Chris Hani Disaster Management Plan

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

Acknowledgement

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

ACRONYMS

Acronym	Explanation
CBO	Community Based Organisation
CHDM	Chris Hani District Municipality
COG	Department of Cooperative Governance and Traditional Affairs
COSCPs	Coastal Oil Spill Contingency Plans
CSIR	Council for Scientific and Industrial Research
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DM	District Municipality
DMA	District Management Area
DMC	Disaster Management Centre
DMP	Disaster Management Plan
DOC	Disaster Operations Centre
DRA	Disaster Risk Assessment
DRMPF	Disaster Risk Management Policy Framework
DWA	Department of Water and Sanitation
ECP	Eastern Cape Province
ECPDMC	Eastern Cape Provincial Disaster Management Centre
E.g.	Example
Etc.	Etcetera
EMP	Environmental Management Plan
EWS	Early Warning System
FCP	Forward Command Post
IDP	Integrated Development Plan
IIMP	Integrated Incident Management Portal
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
MSA	Municipal Systems Act
NDMC	National Disaster Management Centre
NDMF	Policy Framework for Disaster Management in South Africa
NGO	Non-Governmental Organisation
PDMC	Provincial Disaster Management Centre
Prov	Province
PSC	Project Steering Committee
SADC	South Africa Development Community
SANDF	South African National Defence Force
SANDMC	South African National Disaster Management Centre
SANDMF	South African National Disaster Management Framework
SANS	South African National Standard
SAPS	South African Police Service
SAWS	South African Weather Service
SDF	Spatial Development Framework
SOPs	Standard Operating Procedures

TERMINOLOGY

The following terminology[1] is utilised in this document:

Term	Definition
Capacity	The combination of all strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals.
Contingency Planning	A management process that analyses specific potential events or emerging situations that may threaten society or the environment and establishes arrangements to enable timely, effective and appropriate responses to such events and situations.
Development planning	An integrated, multi-sectoral process through which governmental institutions streamline social, economic and spatial growth.
Disaster	A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.
Disaster Risk	The potential disaster losses, in lives, health, status, livelihoods, assets and services, which could occur to a particular community or society over some specified future time period.
Disaster Management	The systematic process of using administrative directives, organisations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster. This term is an extension of the more general term 'Risk Management' to address the specific issue of disaster risks. Disaster Management aims to avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness.
Disaster Risk Reduction	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 Plan	A document prepared by an authority, sector, organisation or enterprise that sets out goals and specific objectives for reducing disaster risks together with related actions to accomplish these objectives.
Early Warning Systems	The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss by reducing or mitigating disaster risk. It incorporates a system of data collection and analysis that monitors people's well-being (including security), in order to provide timely notice when an emergency threatens, and thus to elicit an appropriate response. An Early Warning System is the integration of four main elements: Risk Knowledge; Monitoring and Predicting; Disseminating Information; and Response. Failure of any part of the system will imply failure of the whole system.
Hazard	A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage,

[1] **Department: Provincial and Local Government.** 2007. *Disaster Management Act 57 of 2002*. Pietermaritzburg: Interpak Books.

	loss of livelihoods and services, social and economic disruption, or environmental damage. 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, intensity, frequency and probability
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
Mitigation	The lessening or limitation of the adverse impacts of hazards and related disasters.
Preparedness	The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. These activities and measures include the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.
Prevention	The outright avoidance of adverse impacts of hazards and related disasters.
Recovery	The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.
Residual Risk	The risk that remains in unmanaged form, even when effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained.
Resilience	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	The provision of emergency services and public assistance during or immediately after a disaster in order to: save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. These measures can be of immediate, short-term or protracted duration.
Risk	The combination of the probability of an event and its negative consequences.
Risk Assessment	A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environments on which they depend.

Risk Management	The systematic approach and practice of managing uncertainty to minimise potential harm and loss.
Vulnerability	The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects 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 Chris Hani District Municipality (CHDM), in terms of the Disaster Management Act, 2002 (Act 57 of 2002) amended as Act 16 of 2015, is required to compile a municipal Disaster Management plan. This document fulfils the legal requirement as set out in the Disaster Management Act as amended and the Policy Framework for Disaster Management in South Africa and confirms the arrangements for managing disaster risk and for preparing for- and responding to disasters within the Chris Hani District Municipality.

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

Chapter 1 deals with the introduction and provides a background to the project. It 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 as amended. The structure of the Disaster Management Plan is also explained and linked to the Key Performance Areas and Enablers of the Policy Framework for Disaster Management in South Africa, also known as the National Disaster Management Framework (NDMF).

Chapter 2 addresses requirements for the establishment of integrated institutional capacity for Disaster Management within the Chris Hani 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 3 the risk profile of the District is provided based on the risk assessment which was conducted during August 2018 in all six local municipalities of the CHDM. The high risks identified within the District include: Vegetation Fire, Snow, Strong Winds, Infectious Diseases, Invasive Alien Plants, Road Accidents, Crime & Drug Abuse, Drought, Flood and Lightning.

Chapter 4 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 5 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, an 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.

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 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 Chris Hani Municipality;
- It is advisable that the Chris Hani 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 as amended. The Disaster Management Advisory Forum shall be responsible for the review of the Municipal Disaster Management plan on an annual basis where there is a need.

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 CHDM is not immune to emergencies and disasters and annually suffers 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 CHDM is required as per the Disaster Management Act, 2002 (Act No. 57 of 2002) as amended, to compile municipal Disaster Management plans. This document fulfils this legal requirement and confirms the arrangements for managing disaster risk and for preparing for- and responding to disasters within the CHDM.

The intended outcomes of this plan are:

- The integration of Disaster Management into the strategic and operational planning and project implementation of all line functions and role players within CHDM;
- 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 not only to define 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 will be described, after which 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 Policy Framework for Disaster Management (National Disaster Management Framework) in South Africa.

2.1 General Area Description

The Chris Hani District is a land-locked district situated in the centre of the Eastern Cape, between the Eastern Cape coastline and the Drakensberg Mountains. The CHDM is classified as a Category C2 municipality and it is sub-divided into six local municipalities. The Emalahleni LM, Engcobo LM, Intsika Yethu LM ,Sakhisizwe LM ,Enoch Mgijima and Inxuba Yethemba LM is located in the west.

Map 1: Locality map of CHDM

The District is vulnerable to the impact of natural and human-induced disasters and the population of the area has historically 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, decrease disaster risk, 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.

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 further demonstrates that Disaster Management involves the simultaneous management of several disaster risks in various stages of the life cycle of disaster risks.

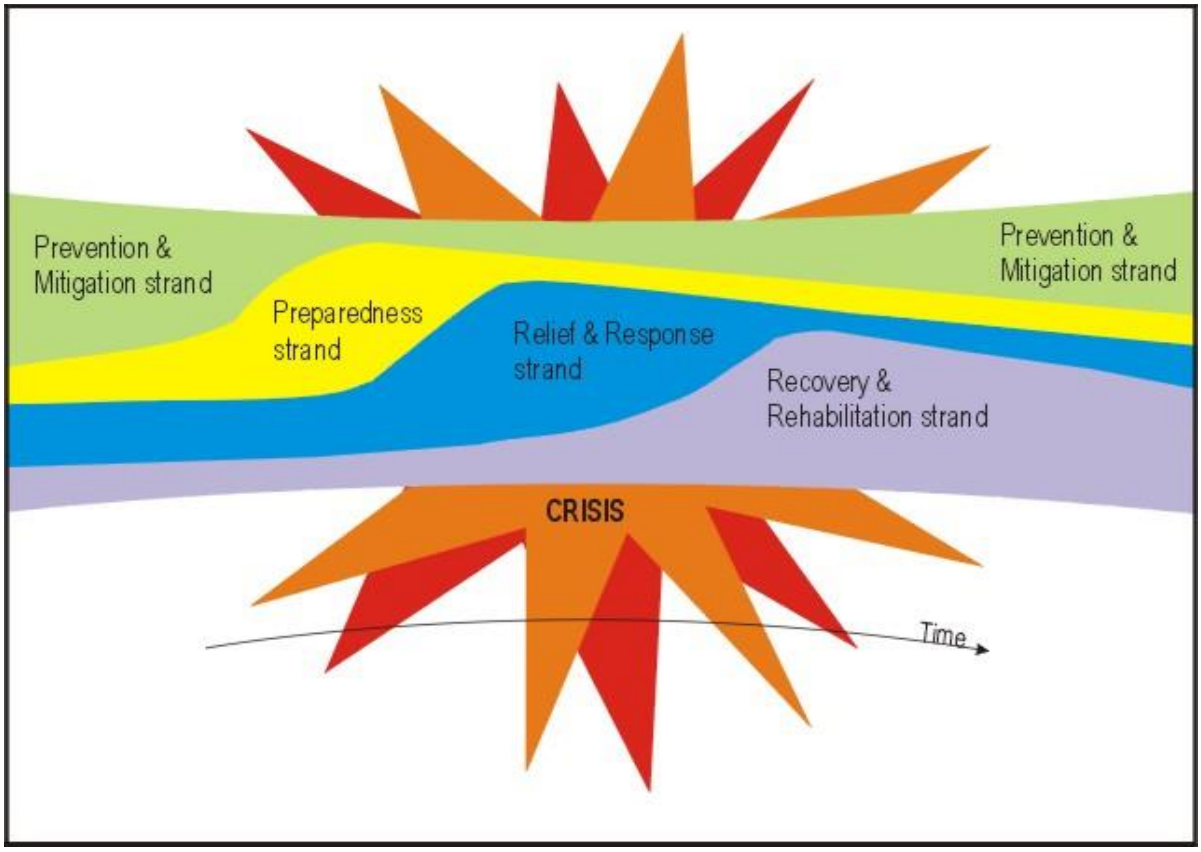


Figure 1: The expand / contract model of Disaster Management

The South African government has responded to the negative consequences of disasters by developing legislation (The Disaster Management Act, 2002 – Act No. 57 of 2002) as amended and national policy (The Policy Framework for Disaster Management in South Africa, 2005) to deal with the management of disaster risk and disaster impact.

The Disaster Management Act as amended, hereafter termed the 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 CHDM 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 Disaster Management Plan (DMP) Description

2.2.1 Objectives of the DMP

The Policy Framework for Disaster Management in South Africa indicates that the main objectives of Disaster Management in any particular jurisdiction within South Africa, such as the CHDM, are to:

- Establish integrated institutional capacity within the District to enable the effective implementation of Disaster Management policy and legislation;
- Establish a uniform approach to assessing and monitoring disaster risks that will inform Disaster 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; and
- Ensure effective and appropriate disaster response and recovery.

The objectives of the DMP are aligned to the National Policy Framework and are thus to focus 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; and
- The development of Operational Response and Recovery Plans and related products.

2.2.2 Scope of the DMP

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

The CHDM DMP will function as a guideline for the practical implementation of all aspects of Disaster Management within the Chris Hani 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 CHDM 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 Chris Hani District Disaster Management Framework (CHDM DMF) and to reduce disaster risk and increase disaster resilience within the district.

