegal dumping

	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
1	Report illegal dumping	Public / Officials	From affected area	Upon observing dumping	To notify relevant department
2	Investigate dumping	Law enforcement	In affected area	Upon receiving notification	To determine origin and perpetrator(s)
3	Assess health risk as result of dumping	Environmental Health	In affected area	Upon receiving notification	To determine whether immediate action is required
4	Fine perpetrator	Law enforcement	Perpetrator's address	Upon identifying perpetrator	To discourage illegal dumping
5	Rehabilitate affected area	Solid waste / Land owner / Perpetrator	In affected area	Within 1 day if hazardous / medical waste Otherwise within 5 working days	To restore area and discourage further dumping
6	Record case and actions taken	Solid waste	Municipal offices	Upon receiving notification	To create management information and establish trends

Disaster Preparedness Plan: Storms / Severe Weather Storms

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
1	Notify response teams (Municipal engineering, SAPS, Fire & Rescue, EMS, Dept Water Affairs, SAWS)	Local Authority	24 Hour Call centre	Immediately	To activate response teams
2	Activate response teams	District Disaster Management and Services Standby Teams	From locations/ standby positions	Immediately	To assess impact and actions required
3	Identify affected and damaged area	District Disaster Management and Services Standby Teams	In affected area	Immediately	To determine the extent of the damage in order to assess the affected area
4	Determine impact	District Disaster Management and Services Standby Teams	At affected area	Immediately	To determine the actions and level of response required
5	Implement appropriate emergency intervention	First responders on scene	At scene	On arrival	To protect life and property and neutralize any impacting hazard
6	Activate JOC	Head of DMC and senior management of all services / jurisdictions involved.	DMC or alternative	Immediately if major flooding incident	To plan strategically and coordinate multidisciplinary response, relief and rehabilitation
7	Assess information	All services	JOC	Immediately	To plan actions
8	Design plan of action	DM Co-ordination Team / JOC Team	JOC	After assessment	To facilitate response and relief
9	Implement response actions	District Disaster Management Team, SANDF, SAPS, EMS	Affected area	ASAP	To prevent injury / mortality and to provide basic needs / services
10	Provide relief	Relevant Stakeholders	At affected area / relief centre	After assessment	To minimize impact
11	Mopping up	Relevant Stakeholders	Affected area	ASAP	To normalize community
12	Assess possibility of further damage	District Disaster Management Team, SAWS	Entire area	Immediately	To minimize and/or prevent further disruption / damage

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
13	Issue early warning to areas vulnerable to further damage	District Disaster Management Team, SAWS	Vulnerable areas	Immediately	To minimize and/or prevent further disruption / damage
14	Institute recovery measures	PDMC, Treasury, Relevant Departments	JOC	Once situation is under control	To restore normal activities in area
15	Road closures	Municipality / Prov Traffic	On Site	ASAP	To prevent loss of life and property
16	Communication with population of affected areas	Municipality / Media / Disaster Management / SAPS	On-site media liaison point / Media Centre close to JOC	ASAP	To prevent loss of life and property though public communication
17	Arrange temporary accommodation	Municipality / Social services/ NGO's	Available venues	When needed	To provide temporary accommodation – emergency shelter
18	Organize medical search parties	EMS / Fire & Rescue	On site	ASAP if people reported missing / unaccounted for	To treat medical cases
19	Rapid initial impact assessment	Municipal engineer and Provincial roads engineer	In affected area	Once storm has passed, if infrastructure damage suspected	To establish impact and immediate required repair to infrastructure as well as assistance required from province / national
20	Prioritize, plan and implement emergency repairs to infrastructure	Infrastructure owner	Areas with damaged infrastructure	ASAP – depending on prioritization and available resources	To restore critical and essential services
21	Verification of impact assessment	Province / NDMC / Contracted impact assessment team	Areas with damaged infrastructure	ASAP after rapid initial impact assessment	To quantify and verify infrastructure damage and repair / replacement cost in monetary terms

Additional hazard-specific contingency options could include:

- Mobilise resources to repair structural damage to critical infrastructure
- Mobilise urban / rural search and rescue capacity;
- Determine the need for emergency shelter;
- Determine the need for emergency sustenance and transport.