The Policy Framework for Disaster Management in South Africa, also known as the National Disaster Management Framework (NDMF) was published in 2005. It 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.

The four KPA's of the NDMF correspond with the main sections of the DMP and thus serves as the document structure as illustrated in **Figure 2**.

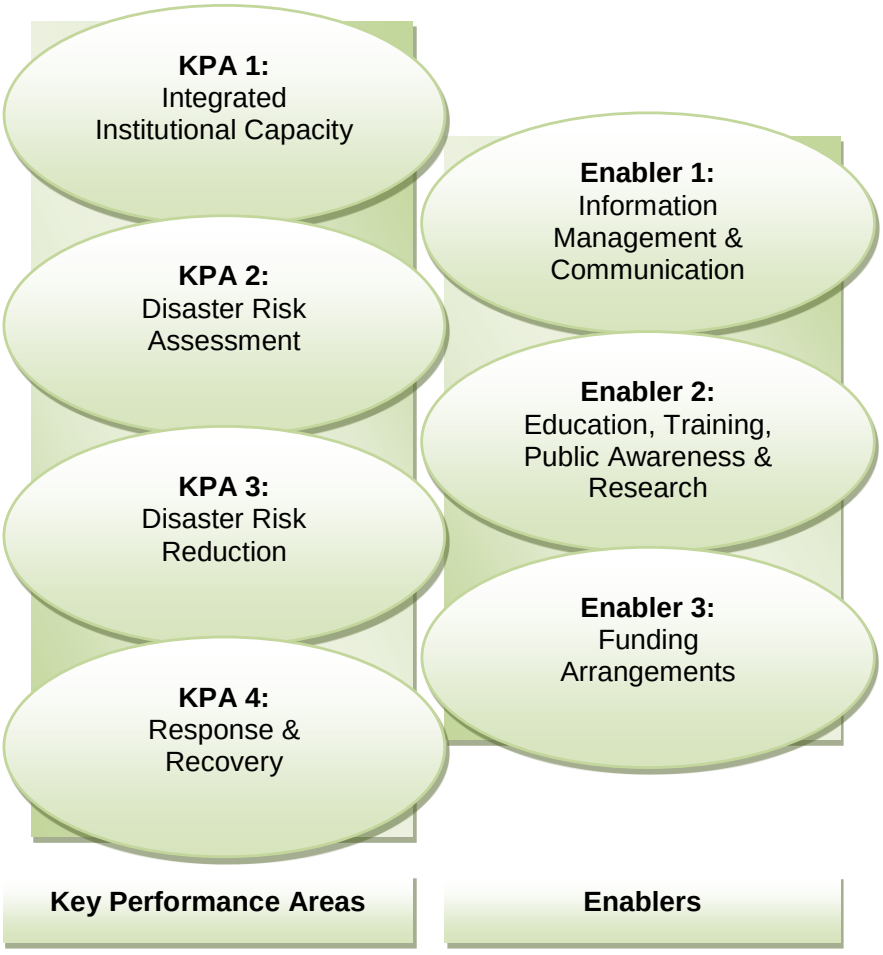


Figure 2 KPA's and Enablers of the National Disaster Management Framework

The four KPA's and the three Enablers are:

- KPA 1: Iintegrated Institutional Capacity for Disaster 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; and
- Enabler 3: Funding Arrangements for Disaster 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 1: 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 Management	Establish integrated institutional capacity for Disaster Management within the Chris Hani District to enable the effective implementation of Disaster Management policy and legislation.
KPA 2: Disaster Risk Assessment	Establish a uniform approach to assessing and monitoring disaster risks that will inform Disaster Management planning and disaster risk reduction undertaken by organs of state and other role players.
KPA 3: Disaster Risk Reduction	Ensure all Disaster Management stakeholders develop and implement integrated Disaster Management plans and risk reduction programmes in accordance with approved National, Provincial (Eastern Cape) and District (Chris Hani) 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 Management role players.
Enabler 2: Education, Training, Public Awareness and Research	Promote a culture of risk avoidance among Disaster Management stakeholders within the Chris Hani District by capacitating all role players through integrated education, training and public awareness supported by scientific research.
Enabler 3: Funding Arrangements for Disaster Management	Establish mechanisms for the funding of Disaster Management in the Chris Hani District.

Both the Eastern Cape Provincial Disaster Management Framework and the Chris Hani District Disaster Management Frameworks are structured around the KPA's and Enablers as set out in the Policy Framework for Disaster Management in South Africa.

2.2.3 A brief description of each KPA and Enabler

In this section a short description of each of the KPAs and Enablers of the Policy Framework for Disaster Management in South Africa is provided to enable the reader to contextualise the use of the KPA's and Enablers within the Municipal Disaster Management Plan of the Chris Hani District. It is important to take cognisance that the four KPAs and three enablers is structured in the DRMPF of the

Chris Hani District Municipality consistent with those of the NDMF so as to support the core concepts of integration and uniformity.

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

2.2.4 KPA 1: Integrated Institutional Capacity for Disaster Management

Key Performance Area 1 of the Policy Framework for Disaster Management in South Africa (NDMF) establishes the requirements for effective institutional arrangements in the national sphere to ensure the integrated and coordinated implementation of Disaster 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 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 Management are also discussed.

2.2.5 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 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.

2.2.6 KPA 3: Disaster Risk Reduction

The successful implementation of the 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 as amended. 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.

2.2.7 KPA 4: Response and Recovery

The Act requires an integrated and coordinated 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.

2.2.8 Enabler 1: Information Management and Communication

Disaster 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 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 Management and development planning processes by all stakeholders.

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

Sections 15 and 20(2) of the Disaster Management Act as amended 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 Management. This Key Performance Area addresses the development of education and training for Disaster Management and associated professions as well as the inclusion of Disaster 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.

2.2.10 Enabler 3: Funding Arrangements for Disaster Management

The provision of funding for Disaster Management is likely to constitute the single most important factor contributing to the successful implementation of the Act by national, provincial and municipal spheres of government. The Act as amended, 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 Management. In order to give effect to the requirements of the Act as amended, four Key Performance Areas and three Enablers have been identified in the NDMF to guide the implementation of the Act as amended. Accordingly, funding from a range of sources for the different aspects of Disaster 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 Management funding arrangements for organs of state in the national, provincial and local spheres of government. From the perspective of the CHDM, 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. Figure 3 illustrates the relationship between the chapters of the plan and the KPAs and Enablers of the National Framework.

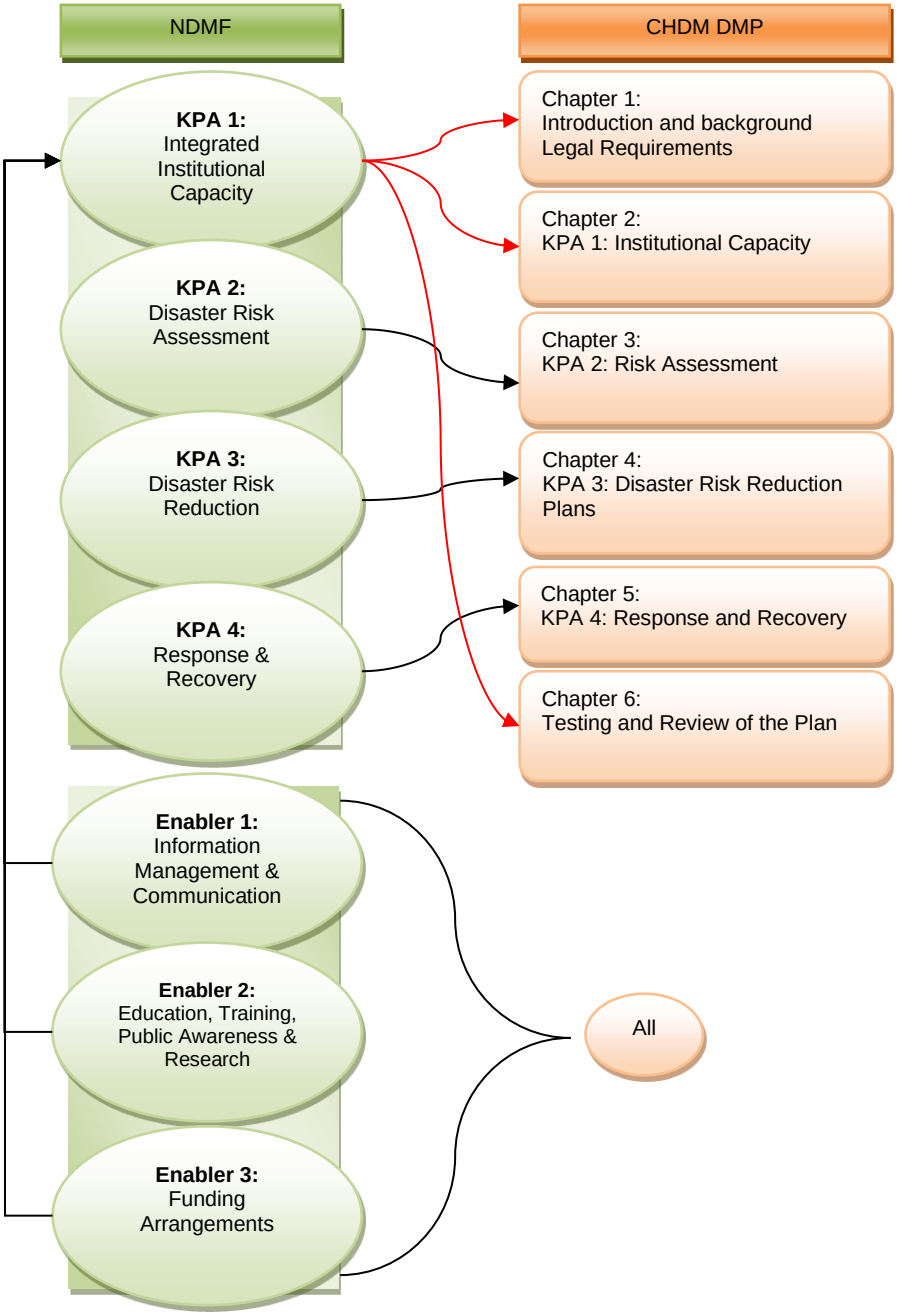


Figure 3: The Interrelationship between the NDMF and the CHDM DMP

2.2.11 CHDM DMP approach and methodology

The methodology used during the compilation of the CHDM DMP is aligned with existing methodologies and practice utilised within the Eastern Cape Province and is aligned with the Policy Framework for Disaster Management in South Africa.

The overall approach combines participatory-consultative aspects with expert opinion based on research and experience. The data used in the compilation of the DMP was gathered from stakeholder consultation as well as a desktop study which summarised existing data provided by CHDM officials and other supporting documents retrieved from credible internet sources.