Disaster Preparedness Plan: Water Pollution

	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
1	Report water pollution	Public / Officials	From affected area	Upon observing pollution	To notify relevant department
2	Investigate pollution, identify source, duration, type and volume	Law enforcement	In affected area	Upon receiving notification	To determine origin and perpetrator(s)
3	Assess health risk as result of pollution	Environmental Health/Water Affairs	In affected area	Upon receiving notification	To determine whether immediate action is required
4	Fine perpetrator	Law enforcement	Perpetrator's address	Upon identifying perpetrator	To discourage illegal dumping
5	Stop further pollution and further distribution of polluted water	Law enforcement	Affected area	Upon receiving notification	To stop further polluting effects and spread of possible dangerous impacts thereof
6	Rehabilitate affected area	Solid waste / Land owner / Perpetrator	In affected area	Within 1 day if hazardous / medical waste Otherwise within 5 working days	To restore area and discourage further polluting
7	Record case and actions taken	Solid waste	Municipal offices	Upon receiving notification	To create management information and establish trends

6.3 Preparedness capacity for the Alfred Nzo District Municipality

The organisational structure for preparedness within the municipality includes Alfred Nzo Disaster Management, Disaster Management representatives of each local municipality within the District, the Disaster Management Advisory Forum, the top management team of the Alfred Nzo Municipality, the focal points for disaster management within municipal departments within the municipality, departmental planning groups, preparedness planning groups, Joint Response & Relief Management Teams, Recovery & Rehabilitation Project Teams, and the Alfred Nzo Disaster Management Communications Centre.

The total structure of the municipality, with every member of personnel and every resource can potentially form part of preparedness capacity.

Ongoing capacity building programmes will be required to ensure the availability of adequate capacity for disaster preparedness.

The Alfred Nzo Disaster Management Communications Centre is responsible for the operational procedures associated with day-to-day operational response to emergencies by municipal departments.

The Alfred Nzo Disaster Management Communications Centre and the Alfred Nzo top management team are jointly responsible for the emergency management policy framework and organisation that will be utilized to mitigate any significant emergency or disaster affecting the municipality.

6.4 Gaps and recommendations

The main gaps confronting the District within the preparedness arena relates to the number of personnel available for standby duties and the communication and monitoring facilities available to the district:

- The establishment of capacity to have a first and second-call person on duty at all times without exceeding the restrictions on working and standby hours contained in the basic conditions of employment act is core to ensuring the preparedness of the district.
- The level of preparedness will also depend on training and experiential learning during operations and exercises.

The following recommendations can be made at this point:

- The district will be well-advised to establish a 24-hour monitoring and communications centre that can monitor emergency and essential services' communications and early warning information systems and identify developing emergencies and disasters so that appropriate response can be activated and deployed.

6.5 Any-hazard Response Procedure

During response and recovery operations the relevant disaster preparedness plans of the municipality will be executed by disaster and emergency management structures.

The following procedure will be implemented for response to any type of hazard impact or disaster. The reason for this any-hazard approach is that there are many common response activities that exist within the response required to different hazards, as illustrated in Figure 12.
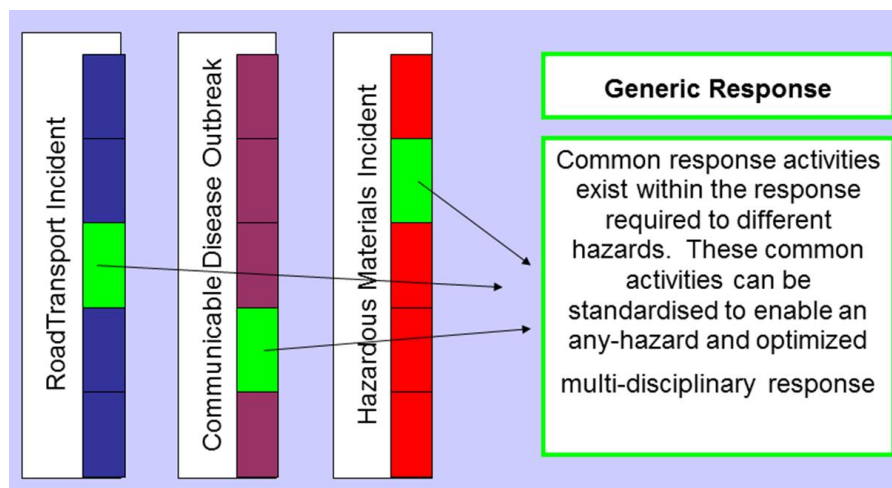

Figure 13: Reason for any-Hazard response procedure

During Disaster Response the Unified Command approach will be implemented. The basic steps and actions of the response and relief management procedure are summarised below.

The Any-Hazard Response Management Procedure consists of 10 steps, being:
1. Notification / Activation
2. Rapid Initial Assessment
3. Establishing a response structure
4. Re-assessment
5. Establishing objectives
6. Deciding on an action plan
7. Implementation
8. Establishing a strategic response structure
9. Monitoring & Evaluation
10. Closure

This procedure is compatible with KPA 4 of the SA National Disaster Management Framework, as well as the Unified Command procedure accepted and implemented by the National Disaster Management Centre prior to the 2010 FIFA World Cup™.

Notification/activation

During the notification phase, it must be ensured that management and operational staff are informed and mobilised as speedily and effectively as possible. To facilitate the foregoing it is imperative that 24 hour duty and standby rosters are kept current and available at the 24 hour communication facilities for the Alfred Nzo District DMC and all service communications centres that have an emergency and/or disaster response role in the District.