2.2.12 Stakeholder Consultation

The approach for managing the assembly of the CHDM DMP entailed a close collaboration and liaison with the top management of CHDM Disaster Management, the CHDM Disaster Management Manager, and the Disaster Management representatives from the six local municipalities within the district. The

Project Steering Committee met as and when required to discuss the DMP progress and any administration.
The Project Steering Committee (PSC) for the project consisted of:

- Chris Hani Disaster Management (Project Manager)
- Chris Hani Disaster Management (Senior Disaster Management Officer)
- Chris Hani Disaster Management (Disaster Management Officers)

The relevance and quality of the CHDM DMP is reliant on inputs from a wide variety of stakeholders and a series of stakeholder consultation workshops were held. During 08-10 May 2018 (six) workshops were conducted at local municipal level regarding the DRA, DMP workshops was held at a District level on

2.2.13 Collection of data and literature review

Existing information and data was collected in hardcopy where possible, as well as in electronic format from CHDM officials as well as from credible internet sources for review. The existing and relevant Disaster Management legislation and policy frameworks, together with the Chris Hani IDP, existing DMP, other documents, studies, policies, frameworks and strategies formed a point of departure.

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

2.3 Legal requirements applicable to the Chris Hani District Municipality

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. Section 24 states 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 (the Act)**: The White Paper led to the promulgation of the Disaster Management Act, Act No. 57 of 2002, which is the regulatory framework for Disaster Management in South Africa. The Department of Cooperative Governance (COG), through the National Disaster Management Centre (NDMC), administers the Act.
- **National Disaster Management Framework (NDMF)**: The NDMC has prepared a Policy Framework for Disaster Management in South Africa, which aims to guide the development and implementation of Disaster Management in the country.
- **National Disaster Management Centre Guidelines**: The NDMC developed guidelines for the establishment of disaster management centres (DMCs).
- **Provincial Disaster Management Generic Plans**: The PDMC 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.

2.3.1 The Disaster Management Act (the Act)

The Disaster Management Act, Act No. 57 of 2002 as amended (the Act), requires that, inter alia, the three spheres of government prepare ***Disaster Management Plans*** (Sections 39 and 53 of the Act).

Section 39 of the 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 Act addresses the disaster management planning requirements for Municipal Areas, name

"*(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 ar institutional role-players;

(c) regularly review and update its plan; and

(d) through appropriate mechanisms, processes and procedures established in terms Chapter 4 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 200 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;

(c) anticipate the types of disaster that are likely to occur in the municipal area and their possible effects;

(d) place emphasis on measures that reduce the vulnerability of disaster-prone areas, communities and households;

(e) 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 t 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 th 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 Act as amended 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 Act*). In preparing their Risk Reduction Plans, Municipalities should apply their minds and produce 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 Act*), 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; and

- **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 Act as amended, the CHDM is legally obliged to

- Prepare a Disaster Management plan for its area according to the circumstances prevailing in the District;
- 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, and include consultation with its local municipalities as well as local communities in the preparation or amendment process.

Section 53(2) (a) of the Act as amended 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 No. 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 0).

According to Section 53(4) of the Act as amended, the Municipality must submit a copy of its Disaster Management Plan (DMP), 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 that will inform the way in which the CHDM approaches the management of disaster risks within its jurisdiction includes the Municipal Structures Act of 1998 (Act No. 117 of 1998). According to Section 84(1)(j) of this act, the CHDM is responsible for the provision of firefighting services serving the area of the District Municipality as a whole.

This section has focused on the implications of the Act for the CHDM, 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 public enterprises operating within the jurisdiction of the CHDM will be described in the next section.

2.3.2 Requirements for national departments and public enterprises to compile plans

The CHDM working 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 co-operation would be required to reduce disaster risk. The success of the CHDM DMP depends on effective planning by several other stakeholders as illustrated in the figure below.

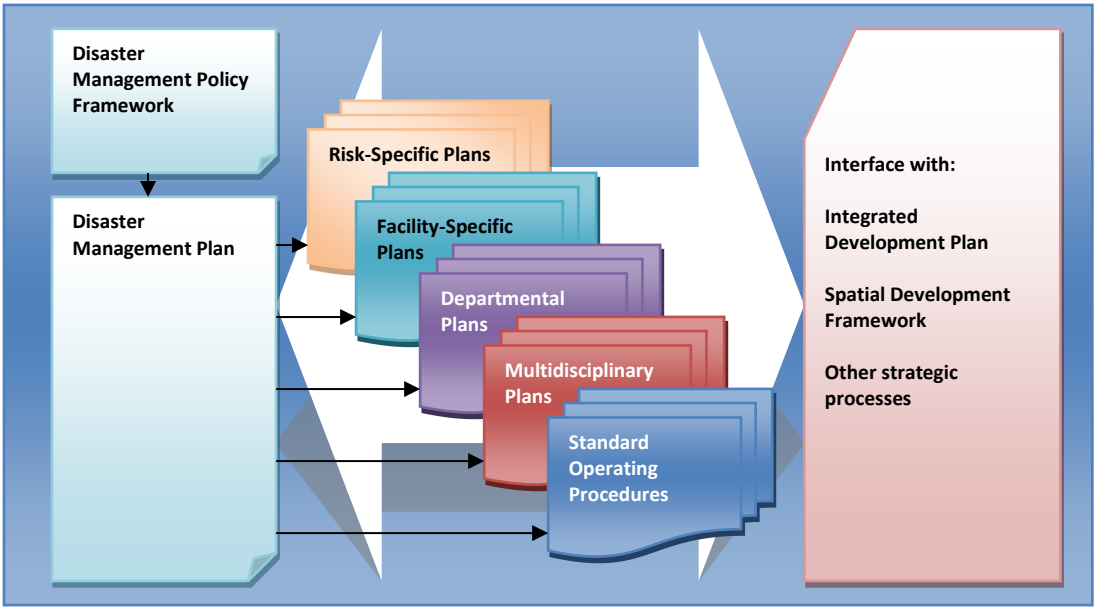


Figure 4: The relationship between plans

National government departments and public enterprises operating within the boundaries of the CHDM 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 public enterprises conduct Disaster Management planning.

Part 2, Section 25 of the Disaster Management Act as amended governs the preparation of disaster management plans by national organs of state:

(1) Each national organ of state indicated in the Policy Framework for Disaster Management in South Africa 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 Policy Framework for Disaster Management in South Africa; (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 Act 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 No. 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*[2].

[2] 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 No. 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 public enterprises operating within the CHDM thus have 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.

2.3.3 Requirements for commerce and industry to compile plans

Disaster Management requires multi-sectoral co-operation and it is 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 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 respond 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 CHDM Disaster Management to support emergency and Disaster Management planning with 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. In addition good practice and corporate social responsibility also dictate that commerce and industry assess and manage risk, which includes disaster risk. The King II and III Reports[3] 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 CHDM and commerce and industry within the area on issues of risk and joint efforts to reduce risk or to respond to disasters.

[3] King II and III available online from: www.iodsa.co.za

More formally, the Occupational Health and Safety (OHS) 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 No. 29 of 1996) also warrants 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 employment who may be directly affected); 17 and 18 (Health and safety representatives); 19 and 20 (Committees) and the Major Hazard Installation Regulations proclaimed under this 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.

Further 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 regulate the establishment of Fire Protection Associations (FPAs).

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. In October 2006 the Premier of the Eastern Cape officially opened the CHDM Disaster Risk Management Centre (DRMC). The CHDM also has a Disaster Risk Management Policy Framework (DRMPF) which is a policy framework with the purposes of providing those with statutory disaster risk management responsibilities with a written mandate. The policy framework also aims to guide the development and implementation of uniform and integrated disaster risk management policy and plans of the eight local municipalities of the CHDM.

2.3.4 CHDM current compliance with the Disaster Management Act

According to the Disaster Management Act (No. 57 of 2002) as amended, the CHDM is required to have the following established:

- 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).

The eight Local Municipalities are legally 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 2 describes the current status quo of compliance of the CHDM and the Local Municipalities within the District with the requirements of the Disaster Management Act as amended. 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 IDP process of the Local Municipalities.

The Requirements of the Disaster Management Act as amended are listed in the top row 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.

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 recommended 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 co-ordinate Disaster Management policy within the municipality and enable stakeholder involvement in Disaster Management matters.

Disaster Management has become one of the key components of an IDP’s credibility. Section 26(g) of the Local Government: Municipal Systems Act, 2000 (Act No. 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 IDP.

Table 2: Status of compliance with Disaster Management Act as amended within Chris Hani District

District / Local Municipalities	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
Chris Hani District Municipality	Must	Yes	Must	Yes	May	Yes	Must	Yes	Must	Yes
Emalahleni Local Municipality	May	No	Must	No	May	Yes	May	Sat	May	No
Engcobo Local Municipality	May	No	Must	No	May	No	May	Sat	May	No
Intsika Yethu Local Municipality	May	No	Must	No	May	No	May	Sat	May	No
Inxuba Yethemba Local Municipality	May	No	Must	No	May	No	May	Sat	May	No
Enoch Mgijima Local Municipality	May	No	Must	No	May	No	May	Sat	May	No
Sakhisizwe Local Municipality	May	No	Must	No	May	No	May	Sat	May	No

Key:

Priority	
Must	Best practice, not legal requirement
May	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

2.4 Linkage with the Integrated Development Plan of the Chris Hani District Municipality

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 the 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 process. 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 then 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 the tolerable risks.
- 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.

2.4.1 Linkage with the Spatial Development Framework of the Chris Hani 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 IDP 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 IDP of the CHDM 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. Figure 5 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.