Such call-out lists must indicate the first response mobilisation and 2nd line responders clearly.

It is therefore necessary to design Standardised response procedures and protocols for specific incidents and also consider variables such as season and time of day. See hazard-specific preparedness plans in Annexure A (Section 6.2 from page 69) as well as pre-defined hazard-specific contingency plans.

Rapid Initial Assessment

The basis for any effective response is the initial rapid but accurate on-scene assessment of the situation i.e. nature of the hazard, resource requirements, immediate threats to people, property and the environment,

magnitude and boundaries of current and possible future impacts, and to be able to communicate this information in a predetermined standardised format.

Rapid and effective response can also be facilitated if a standardised initial report-back includes response suggestions and needs.

The rapid initial assessment must be as accurate as possible with accurate predictions of what may still occur.

Establish response management structure

Once the initial response has been effected and services arrive on the scene the process for the implementing of the secondary response must be initiated as soon as possible. This response must be based on the needs received from the scene as a result of the rapid assessment.

This response must build on existing response levels and strengthen the deployments and actions on scene.

6.5.1   Structures to coordinate response

The establishment of a structure to manage, co-ordinate and integrate response actions at the scene of an incident is imperative and a priority for all services involved at an incident.

Such a basic structure should be contained in a "Standardised incident management plan" agreed to beforehand by all role-players.

There are a number of essential elements to the structure and principles, which should be observed at all times:

- Flexible organisation

    The composition of the organisation must be adapted to the size, magnitude and nature of the incident. The organisation must be adapted (increased or decreased) as circumstances dictate.

- Standardised Terminology

    All services must be informed and be familiar with the organisation and terms used by services, which may be involved in an incident.

- Tactical Incident Management facilities / structures

    As part of the management structure, there are a number of essential facilities / structures, which may need to be established at the scene of an incident, these can include:

    - Outer perimeter / cordon / public exclusion zone
    - Inner perimeter
    - Establishing a landing zone
    - Staging area
    - Incident command post
    - Casualty clearing post
    - Information point / media liaison
    - Communications network
    - Access control to incident site and emergency infrastructure

- On-Site Incident Coordination Point

This is an on-scene facility where tactical decision-making and control of inter-disciplinary co-ordination takes place. Also known as Incident Command Post (ICP), On-site JOC / Forward Control or Command Post (FCP).

This is the single point of command for all on-site operations during the response phase of an emergency and will be located at an appropriate location at or near the scene of the emergency, normally within the outer perimeter.

The incident Commanders / Managers from key response agencies will operate under Unified Command to co-ordinate incident operations.

- Joint Incident Management Team / Unified Command

One of the main objectives to ensure effective on-scene management of services is to establish a "Unified Incident Management" system. This system allows for a structure whereby overall incident objectives and strategies can be formulated.

In incidents involving multiple jurisdictions, a single jurisdiction with multi-agency involvement, or multiple jurisdictions with multi-agency involvement, unified command allows agencies with different legal, geographic, and functional authorities and responsibilities to work together effectively without affecting individual agency authority, responsibility, or accountability.

In this regard it is important that the representatives be suitably mandated and takes full responsibility and charge of its service at that level.

It will ensure that the agreed upon operational plan and integrated tactical strategies are implemented by making optimum use of available resources.

It is normally structured to facilitate activities in five major functional areas:

- command,
- operations,
- planning,
- logistics, and
- finance and administration.

This organisation should also include the following elements depending on the situation;

- Safety
- Media / public liaison – information
- Liaison – supporting agency / jurisdiction liaison (DisMan well-placed for this)

Depending on the situation the estimated duration of the incident must be established in order to plan the need for the rotation of staff and to plan meals, etc.

- Determining the primary role-player for an incident or activity

If a situation occurs where there is no immediate agreement between parties regarding who should be the primary role-player in a specific emergency situation, a pre-determined procedure should be followed to resolve the issue.

- Communications

District communication networks and structures are described within the institutional arrangements section of this plan.

Re-assess

The first very important step after the Joint Incident Management Team has been established is for them to re-assess the situation. During this process, there are three aspects which must be addressed.

6.5.2 Re-assess Resources

The team need to establish:
- present deployment and how effective it is
- possible further immediate, medium and long-term resource needs.

An analysis of special equipment and services and needs must be done at this stage.

When evaluating the mobilising of additional resources the following needs must be taken into account;
- The type of human resources required i.e. skills and type of tasks to be performed.
- What equipment and supplies is required and which must come first (Priorities)
- Who will be responsible for the control of essential supplies

- Which essential services are required and/or should be restored first (Priorities)
- Observe and ensure that supply chain management / logistics are complied with. (Accountability)
- Possible invoking of mutual aid arrangements and/or other formalised agreements

6.5.3 Re-assess Hazard

A thorough analysis of the potential impact of the hazard must be made. In this regard the following should be assessed;

- Present impact
- Potential hazard impact (worst case scenario)
- Also think beyond present situation
- Obtain specialist input
- Consider implementation of risk specific plans

6.5.4   Re-assess Situation

In this regard the following aspects must be carefully analysed and assessed.

Look up - Establish present weather and get prediction for next 24 hours. It is important to look at the impact of the weather may have on the situation and what short and long term – changes may are predicted.	
Look around - Look at the topography and natural environment and establish what effect it would have on the hazard behaviour and impact	
Look down - Look at the built environment, the natural environment and the economical activities and establish how the hazard can possibly affect these activities. It is also important to consider/establish land owner and type of facility – eg key points being affected.	

Figure 14: Re-assess the situation

Do a complete evaluation to establish the severity and implications of the problem (direct and indirect implications)

Establish incident management objectives

Once the re-assessment have been completed the team should decide on the incident management objectives, and the following should receive attention;
- Broad statement of intent
- Think strategically
- Determine priorities
- Ensure public protection and secure affected area

It is important that emergency worker and public protection be observed throughout the process of setting objectives.

6.5.5 Plan of action
Once the incident management objectives are complete a well framed and well prepared plan of action is essential for the effective execution of the operation.

To plan effectively the following should be considered;
- Situational analysis (Clearly mapped)
- Resource status and response levels (Accurate recording)
- Think of worst case scenario (Think ahead)
- Plan for all phases (response, relief, recovery, rehabilitation and reconstruction)
- Decide on key objectives and responsibilities
- Consult with external organisations
- Protective actions (Response activities)
- Protective action strategies (Response management strategies)
- Incident Communication planning (Radios, IT , Public and Media)
- Develop alternatives (think beyond the normal)
- Review alternatives
- Decide on plan of action

Implementation

Once a decision has been made on the plan of action the plan must be communicated clearly to all role-players. In this regard, the following should receive particular attention;
- Communicate objectives, responsibilities, timeframes clearly
- Action tasks clearly and to specific services and/or sections
- Motivate staff and support implementation throughout.

Strategic Response Management Structure

A strategic response management structure can be established if the severity of the incident requires higher-level decision-making powers or wider coordination.

6.5.6   Disaster Operations Centre/Joint Operations Centre

The Disaster Operations Centre is an off-site, centralised facility, which is provided by the District Disaster Management Centre, where multi-disciplinary co-ordination and strategic decision-making takes place. It is a fully equipped dedicated facility within the Alfred Nzo Disaster Management Centre.

For the purpose of multidisciplinary strategic management of response and recovery operations, this facility must be capable of accommodating any combination of emergency and essential services representatives, including all relevant role players and stakeholders identified in response and recovery plans.

This facility must be activated when a local, provincial or national disaster occurs or is threatening to occur within the boundaries of the District.

The Disaster Operations Centre may be activated immediately upon receipt of information of a specific type of incident, or may be activated upon request or advice of the joint incident management team(s) at the scene of the incident(s).

6.5.7   Initial Strategic Situation Analysis

Once the initial activation has taken place the following should take place;
- Convene meeting in the JOC
- Review situation on available information
- All possible role-players must be identified and mobilised if not yet present.
- Identify and appoint incident co-ordinator
- Ensure all services required have been activated and are responding to their areas of responsibility
- Compile initial situation report for distribution to all stakeholders, internal and external.
- Establish public notification needs
- Establish public safety advisory needs
- Generate media release for public communication
- Monitor, assess and support services on-scene
- Establish possible resource needs
- Evaluate resources available vs resources possibly required
- Establish availability of resources, consult database

- Establish possible need for invoking mutual aid agreements and do initial notifications of possible support required
- Monitor, re-assess and adapt strategy

6.5.8 Structures to provide relief

Additional off-site structures may need to be established to provide relief, these could include
- Mass Care centres
- Victim information centres
- Reconciliation areas (where victims and their friends / family can be reunited)
- Data processing centres
- Media briefing facilities
- Counselling facilities
- Animal holding areas

Monitor/Evaluate

The successful implementation and execution of any plan is very dependent on sustained and effective monitoring and evaluation of its effectiveness.

This must be ensured by observing the following principles;

- To constantly receive and evaluate feedback reports from line departments
- To regularly direct requests and ask questions
- To take note of and observe status changes on an ongoing basis
- To analyse actions and anticipate problems/changes (be flexible)
- To regularly re-assess the situation and the effectiveness of actions and adapt strategies as circumstances dictate. Repeat process - Schedule meetings at specific agreed regular times.

Close incident & document

Once an incident has been effectively managed and services can return to normal operations, the following actions must be taken.

6.5.9 De- mobilise

Once the response to an incident is completed and there is consensus amongst all role-players that the point has been reached for services to stand-down from the incident and to return to their normal activities, the demobilisation phase is reached.

Ensure that all services have received de-mobilising orders and are reporting to their work stations.