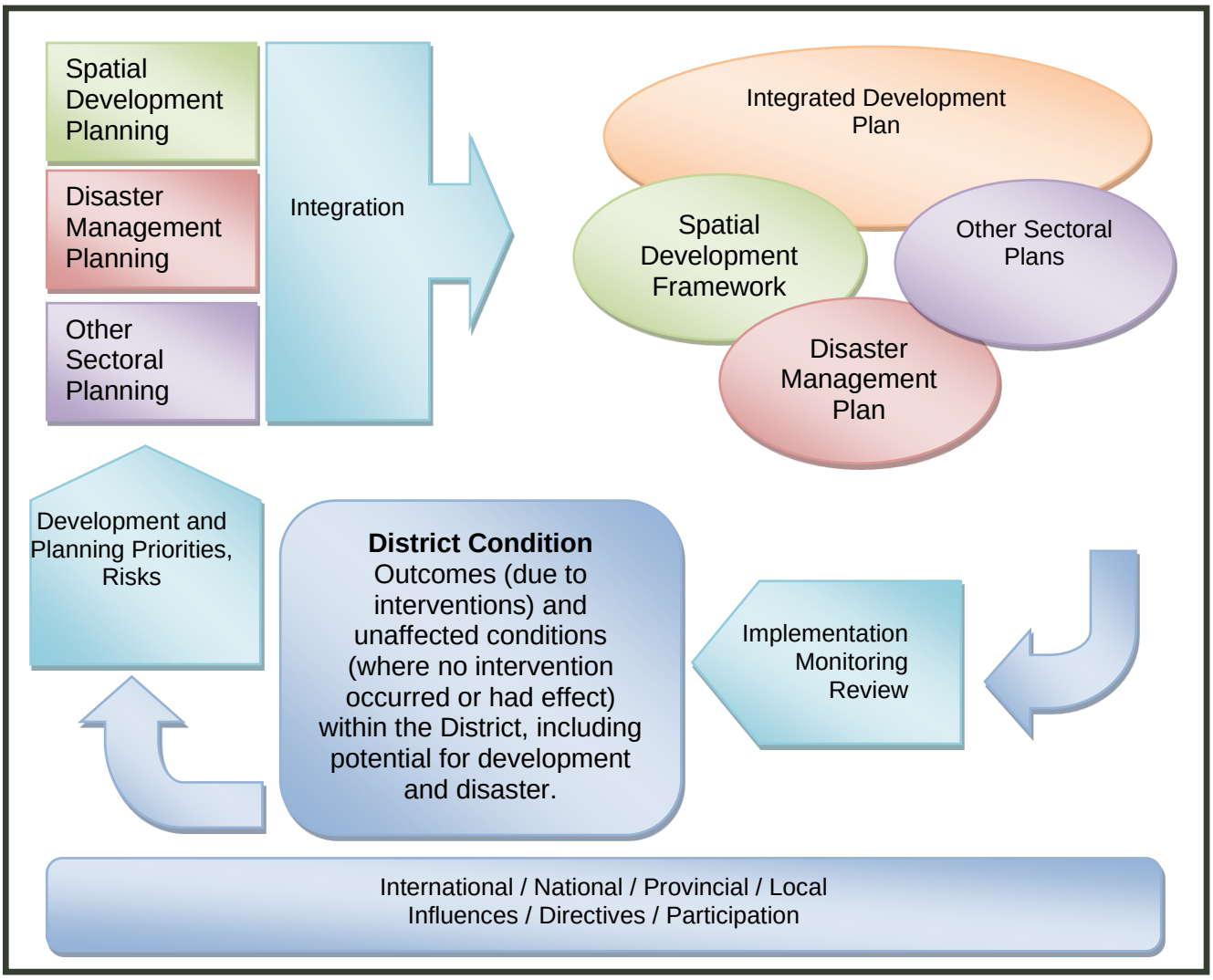


Figure 5: The Relationship between the SDF, IDP and Disaster Management Plan

2.4.2 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 Municipality, 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 into 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.

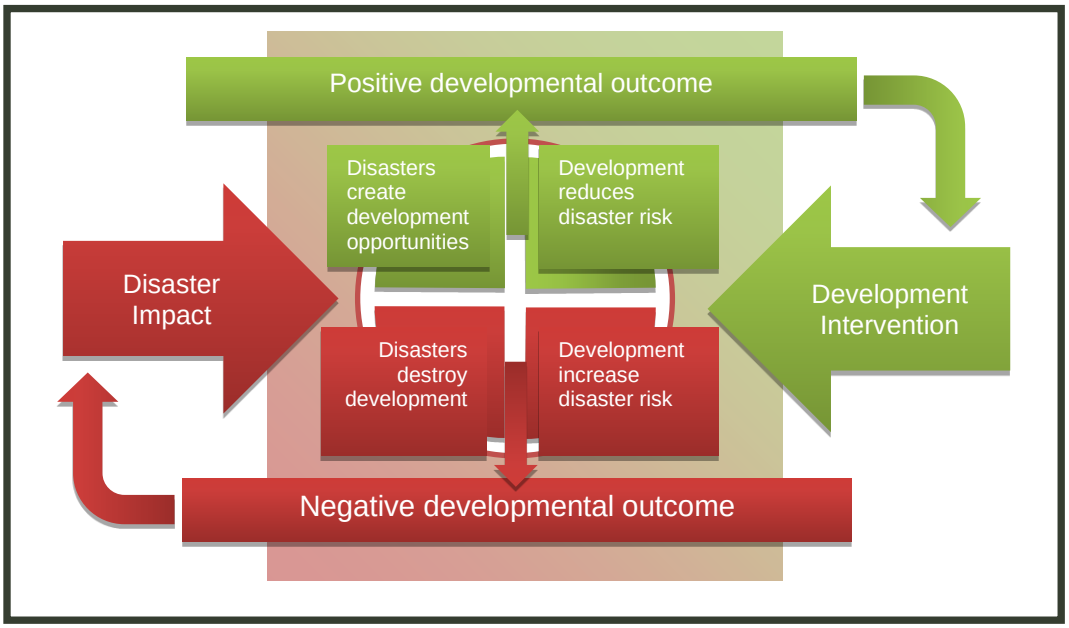


Figure 6: The relationship between disasters and development

In recognition of the possible negative or positive relationship between disasters and development, both the Municipal Systems Act and the Disaster Management Act as amended requires the inclusion of a municipal Disaster Management plan in the IDP of municipalities.

2.4.3 Integrating development and Disaster Management planning

Based on the previous discussions of the relationship between Disaster Management, the SDF 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. It is recommended that long-term planning for future IDP cycles should include the Disaster Management planning steps indicated below.

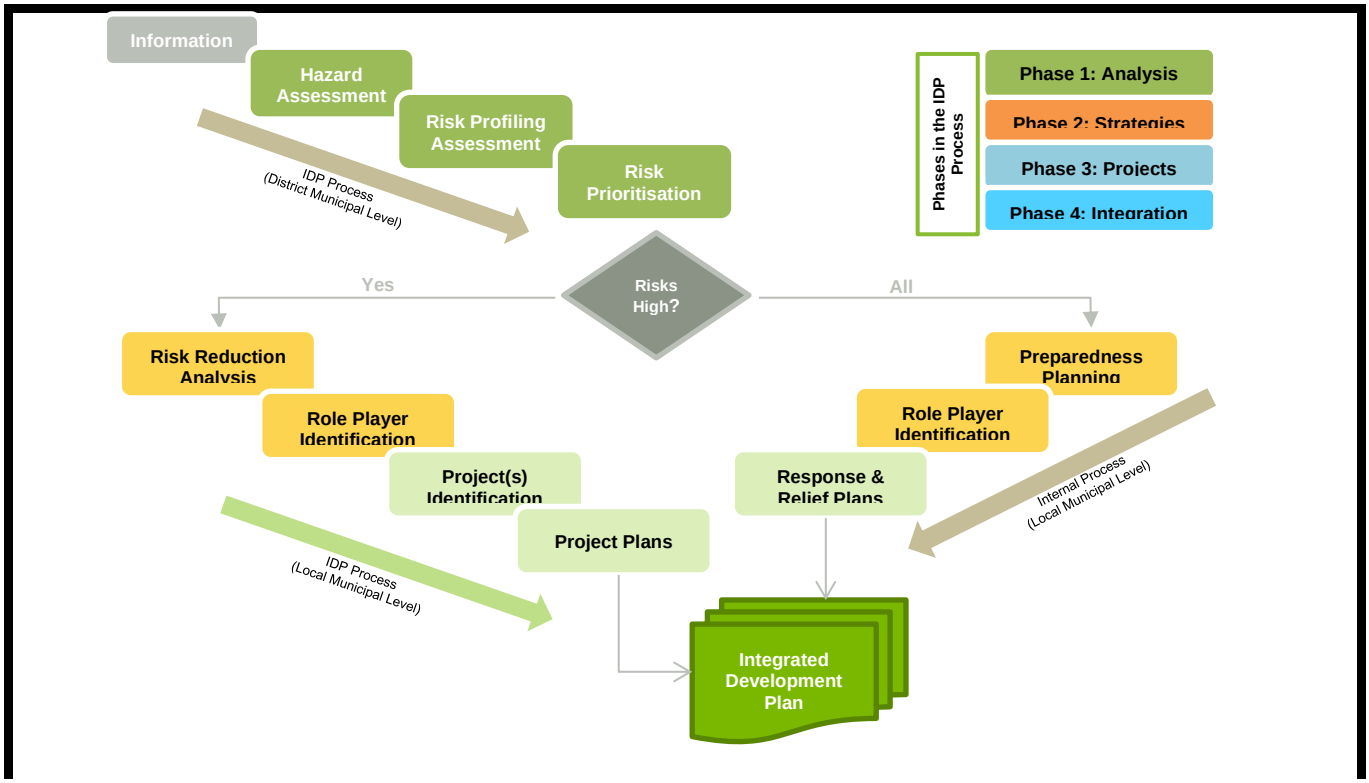


Figure 7: Planning Process for developing a DMP

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

2.5 Structure of the CHDM Disaster Management Plan (DMP)

The Municipal DMP of the CHDM 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 as amended, Section 3.1.1.2 of the NDMF, and the proposed outlay of a Disaster Management Plan from the Chris Hani District Disaster Management Framework.

Several peripheral documents will support the DMP, 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 Policy Framework for Disaster Management in South Africa (NDMF), the CHDM DMP is structured around the four KPA's of the NDMF which is also reflected in the provincial and CHDM Disaster Management Frameworks.