6.5.10 Complete Review (Post Mortem)

After each incident, copies of all messages, reports and incident logs of all services must be submitted to the Alfred Nzo District DMC for joint analysis and review.

There must be a formal and structured critical review of all actions and all findings and/or areas of concern must be recorded and included in a report with the necessary recommendations and/or corrective actions to improve response in future.

6.5.11 Corrective actions

Corrective action plans must be drawn up and are designed to implement changes that are based on lessons learned and recommendations made from reports and reviews after actual incidents or from training and exercises.

Such actions and recommendations must include time frames and deadlines for implementation.

The response management flowchart below illustrates the initial activation and subsequent possible escalation of incidents to Disaster Management.
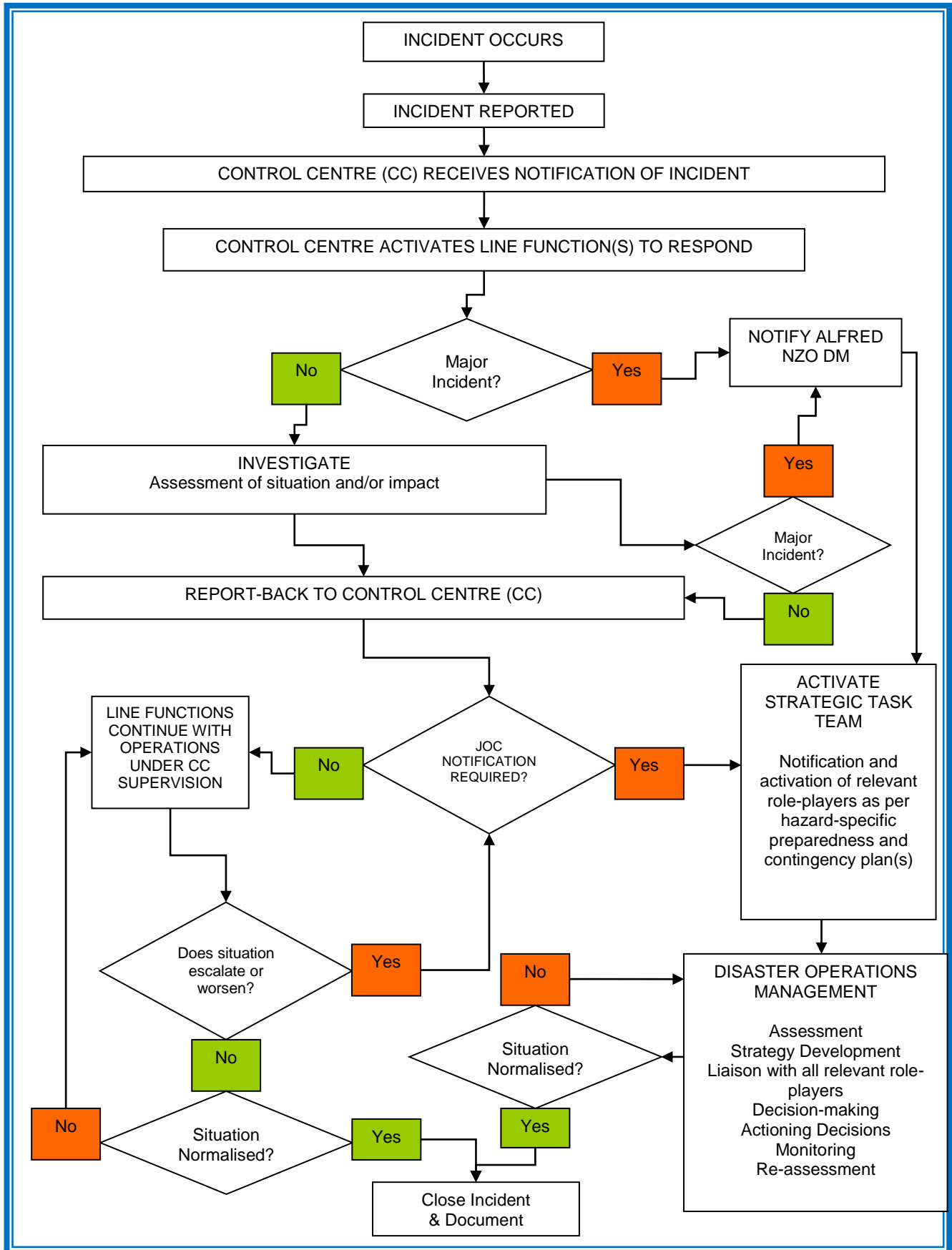
Figure 15 Response Management Flowchart

6.6 Declaration of a state of disaster and disaster classification

It is advisable that the Alfred Nzo Municipal Council adopts a formal policy for the declaration of a local state of disaster. Such a policy will replace this section of the plan which provides a general description of issues surrounding the declaration of a state of disaster.