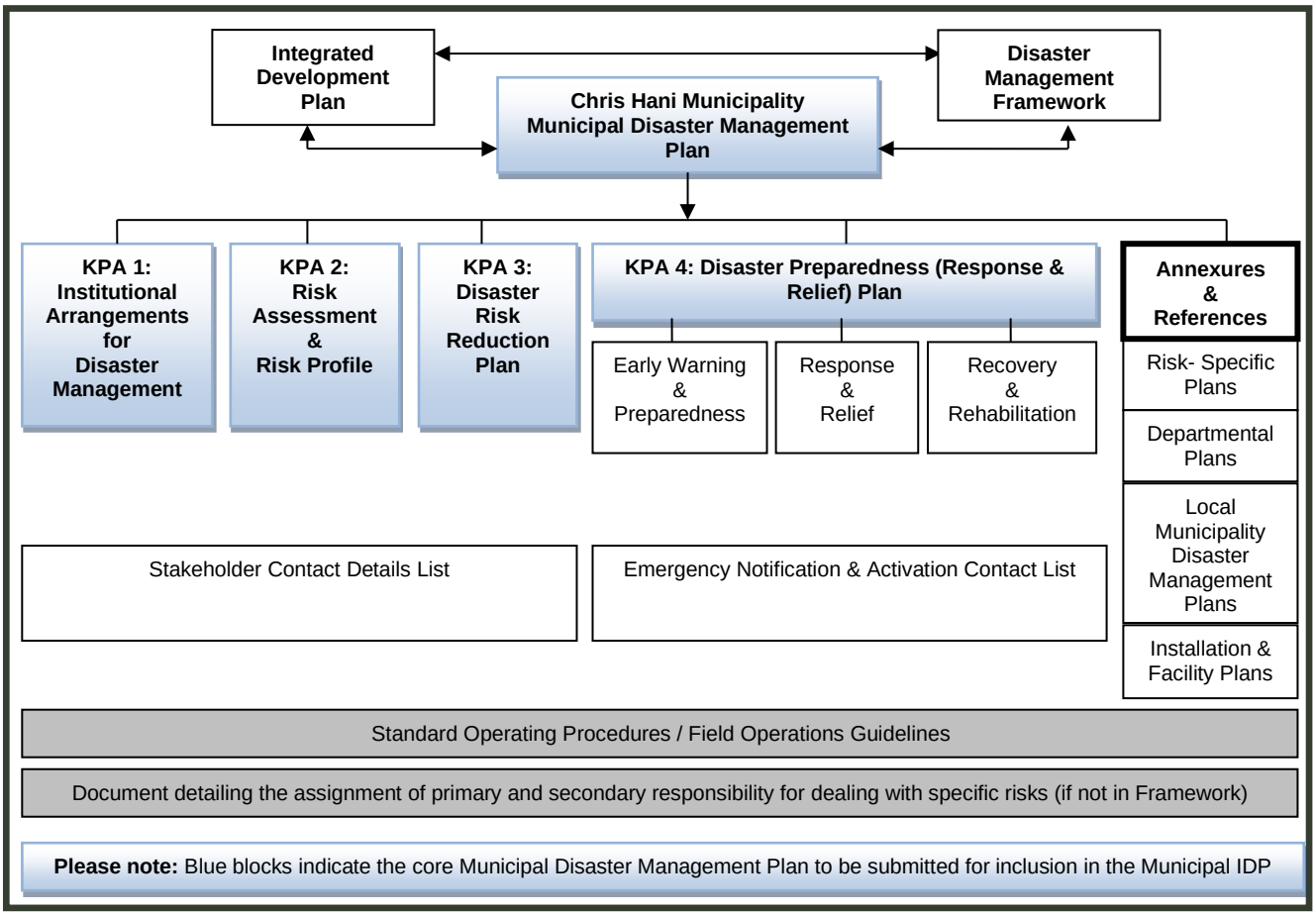


Figure 8: Structure of the Chris Hani Municipal Disaster Management Plan

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 Plan
- KPA 4: Disaster Preparedness (Response & Relief) Plan

Each of these key components will be discussed in more detail in Section 3.

3 KPA 1: Institutional Capacity

This section describes the planning for institutional capacity for Disaster Management within the CHDM in accordance with KPA 1 of the NDMF.

3.1 Current Institutional Arrangements within CHDM

The placement of the Disaster Management function has over the years changed from being part of the municipal manager's office to be falling under Community Services. The placement of the function has an influence on its cross-sectoral coordination capacity and should be considered carefully.

The Chris Hani District IIMP (Integrated Incident Management Portal) contains lists of vehicles and other resources which forms part of the Disaster Management Institutional Capacity for the District.

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 role-players and stakeholders work together with Disaster Management officials to reduce disaster risk. The need to spread the responsibility for Disaster Management wider than a few incumbents within the CHDM is a necessity, and is based on the idea that there is a shared responsibility for Disaster Management.

3.2 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 CHDM, Local Municipalities within the District Municipality, all departments and employees of the CHDM, all provincial and national organs of state operating within the CHDM, all sectors of society within the District Municipality and, perhaps most importantly, all the residents of CHDM.

3.2.1 Key outcomes of the Disaster Management Plan

The DMP of the CHDM seeks to achieve the following key outcomes:

- Integration of Disaster 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.

3.2.2 Focal points for Disaster Management

Although the municipal department within the CHDM assigned with the Disaster Management function should direct and facilitate the Disaster Management process, it cannot perform the whole spectrum of Disaster Management activities on its own. Disaster Management is everybody's business. It is therefore recommended that each municipal department within the District Municipality and each Local Municipality within the CHDM 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 CHDM 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.

3.2.3 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 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 3.4 describes the responsibilities of specific departments within the District in terms of Disaster Management. CHDM Disaster Management can support such a department with advice, information, facilitation and coordination.

Action: CHDM 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 Chris Hani Municipal Disaster Management Plan. These documents must be easily accessible to all relevant role-players.

3.2.4 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 co-ordination 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 Management efforts, such grey areas must be addressed and clearly assigned responsibilities must be confirmed.

Action: The risk profile of the CHDM will be considered by the CHDM 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 3** below.

Table 3: Assignment of primary and supporting role-players for disaster risks

Description of disaster risks identified in the risk profile of the CHDM. (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 has 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 later in this document.

3.3 Disaster Management Structure for the Chris Hani Municipality

In this section a Disaster Management structure for CHDM 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 CHDM Disaster Management Centre. Other relationships and key stakeholders must also be described.

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 Chris Hani 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 CHDM 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.

3.3.1 Chris Hani Disaster Management

“Chris Hani Disaster Management” refers to the department within the municipality assigned with the Disaster Management function. This organisational component should be formally established as the Chris Hani Disaster Management Centre to comply with the Disaster Management Act. The Disaster Management Centre of the CHDM 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 Management activities of all role players. A fully established and functioning Municipal Disaster Management Centre is a key element of this plan.

Action: The Chris Hani Municipality will consider the establishment and maintenance of a fully staffed and resourced Disaster Management Centre in order to enable the DMC to optimally perform its statutory responsibilities for the direction and execution of disaster risk management policy in the District.
Figure 9 illustrates the recommended 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 Policy Framework for Disaster Management in South Africa (NDMF), taking into consideration existing capacity and that capacity may have to be built in phases over time. The words “Senior Management” refers to whatever positions will be situated above the Head: Disaster Management within the municipal management structure and is not prescriptive, although the recommendations regarding the placement of the Disaster Management function that are contained in the National Disaster Management Framework are noted.

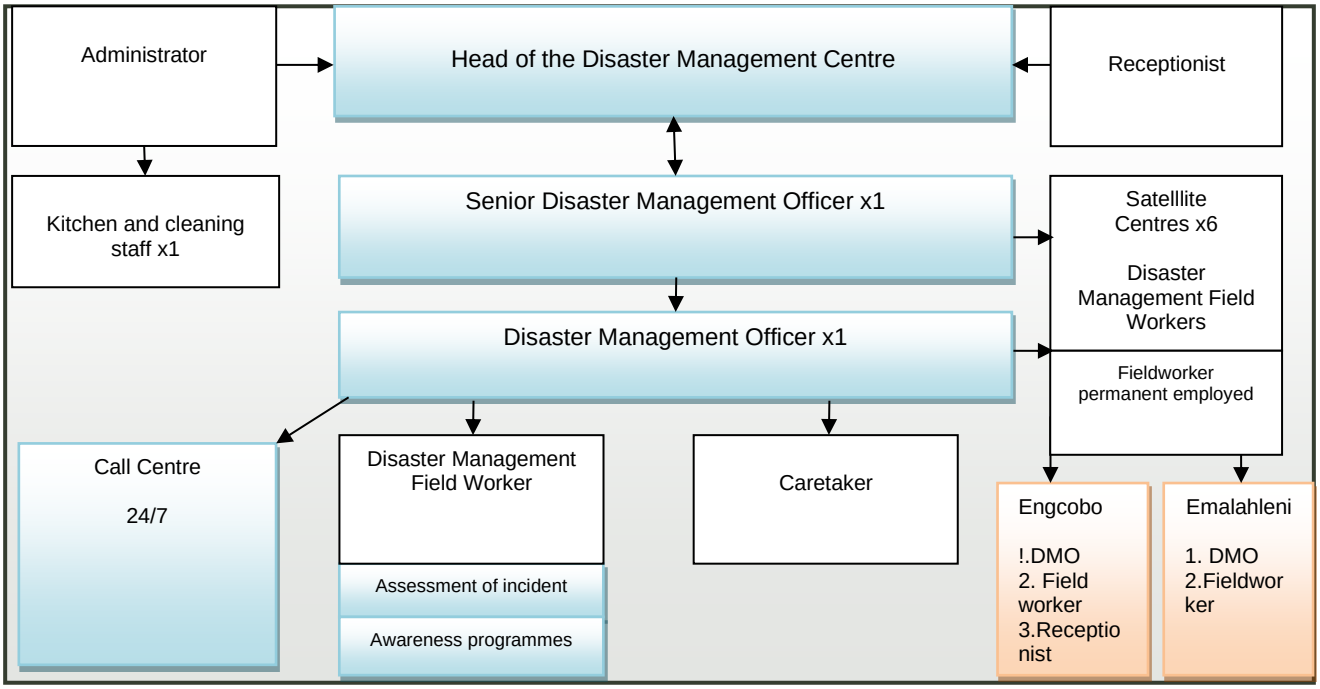


Figure 9: Current DMC Staff

3.3.2 Chris Hani District Disaster Management Advisory Forum

The Chris Hani District may establish a District Disaster Management Advisory Forum as described in Section 51 of the Disaster Management Act, 2002 as amended. It is advantageous for a District Municipality to establish such a forum to co-ordinate 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 co-ordination 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 CHDM 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 is contained within the CHDM Disaster Management Guidelines.

3.3.3 Interdepartmental Disaster Management co-ordination

Internal co-ordination 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 co-ordination 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 CHDM will consider the establishment of a dedicated body for interdepartmental Disaster Management co-ordination, or will assign this responsibility to the top-management team (of officials) of the Municipality.

3.3.4 Focal points for Disaster Management within municipal departments

Refer to section 3.2 above.

3.3.5 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.

3.3.6 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 Chris Hani 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.)

3.3.7 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 Chris Hani 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.)

3.3.8 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.

3.3.9 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.

3.3.10 Technical Task Teams

The Disaster Management Act, Sections 44 and 47, call for a co-ordinated 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 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 Chris Hani 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 Chris Hani DMC who in turn will submit it to the Chris Hani Disaster Management Advisory Forum. In the case of large incidents or threatening or realised disasters the respective technical task teams will advise the CHDM Disaster Management Centre on appropriate actions and management requirements.

3.3.11 Chris Hani Disaster Management

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 Chris Hani Disaster Management Communications Centre will liaise closely with the Emergency Control Centres / Groups of the Local Municipalities and other stakeholders within the CHDM 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: Chris Hani 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.

3.3.12 Chris Hani Disaster Operations Centre (DOC) / Joint Operations Centre (JOC)

The CHDM DOC is a facility equipped to serve as command and co-ordination 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.

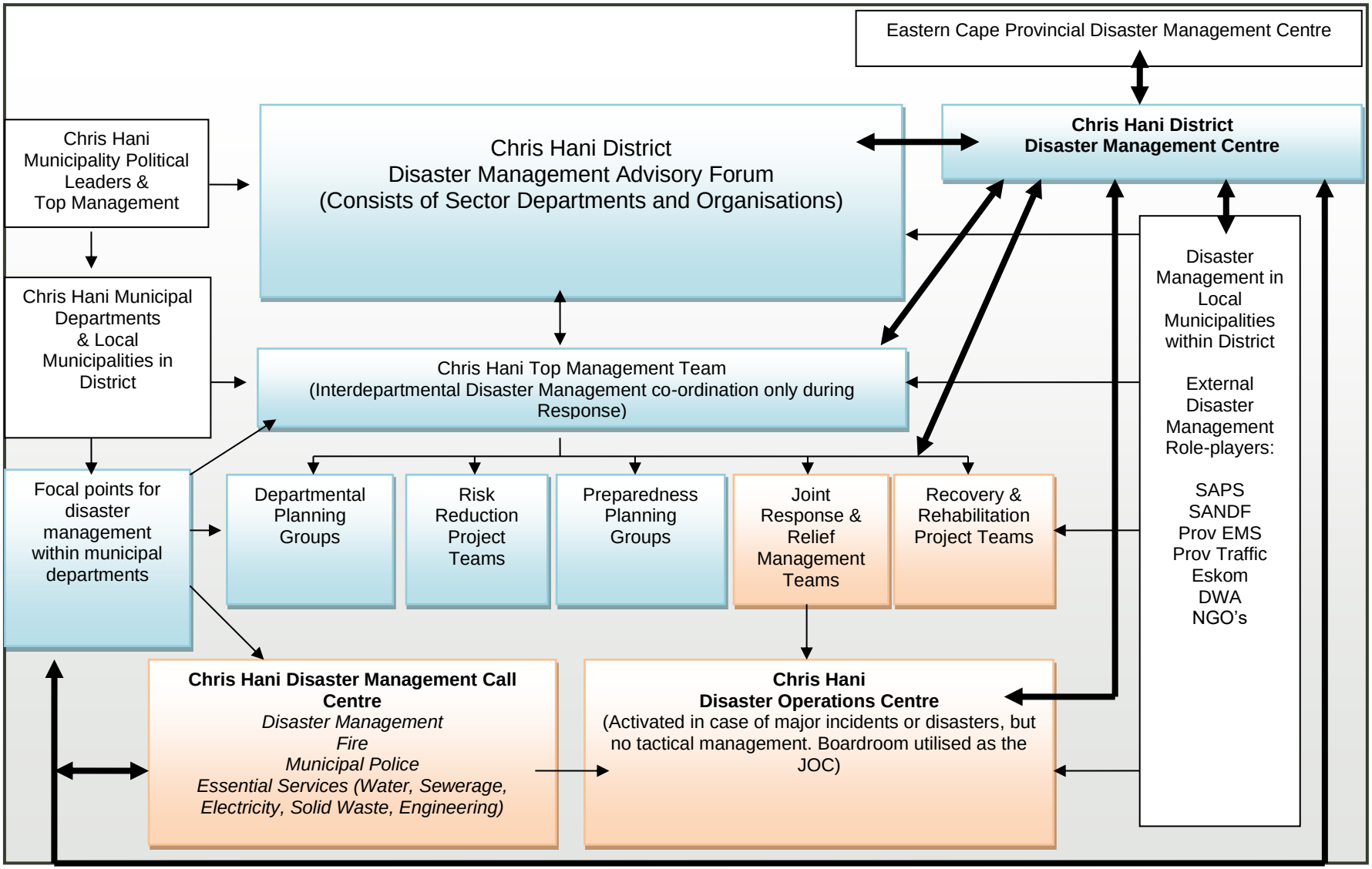


Figure 10: District Disaster Management Coordination and Collaboration

3.4 Institutional Responsibilities

The main CHDM 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 CHDM in keeping with Chapter 5 and Section 52 of the Disaster Management Act.

3.4.1 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); and
- Ensuring that the public, the media and neighbouring municipal officials are also advised of both the declaration and termination of a state of disaster.

3.4.2 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 CHDM.
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; and
- Identify persons/organizations to receive recognition for contributions to emergency response.

3.4.3 Head of Disaster Management 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. In addition, the Head need 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 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; and

- Ensure “memoranda of understanding” and “mutual aid agreements” with neighbouring local government and private entities.

Additional management responsibilities are described in Annexure C. Management responsibilities include information management, which is an important aspect of institutional capacity.

In the next section information management will be discussed.

3.5 Information Management System.

3.5.1 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:
  - Timeliness – the delivery of data and information in time to drive decision-making;
  - Consistency – delivery of data and information in a consistent and uniform manner;
  - Understandability – delivery of data and information in a manner that is appropriate and understandable in the target community;
  - Accuracy- precision in measurement and observation; and
  - 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:

  - Simple text descriptions – easily understood and uncomplicated verified facts;
  - Levels of warning – brief explanation of the hazard, its progression, cautionary advice and status;
  - Simple diagrams – locality maps, north point, scale, full key that is faxable or printable, preferably in black and white;
  - Imagery – photographs, aerial photographs, and satellite imagery;
  - Interpreted imagery as maps – reflecting pertinent items such as flood lines, lava flows and access/egress routes;
  - Contact details – e-mail addresses, telephone/fax numbers of persons, services and installations;
  - Registering for automatic updates – via telephone, e-mail and/or fax – in order to obtain latest developments;
  - Meteorological data – updating on changing weather conditions;
  - Hazard onset speed/rates – predictions on hazard movement/impact such as flood fronts and fire fronts in order to extrapolate events;
  - Web links, addresses/phone/fax indicating “further information” which should include explanations as to value and information type; and
  - 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.

3.5.2 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:
  - Response;
  - Rehabilitation;
  - Reconstruction;
- Executive Briefings;
- Control documentation – Standard Operating Procedures (SOPs), protocols, reports, framework for strategic decision taking, job descriptions, checklists etc.; and
- 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.

3.5.3 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;

3.5.4 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.

3.6 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 CHDM. These identified actions are summarised as recommendations in the table below for easy reference:

Table 4: Recommendations for Institutional Capacity in the CHDM

Action	Description
1	An annually revised database of the responsible persons in the sector departments be maintained by CHDM.
2	Chris Hani 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.

Action	Description
3	The risk profile of the CHDM will be considered by the Chris Hani 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 CHDM will establish and maintain a fully staffed and resourced Disaster Management Centre.
5	The CHDM will consider the establishment of a District Disaster Management Advisory Forum and act upon its decision in this regard.
6	The CHDM will consider the establishment of a dedicated body for interdepartmental Disaster Management co-ordination, 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 Chris Hani 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 Chris Hani 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	Chris Hani 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	Chris Hani 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 CHDM. In the next chapter the disaster risk profile of the CHDM 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 Local Municipalities within the District.

4.1 Risk Profile of the Chris Hani District Municipality

Various disaster risks have been identified and assessed in 2018, as set out in detail in the various Risk Assessment Reports[4]. 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 CHDM, 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 5.

[4] **Disaster Risk Assessment Report.** 2018. *Final Report prepared for the Chris Hani District Municipality*.

Table 5: Identified hazards in Chris Hani District Municipality

NATURAL HAZARDS	
Hydro Meteorological Hazards	
Flood	Lightning
Strong Winds/Tornado	Severe storms: Hail and Heavy snowfall
Drought	
Biological Hazards	
Animal diseases: African swine fever Rabies PRRS Red water *Veld fires*	Human diseases: Tuberculosis cholera HIV/Aids Diarrhoea Crime
Geological Hazards	
Landslides, rock fall and mudflow	Mud hut failure
TECHNOLOGICAL HAZARDS	
Road accidents HAZMAT by road/rail Fire: structural Hydraulic fracturing Critical infrastructure disruption	Structural failure (mud hut failure)
ENVIRONMENTAL HAZARDS	
Soil erosion	Air pollution
Overgrazing	Land degradation
Loss of biodiversity	Ground/surface water pollution

The table above illustrate the types of disasters that pose disaster risk within the CHDM 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.

4.1.1 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.

4.1.2 Risk Summary

In this section the results of the risk assessment conducted within the CHDM 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.

Hazard classification and identified hazards in the CHDM

HAZARDS 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 pertinent in the Chris Hani District Municipality
NATURAL HAZARDS These are natural processes or phenomena occurring in the biosphere that may constitute a damaging event. Natural Hazards are typically classified into:		
Geological Hazards: Geological hazards include internal earth processes, such as earthquakes and related geophysical processes such as mass movements, landslides, rockslides, surface collapses, debris or mud flows.	Earthquake-related Slope instability-related Coastal zone process-related Cosmic-related	Landslides, rock fall, mudflow Mud hut failure
Hydro-Meteorological Hazards: Natural processes or phenomena of atmospheric, hydrological or oceanographic nature.	Atmosphere-related Water-related	Floods Drought Severe storms: Hail and/or Heavy snowfall Lightning Strong wind/tornado
Biological Hazards: Processes of organic origin or those conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances.	Animal diseases Human diseases Veld fire risk	Veld fire Human diseases (Cholera, HIV/Aids, Tuberculosis, Diarrhoea) Animal diseases (African swine fever, rabies, PRRS, red water)
TECHNOLOGICAL HAZARDS: Technological hazards are defined as 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.	Transport Incidents Urban and/or Industrial incidents Critical infrastructure disruption Key national points Socio-economic disruption	Transport accidents Railway accidents HAZMAT by road/rail Service delivery failure or disruption; Structural collapse failure Shale gas exploration and development; Structural fire

ENVIRONMENTAL HAZARDS: These 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[5].		Loss of biodiversity Soil erosion Overgrazing Air pollution Land degradation; Surface water pollution; Groundwater pollution

Table 6: CHDM Common Hazards

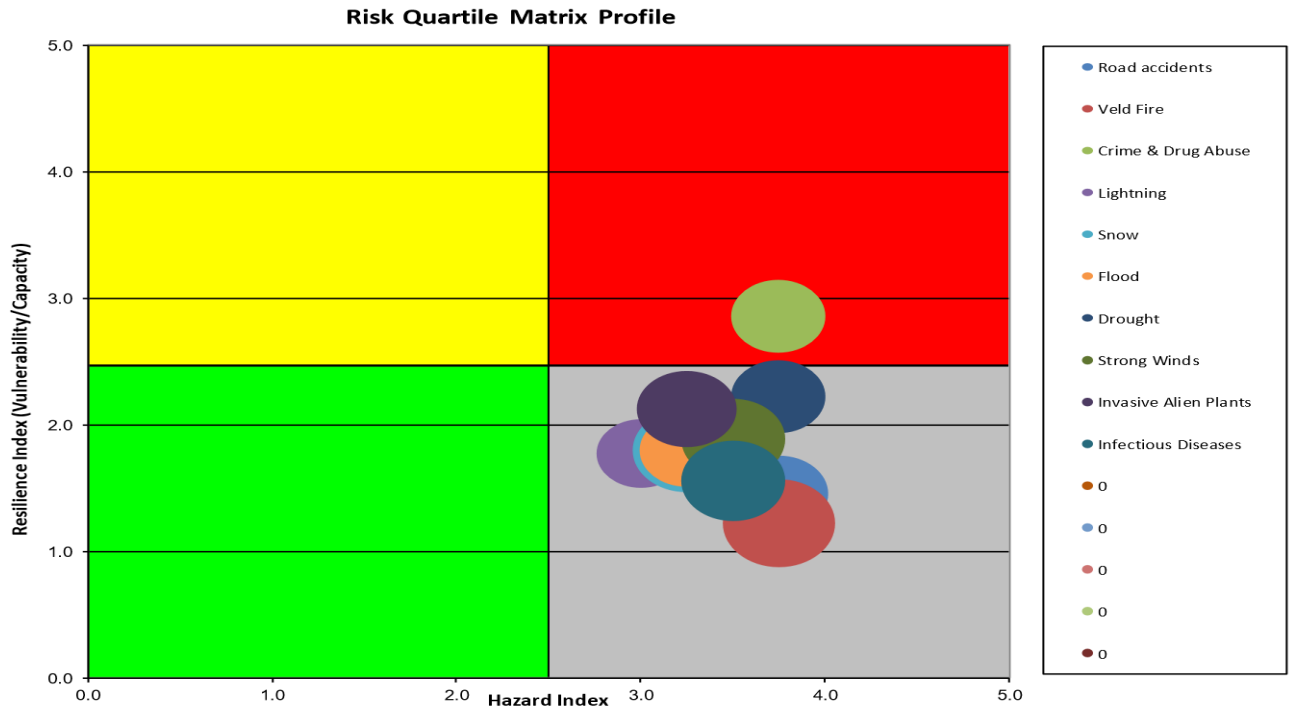
4.1.3 Key findings

Priority Risk	Priority Score	Risk Score
Vegetation fire	13	4.6
Snow	12	5.9
Strong winds	11	6.6
Infectious diseases	11	5.4
Invasive alien plants	10	6.9
Road accidents	10	5.5
Crime & drug abuse	9	10.7
Drought	9	8.3
Flood	9	5.9
Lightning	8	5.3