When a disastrous event occurs or is threatening to occur in the area of the district, the District Municipality, through its Disaster Management Centre (or alternatively the most senior official responsible for Disaster Management), will determine whether the event is a disaster in terms of the Act, and, if so, the Head of the Centre (or alternatively the most senior official responsible for Disaster Management) will immediately

- initiate efforts to assess the magnitude and severity or potential magnitude and severity of the disaster;
- alert Disaster Management role-players in the municipal area that may be of assistance in the circumstances;
- initiate the implementation of the disaster response plan or any contingency plans and emergency procedures that may be applicable in the circumstances; and
- inform the Eastern Cape Provincial Disaster Management Centre and the National Disaster Management Centre of the disaster and its initial assessment of the magnitude and severity or potential magnitude and severity of the disaster.

When informing the National Centre and the Eastern Cape Provincial Disaster Management Centre the Alfred Nzo Disaster Management Centre (or alternatively the most senior official responsible for Disaster Management) may make recommendations regarding the classification of the disaster as may be appropriate.

Irrespective of whether a local state of disaster has been declared or not, the Council of the Alfred Nzo District, acting after consultation with the relevant local municipality, is primarily responsible for the co-ordination and management of local disasters that occur in its area, except if an agreement is in place between Alfred Nzo District and a local municipality in its area where the local municipality assumes responsibility (See Section 54 and 55 of the Act).

Whether or not an emergency situation is determined to exist, municipal and other agencies may take such actions under this plan as may be necessary to protect the lives and property of the inhabitants of the municipality.

Declaration of a local state of disaster: In the event of a local disaster the relevant municipal council may by notice in the provincial gazette declare a local state of disaster if existing legislation and contingency arrangements do not adequately provide for the municipality to deal effectively with the disaster; or other special circumstances warrant the declaration of a local state of disaster.

If a local state of disaster has been declared, the Council may make by-laws or issue directions, or authorise the issue of directions to:
- Assist and protect the public;
- Provide relief to the public;
- Prevent or combat disruption; or
- Deal with the destructive and other effects of the disaster.

6.7 Gaps and recommendations

A lack of communication and ineffective inter-agency cooperation are the most often experienced challenges in the response phase to major incidents and disasters. The any-hazard response procedure presented at the start of this chapter can address these challenges if all stakeholders are trained and experienced in the procedure and if positive relationships have been built between agencies.

Training, exercises and drills will therefore increase capacity for response within the district. Alfred Nzo district would be well-advised to present a programme of drills and exercises that over time will exercise response to priority risks and thereby increase institutional capacity for risk reduction and disaster response.

7 TESTING AND REVIEW OF THE PLAN

The municipality will regularly review and update its plan, as required by Section 48 of the Disaster Management Act, 2002. The Disaster Management Advisory Forum shall be responsible for the review of the municipal disaster management plan on an annual basis.

Upon re-demarcation of the Alfred Nzo District's municipal boundaries, all Risk Assessments, Institutional Arrangements, Risk Reduction Planning and Preparedness Planning would require alignment between the existing Local Municipalities and any newly added Local Municipalities included into the ANDM boundaries.

It is also of critical importance that especially the emergency response aspects of this plan be exercised at regular intervals. Table-top, walk-through and simulation exercises can be used to ensure that all role-players know what is expected from them in different emergency scenarios. It will be advisable to establish a comprehensive simulation exercise programme in the District.

Action: The ANDMAF will implement an annual review of this plan and re-align all plans and assessments as municipal boundaries change. The ANDM will also establish an exercise programme for this plan.

8 CONCLUSION

A separate disaster management plan included into the IDP but standing on its own and isolated from the rest of the IDP does not necessarily give evidence of the integration of disaster management into the IDP. All departments and role players submitting input to the content of the current and future IDP of the municipality are therefore urged to consider the inclusion and integration of disaster risk management into their strategies, operational planning and project implementation.

It is strongly recommended that the municipality institutes the compulsory consideration of disaster risk management in the planning and execution stages of all IDP projects. This will ensure the integration of disaster management into the IDP, and will ensure that all plans and projects are focused on contributing to disaster risk reduction and disaster preparedness – thus reducing the impact of disasters on lives, property, community activities, the economy and the environment in the Alfred Nzo Municipality.

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- Road Traffic Act
- Social Assistance Act, 1992 (Act no 59 of 1992)

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10 ANNEXURES

The following annexures are attached to this plan:

Annexure A: Emergency Numbers List for Alfred Nzo
Annexure B: Management Responsibilities

Annexure A: Key Stakeholders Contact List

NAME	DESIGNATION	TEL/WORK	FAX NO.	CELL NO.
ALFRED NZO DISTRICT MUNICIPALITY				
Mr.M,Moyo	Municipal Manager	039 254 5000	039 254 0343	082 5599514
Mr M Mkatu	Chief Financial Officer	039 254 5000	039 254 0343	082 8556999
Mr B Silinga	SNR Manager: Community Development Services	039 254 5000	039 254 0343	071 6042461
Mr O Hlazo	SNR Manager: Technical Services	039 254 5000	039 254 0343	082 5599536
Mr Z Mphumzi	Media Liaison Officer	039 254 4000	039 254 0343	082 4495149
Mr. M.C Mbangatha	Manager : Disaster Management	039 254 0748/ 039 254 0825	039 254 0747	082 5599533
Mr Z Vuko	Chief Fire Officer	039 254 0748/ 039 254 0825	039 254 0747	082 5599503
Mr. S Mbokwana	Assistant Manager : Operations & Planning	039 254 0748/ 039 254 0825	039 254 0747	0823749168
MATATIELE LOCAL MUNICIPALITY				
Mr. S Mbedla	SNR Manager : Community Services	039 737 3135		079 5045767
Mr. B. Gous	Manager : Protection Services	039 737 3135		083 7747219
UMZIMVUBU LOCAL MUNICIPALITY				
Mr. Sineke	SNR Manager : Community Services	039 254 6000/ 039 255 0166	039 255 0167	082 4673708
Mr. Ndinisa	Assistant Manager: Community Safety	0392546 000/ 0392550 166	039 2550167	083 5816078
Ms N Manciya	Disaster management Officer	039 254 6000/ 039 255 0166	039 2540167	082 5240291
NEIGHBOURING CENTRES & STATIONS				
Mr. Qabisisa	SNR Manager : Provincial Disaster Management Centre	040 609 5139/ 040 609 5948	040 635 2013	082 7746596
Mr S Soldati	Head : O.R Tambo District Disaster Management Centre	047 501 6492	047 532 4166	084 6112721
Mr M Williams	Chief Fire Officer : O.R Tambo Fire Services	047 501 6400	047 532 4166	083 5707215
Mr L Mnxulwa	Head : Joe Gqabi District Disaster Management Centre	045 971 0158	045 971 0251	N/A
Mr Pitso	Chief Fire Officer : Joe Gqabi Fire Services	045 971 0158	045 9710251	N/A
Mrs T Dzanibe	Head : Sisonke District Disaster Management Centre	039 834 8700	039 834 1700	082 8057892/ 076 2484677
Mr P Tanner	Head : Ugu District Disaster Management Centre	039 6881501		082 5588412
Mr. S Mtshengu	Chief Fire Officer : Greater Kokstad Local Municipality	039 797 6600	073 682 3782	
Director	SAPS Kokstad : Cluster Commander	039 797 1001		N/a
GOVERNMENT DEPARTMENTS				
Ms B Lwana	District Manager : Roads & Transport	039 254 0396	086548 4718	N/A
Mr. Bango	Manager : Traffic Control	039 254 0396	086 548 4718	082 8220405
Director F.F. Siganga	SAPS Mt Frere Cluster Commander	O39 255 1419 direct line	039 255 0112 /	082 884 5732

NAME	DESIGNATION	TEL/WORK	FAX NO.	CELL NO.
		039 255 0112 switch board	039 255 4000	
Snr Superintendent Thafeni	SAPS Matatiele Cluster Commander	039 7379917	039 737 4186	082 7789189
Director Ntsadu	SAPS MT Ayliff Cliuster Commander	039 254 0311 direct line 039 254 0007	039 254 0040	082 7797273
Superintendent Mtshengu	SAPS Maluti Police Station	039 256 0108		082 3198820
Superintendent Ngwadla	SAPS Matatiele Police Station	039 737 9900	039 737 9921	N/A
Mrs Mthonjana	District Manager : Department of Health	039 727 1044	039 727 1325	083 3781902
Mr Bokoda	Dept of Health : Manager : EMS	039 2540178 / 039 254 0133	N/A	N/A
Mr.Gcolotela	Dept :of Health : Deputy Manager : EMS	039 254 0178/ 039 254 0133	N/A	083 7311059
Mr Manakela	Hospital Manager :Mt Ayliff Hospital	039 254 0230/7	039 254 0190	N/A
Ms C.W Zitha	Hospital Manager : Madzikane ka Zulu Hospital	039 255 8200	039 2550333	N/A
Ms Ceza	District Manager : Dept of Agriculture	039 727 4453	039 7272497	082 7799633
Ms Mayeza	District Manager : Social Development	039 254 0715	039 254 0590	082 4419387
Mr Sitlelana	District Manager : Public Works	039 7271290/2835	039 7271868	082 787 3165
Mr Sobikela	District Manager : Dept of Education MT Frere	039 255 0005	039 2550006/0791	083 2750669

Annexure B: Institutional responsibilities

The institutional responsibilities described here are supplementary to those described in Section 3.5.

Councillors

Councillors must ensure that ward committees are established and involved in disaster risk management programs with the emphasis on disaster risk reduction and related public awareness and education. The main aim is to enhance the natural coping skills of the public.