The figure below displays each of the priority risks on a RQM, which provides the following information, based on quantification and evaluation of each of the risks used in the quantification process and the Risk Quartile Matrix Monitoring and Evaluation Tool):

- Hazard Index
- Resilience Index (vulnerability+ capacity
- Priority of the risk (size of the bubble);and
- The position of the bubble on the RQM suggests the recommended risk reduction strategy for the management of the priority risk:
    - **Green zone-** tolerate or accept the risk
    - **Grey zone-** treat or reduce the risk
    - **Amber zone-** transfer the risk
    - **Red zone- terminate or avoid the risk**

[5] **United Nations International Strategy for Disaster Reduction.** 2002. *Living with Risk: A Global Review of Disaster Reduction Initiatives.*



Risk Quartile Matrix for all priority risks identified for CHDM.

Based on the placement of the priority risks on the RQM, the following inferences can be made:

- Vegetation fires, snow, strong wind, infectious diseases and invasive alien plants were considered high priority risks at the time of assessment, with vegetation fire the highest priority risk in this category;

Road accidents, flooding, drought, crime and lightning were considered medium priority risks at the time of assessment, with road accidents the highest priority risk in this category;

The recommended risk management strategy for priority risks, with the exception of vegetation fires, is to treat or mitigate these risks. In other words, projects identified to manage these risks must seek to reduce the impact of the risk; and

The recommended risk management strategy for vegetation fire is to terminate or prevent the risks. In other words, projects identified to manage vegetation must seek to eliminate or reduce the probability and potential impact of vegetation fires.

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 process described here can be considered as a Standard Operating Procedure (SOP) for Risk Reduction.

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 CHDMAF;
- Upon project approval from the CHDMAF, 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 CHDMC;
    - 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 Chris Hani Municipality

Risk reduction project proposals for priority risks are listed in the tables below. The Chris Hani 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.

5.2.1 Disaster Risk Project Proposals: Fire - Structural and Veld

Risk Reduction Category		Risk Reduction Project Proposals
Physical Planning Measures	1	Plan and provide for fire stations based on land use categories and fire risk assessment
	2	Plan and provide for buffer zone between residential and vegetation areas. Cut grass at regular and seasonal intervals
	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 i.e. provide fire equipment and fire beaters
	6	Ensure that development of dwellings does not take place before adequate bulk services are provided. Approval of building plans.
	7	Encourage and facilitate Integrated catchment management planning i.e. by providing sand and installing water taps or hydrants at central locations
Engineering & Construction Measures Economic 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	Ensure that the fire extinguishers are assessed on an annual basis
	17	Research and upgrading / improvement of firefighting equipment/ trucks/ hydrants
	18	Provide fire hydrants in informal settlements
	19	Install watch towers, fire breaks, fire extinguishers in forestry areas
	20	Improve the quality and provide appropriate of firefighting equipment at all levels
	21	Ensure that fire hydrant water supply is sufficient in higher lying areas. Build dams for water reticulation in strategic high risk areas
	22	Provide for capital projects in municipal budget
	23	Provide funds for upgrading of fire equipment

Risk Reduction Category		Risk Reduction Project Proposals
	24	Fines for illegal electrical connections
	25	Implement program to decrease high risk housing
	26	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
	27	Rural areas property rebates for areas under conservation
	28	Provide affordable and accessible insurance packages for emerging and small scale farming communities
	29	Action plans in place
	30	Reaction plan in place
	31	Purchase a small vehicle for veld fires for Cradock
Management & Institutional Measures	32	Train fire marshals for commercial/industrial complexes
	33	Appoint / train appropriate staff
	34	Conduct fire and evacuation drills
	35	Ensure evacuation doors are unlocked
	36	Running of programmes for prevention of arson
	37	Maintenance program for fire extinguishing equipment
	38	Identify and procure appropriate equipment
	39	Structured and sustained fire-prevention inspections
	40	Cleaning of undergrowth around buildings
	41	Train and deploy firefighting volunteers at fire stations and road works
	42	Identifying high risk fire areas (hotspots) from Disaster Risk Assessment report
	43	Identify safer alternatives for cooking and lighting i.e. stoves, lamps etc.
	44	Ensure correct storage of combustible materials
	45	Develop and implement maintenance programs for of access routes in high risk fire areas
	46	Train and develop fire response teams and fire beaters
	47	Training at all levels to improve the implementation of incident command system as a standard operating procedure

Risk Reduction Category	Risk Reduction Project Proposals	
	48	Develop a management policy for the sale of paraffin
	49	Establish and support Fire Protection Association
	50	Develop area fire management plans
	51	Refrain from using recycling cardboard containers for recycling of paper
	52	Revisit policy for evicting shack dweller
	53	Maintenance programme
	54	Decentralize funds
	55	Local Municipality and ESKOM should take active ownership of their responsibilities.
Societal Measures	56	Develop fire evacuation procedures for commercial/industrial complexes
	57	Declare non-smoking areas
	58	Prohibit fires in high risk areas
	59	Conduct fire hazard awareness programs
	60	Conduct community awareness programs in communities before the fire season starts. So annually before June.
	61	Implement community based programs for the proper care/maintenance of electrical equipment
	62	Include fire prevention education in school curriculum
	63	Include Disaster Management in school curriculum
	64	Implement fire education, fire risk awareness, recruitment of volunteer fire fighters, social responsibility, ownership system e.g. hydrants
	65	Establish disaster ward committees

5.2.2 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 i.e. by building bridges
	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 i.e. alter hibernation areas of livestock if it is in the floodplain areas
	8	Study and understand the impact of climate change on development
	9	Signage
	10	Asset management
	11	Maintenance i.e. Dept of Public Works, Disaster Management and Dept of Water Affairs should collaborate to remove debris and reeds from riverbeds
	12	Immediate demolishment of illegal housing structures in floodplain areas so as to prevent a mushrooming event
	13	Build relevant sheds and shelter areas for livestock
Engineering & Construction Measures	14	Study EIA to inform construction and building measures
	15	Identifiable flood measuring and early warning systems
	16	Plan and Build retention dams to reduce risk of flooding
	17	Restore and maintain water catchment areas
	18	Build retaining walls to protect buildings
	19	Improve and upgrade storm water reticulation systems regularly
	20	Develop and maintain Early warning systems
	21	Develop and maintain sustained cleaning programs for rivers and dams
	22	Plan bigger capacity dams to regulate flow of water
	23	Implement programmes and measures to prevent erosion i.e. planting of trees and mulching grass

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Plan and erect Visible warning signs in low lying areas
Economic Measures	25	Provide for disaster relief funds on local municipal level and district level
	26	Adequate provision for the for maintenance of storm water systems
	27	Farmers developing areas for agricultural use in flood prone areas should pay increases insurance on crops in those areas
	28	Diversify the agricultural industry
	29	Provide financial incentives to employ and retain engineers
	30	Provide financial incentives for farming communities and emerging farmers who strategize and mitigate risks
Management & Institutional Measures	31	Enforce relevant bylaws
	32	Plan for the support for affected communities
	33	Take climate change into account when developing plans and protocols
	34	Develop and maintain flood Emergency response teams
	35	Develop and supervise Maintenance programs
	36	Ensure that SOP for disasters are developed and maintained
	37	Utilise the Dept of Agriculture's Project Implementation (PIMS) to assist the Dept of Infrastructure and Engineering
	38	Dept of Public Works, Disaster Management and Dept of Water Affairs should collaborate to remove debris and reeds from riverbeds
	39	Facilitate Strategic planning of resources to cover all areas during emergencies
	40	Plan and ensure Strategic distribution of Disaster Management resources across area
	41	Ensure the provision of Emergency flood kits
	42	Mutual aid agreements to be established for relief and response
	43	More command centre vehicles
	44	Quality assessments
	45	Asset management
Societal Measures	46	Develop Awareness training and workshops in high risk areas
	47	Develop and inform communities of response actions to early warning systems and evacuation drills

Risk Reduction Category	Risk Reduction Project Proposals	
	48	Ensure Coordination and cooperation with NGO's
	49	Community awareness i.e. through preseason radio warnings
	50	Early warning systems: include indigenous knowledge for early warnings especially for emerging farmers. Educate these communities that the “fertile” soils are usually located in dangerous flood prone areas and potential erosion areas

5.2.3 Disaster Risk Project Proposals: Storms / Severe Weather (hail and cold snap)

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 i.e. build trees
	6	Identify alternate suitable venues/facilities for emergency services
	7	Study and understand the impact of climate change on development
Engineering & Construction Measures	8	Conduct a feasibility study of the area before any construction commences
	9	Fencing off of wetlands
	10	Develop and maintain severe weather early warning systems
	11	Lightning conductors on roofs in high risk areas
	12	Implement robust construction methods according to building codes and known severe weather occurrence
	13	Provide robust community facilities that are less vulnerable to severe weather and can be used as temporary emergency shelter
	14	Ensure known severe weather occurrences are considered in all municipal infrastructure construction projects
	15	Proper maintenance, monitoring and evaluation of stormwater systems and planning
Economic Measures	16	Pro-active maintenance
	17	Suggest the implementation of an emergency fund at local municipal level for each LM in the CHDM
	18	Establish co-operations of farming communities
	19	Adequate provision for the maintenance buildings to reduce vulnerability to severe weather
	20	Procure insurance on important infrastructure that can be damaged by severe weather
	21	Institute and enforce fines or other punitive measures for non-adherence to building codes
	22	Provide accessible and affordable insurance packages for high risk communities
	23	Plan for the support of affected communities