Executive Manager: Community Development Services

The Manager of the Community Development Services must:

- Ensure that departmental disaster plans are compiled and maintained.
- Ensure the effective planning for, utilisation and functioning of municipal emergency services for pre-disaster risk prevention, mitigation and reduction, disaster response and post disaster recovery and rehabilitation.
- Compile pro-active departmental disaster management programs to support risk reduction or elimination.
- Compile reactive departmental disaster risk management plans to ensure municipal services continuation during emergency/disaster situations.
- Coordinate response and mutual aid agreements with adjacent municipalities and private sector entities.

Chief Fire Officer

The Fire Chief must ensure that fire prevention and fire suppression disaster risk plans are compiled and maintained with specific reference to the following:

- Compilation of pro-active fire prevention and fire fighting disaster risk management programs to support risk reduction or elimination.
- Compilation of reactive departmental disaster risk management plans to ensure service continuation during emergency/disaster situations.
- Ensure acquisition of and ensured access to resources for disaster risk management purposes.
- Ensure compliance with relevant legislation e.g. Fire Service Act, Veld and Forest Fire Act, National Building Act.
- Develop, maintain and exercise an emergency plan for the rendering of Fire Fighting, Search and Rescue and technical assistance in the event of a disaster.

Executive Manager Technical Services

The Manager Technical Services must ensure that disaster risk management plans are compiled and maintained with specific reference to the following:

- Compilation of pro-active departmental disaster management programs to support risk reduction or elimination.
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations.
- Identifying and prioritizing essential services that require special maintenance and/or restoration as the result of an emergency or disaster.
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's disaster management resources database.
- The conducting of regular environmental impact studies.

Executive Manager Corporate Services

The Manager Corporate Services must ensure that disaster risk management plans are compiled and maintained in his/her service, with specific reference to the following:

- Compilation of pro-active departmental disaster management programs to support risk reduction or elimination.
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations.
- Monitoring compliance with relevant legislation, regulations, licenses and by-laws.
- Supplying resources for disaster management purposes.

Manager Corporate Services

The Manager Corporate Services is responsible for:

- Coordinating of the establishment for human resource base to assist during disasters.
- Coordinating offers of and appeals for volunteers in conjunction with the Public Relations Officer under the direction of the Disaster Management Advisory Forum (DMAF).
- Supporting the DMAF in risk-reducing public education and awareness (risk reduction) programs.
- Research and document potential occupational health and safety issues to which all emergency responders, including volunteers, might be exposed to.
- Ensure that all departmental and emergency responders attend appropriate training and refresher courses.

Media Liaison Officer

The responsible person must ensure that disaster risk management plans are compiled and maintained with specific reference to the following:

- Compilation of pro-active departmental disaster risk management programs to support risk reduction or elimination.
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations.
- Disaster Risk management projects must be forwarded to the Manager Communication, via the DMAF, especially those aimed at risk reduction and must be communicated to ensure effective public awareness.

Chief Finance Officer

The Finance must ensure that disaster plans are compiled and maintained with specific reference to the following:

- Compilation of pro-active departmental disaster risk management programs to support risk reduction or elimination.
- Compilation of reactive departmental disaster risk management plans to ensure service continuation during emergency/disaster situations.
- Managing donations for emergency response.
- Facilitating emergency procurement.
- Initiating and facilitating efforts to make funds available for disaster management in the municipal area.
- Supplying financial resources for disaster management purposes.
- Liaising with the Provincial officials with respect to the utilization of Provincial emergency relief funds where applicable.
- Setting up a dedicated disaster contingency fund.

Manager Internal Audit

The Manager Internal Audit must ensure task compliance as contained in the Disaster Management Plan with specific reference to;

- Disaster risk management plans, programs and procedures with regard to;
  - Risk assessment from a disaster risk reduction and prevention management perspective.
  - Emergency plans and activation procedures (preparedness / response / contingency).
  - Standard Operating Procedures (SOP'S)

- Auditing of disaster risk reduction institutional capacity, plans and implementation management processes in compliance with the requirements the Disaster Management Act (Act 57 of 2002).

Executive Manager Planning and Economic Development

The Manager Planning and Development must ensure that disaster risk management plans are compiled and maintained with specific reference to the following:

- Compilation of pro-active departmental disaster risk management programs to support risk reduction or elimination.
- Compilation of reactive departmental disaster risk management plans to ensure service continuation during emergency/disaster situations.
- Ensure that risk reduction and mitigation principles are applied in all development projects,
- Include the reduction of natural disasters as an element in environmental education programmes,
- Supplying resources for disaster management purposes.
- Supply information, to the disaster management centre, regarding projects in the District, economic development planning, spatial development and tourism.

IDP Manager

The IDP Manager must ensure compliance with specific tasks as contained in the Disaster Management Plan:

- Disaster risk management plans and procedures with regard to;
  - Risk assessment from a disaster management perspective.
  - Disaster Risk Management incorporated into IDP plans and projects.