Risk Reduction Category		Risk Reduction Project Proposals
Management & Institutional Measures	24	Develop and maintain storm damage and search & rescue emergency response teams
	25	Develop and implement preventative maintenance programmes
	26	Integration of government department and municipalities to visit the Lusaka community in Middelburg
	27	Ensure that standard operating procedures for disasters are developed and maintained. This should be tailored for each LM
	28	Facilitate strategic planning of resources to cover all areas during emergencies
	29	Plan and ensure strategic distribution of Disaster Management resources across area
	30	Educate building inspectors and infrastructure maintenance teams on known severe weather threats
	31	Mutual aid agreements to be established for relief and response
	32	Ensure availability of mobile command vehicles and emergency housing
	33	Identifying hotspots / high risk areas – develop database of severe weather events and damage / impact experienced
Societal Measures	34	Develop Awareness training and workshops in high risk areas before the rainy season
	35	Develop and inform communities of response actions to early warning systems
	36	Ensure Coordination and cooperation with NGO's such as ADRA
	37	Community awareness and involvement of the youth
	38	Collect community-based information on past severe weather events and make publicly available for school and research projects
	39	Identify and utilize indigenous knowledge systems
	40	Focus on combatting climate change through adaptation measures

5.2.4 Disaster Risk Project Proposals: Road Accident

Risk Reduction Category		Risk Reduction Project Proposals
Physical Planning Measures	1	Regulate the traffic through speed bumps, circles, traffic lights
	2	Provide sufficient fencing for grazing areas of livestock
	3	Provide enough signs for pedestrian and school crossings
Engineering & Construction Measures	4	Maintenance of the road infrastructure
	5	In high accident zone areas build underground bridges
Economic Measures	6	Pro-active maintenance
	7	Institute and enforce fines or other punitive measures for non-adherence
Management & Institutional Measures	8	Ensure the availability and visibility of enough trained traffic personnel
	9	Plan for the support of affected communities
	10	Develop and maintain emergency response teams
	11	Develop and implement preventative maintenance programmes
	12	Ensure that standard operating procedures for road accidents are developed and maintained
	13	Plan and ensure strategic distribution of Disaster Management resources across area
	14	Educate community members on known high risk areas
	15	Ensure availability of mobile command vehicles
	16	Identifying hotspots / high risk areas – develop database of severe weather events and damage / impact experienced
	17	Identify high risk areas through the Disaster Risk Assessment report and create tailored programmes that focuses on pertinent areas
Societal Measures	18	Develop Awareness training and workshops in high risk accident areas
	19	Ensure Coordination and cooperation with all government departments (Traffic, EMS), SAPS and NGO's
	20	Community awareness

5.2.5 Disaster Risk Project Proposals: Drought

Risk Reduction Category	Risk Reduction Project Proposals	
Physical Planning Measures	1	Study and understand the impact of climate change on development
	2	Build water reticulation structures
	3	Invest in JoJo tanks
	4	Camp rotation to prevent overgrazing (commonage)
	5	Fencing off of camps for grazing areas of livestock
	6	Diversifying farming methods i.e. farm with Nguni cows as they are drought resistant
	7	Plant drought resistant crops i.e. dyam dyam
	8	Remove alien plants – i.e. cutting down wattle trees
	9	Remove reeds from riverbeds
	10	Build proper storage and preservation facilities for agricultural produce
Engineering & Construction Measures	11	Regulate management of water structures
	12	Landscaping in backyards
	13	Ensure known drought occurrences are considered in all municipal infrastructure construction projects
	14	Build granaries and other storage areas for emergency animal feed
	15	Build water reticulation dams in drought ridden areas. As identified in the Disaster Risk Assessment report
Economic Measures	16	Pro-active surveillance
	17	Provide affordable and accessible insurance for emerging or small-scale farming communities
	18	Institute and enforce fines or other punitive measures for non-adherence to water saving measures
Management & Institutional Measures	19	Plan for the support of affected communities. To be included and addressed in Disaster Management Plan
	20	Develop and implement preventative maintenance programmes
	21	Ensure that standard operating procedures for droughts are developed and maintained
	22	Community members able to identify water leakages
	23	Facilitate strategic planning of resources to cover all areas during emergencies
	24	Plan and ensure strategic distribution of Disaster Management resources across area

Risk Reduction Category	Risk Reduction Project Proposals	
	25	Educate farming and rural communities on known symptoms of drought
	26	Mutual aid agreements to be established for relief and response
	27	Ensure availability of mobile command vehicles
	28	Incentives for farming communities actively participating in advisory forums
	29	Identifying hotspots / high risk areas – develop database of drought events and damage / impact experienced
Societal Measures	30	Develop Awareness training and workshops in high risk areas
	31	Develop and inform communities of response actions to early warning systems
	32	Ensure Coordination and cooperation with NGO's
	33	Community awareness
	34	Collect community-based information on past severe drought events and make publicly available for school and research projects
	35	Institute community garden project scheme
	36	Water week by DWA To sustain local economy and avoid death of livestock and increase in unemployment. in conjunction with local LMs
	37	Strengthening of education programmes

5.2.6 Disaster Risk Project Proposals: Erosion/ Overgrazing

Risk Reduction Category		Risk Reduction Project Proposals
Physical Planning Measures	1	Identification and plotting of vacant high risk areas for future reference to avoid human settlements in such areas
	2	Implement erosion measures such as planting of trees
	3	Establish what the number of livestock allowed per hectare is
	4	Practice crop rotation
	5	Follow the correct ploughing measures
	6	Practice commonages
	7	Establish camps to control the grazing by livestock
	8	Plant indigenous trees and plants
	9	Study and understand the impact of climate change on development
Engineering & Construction Measures	10	Ensure known severe weather occurrences are considered in all municipal infrastructure construction projects
	11	Build gabion structures where needed
Economic Measures	12	Pro-active maintenance
	13	Procure insurance on important infrastructure that can be damaged by erosion
	14	Institute and enforce fines or other punitive measures for non-adherence to building codes
	15	Establish agricultural co-operations
Management & Institutional Measures	16	Plan for the support of affected communities
	17	Develop and implement preventative maintenance programmes in collaboration with the Dept of Agriculture, local farming communities and disaster management
	18	Ensure that standard operating procedures for disasters are developed and maintained
	19	Facilitate strategic planning of resources to cover all areas during emergencies
	20	Plan and ensure strategic distribution of Disaster Management resources across area
	21	Educate building inspectors and infrastructure maintenance teams on known erosion threats
	22	Mutual aid agreements to be established for relief and response
	23	Identifying hotspots / high risk areas – develop database of erosion and damage / impact experienced

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Establish agricultural colleges
Societal Measures	25	Develop Awareness training and workshops in high risk areas
	26	Develop and inform communities of response actions to early warning systems
	27	Ensure Coordination and cooperation with NGO's
	28	Community awareness
	29	Collect community-based information on past severe weather events and make publicly available for school and research projects
	30	Appointment and introduction of rangers
	31	Maintain fencing of camps

5.2.7 Disaster Risk Project Proposals: Rock fall, landslides and mudflow

Risk Reduction Category		Risk Reduction Project Proposals
Physical Planning Measures	1	Considering weather conditions and storm / severe weather occurrence
	2	Identification and plotting of vacant high risk areas for future reference to avoid human settlements in such areas
	3	Retro-fitting roads to ensure resilience to storms and severe weather i.e. build gabions, drill rock and place pins
	4	Study and understand the impact of climate change on development
	5	Close roads
Engineering & Construction Measures	6	Erect signage at high risk areas
	7	Implement robust construction methods according to building codes
	8	Plant natural vegetation
	9	Adequate town planning
	10	Maintenance of stormwater systems and drainage systems
Economic Measures	11	Pro-active maintenance
	12	Adequate provision for the maintenance buildings to reduce vulnerability
	13	Procure insurance on important infrastructure that can be damaged landslides, rock fall or mud flow
Management & Institutional Measures	14	Develop and maintain search & rescue emergency response teams
	15	Develop and implement preventative maintenance programs
	16	Ensure that standard operating procedures for disasters are developed and maintained
	17	Facilitate strategic planning of resources to cover all areas during emergencies
	18	Educate building inspectors and infrastructure maintenance teams on known threats
	19	Ensure availability of mobile command vehicles
	20	Identifying hotspots / high risk areas – develop database of rock fall, landslides and mud flow events and damage / impact experienced
Societal Measures	21	Develop Awareness training and workshops in high risk areas
	22	Ensure Coordination and cooperation with NGO's
	23	Community awareness

Risk Reduction Category	Risk Reduction Project Proposals	
	24	Collect community-based information on past rock fall, landslides and mud flow events and make publicly available for school and research projects

5.2.8 Disaster Risk Project Proposals: Lightning

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 lightning occurrence in development planning, zoning and land-use management
	3	Focus on indigenous knowledge systems that are being used
	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
Engineering & Construction Measures	6	Develop and maintain severe weather early warning systems
	7	Lightning conductors on roofs in high risk areas
Economic Measures	8	Pro-active maintenance
	9	Institute and enforce fines or other punitive measures for non-adherence to building codes
	10	Appoint a service provider that can deliver accessible and affordable insurance packages. Especially focused on the farming communities as they suffer due to livestock loss.
Management & Institutional Measures	11	Plan for the support of affected communities
	12	Ensure that standard operating procedures for disasters are developed and maintained
	13	Facilitate strategic planning of resources to cover all areas during emergencies
	14	Plan and ensure strategic distribution of Disaster Management resources across area
	15	Educate building inspectors and infrastructure maintenance teams on known lightning threats
	16	Ensure availability of mobile command vehicles
	17	Identifying hotspots / high risk areas – develop database of lightning events and damage / impact experienced
	18	Implement a programme that will reward and strengthen support and collaboration attained during disaster forums
Societal Measures	19	Develop Awareness training and workshops in high risk areas
	20	Develop and inform communities of response actions to early warning systems
	21	Ensure Coordination and cooperation with NGO's
	22	Community awareness the responsibility of Disaster Management Centre, disaster risk officials and volunteers in collaboration with the relevant government departments, ESKOM etc.

Risk Reduction Category	Risk Reduction Project Proposals
	23 Collect community-based information on past severe lightning events and make publicly available for school and research projects

5.2.9 Disaster Risk Project Proposals: Sewage and/or drainage failure

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	4. Keep rivers clean and cleared (flotsam can block pipes under bridges)
	5. Outsource cleaning or waste treatment services
Societal Measures	6. Education (understanding of sanitation and hygiene)

5.2.10 Disaster Risk Project Proposals: Water Pollution

Risk Reduction Category	Risk Reduction Project Proposals
Physical Planning Measures	1. Reduce density of pit latrines (requires reducing the density of informal settlements)
	2. Protect springs, rivers and other water sources
Engineering and Construction Measures	3. Ensure sufficient number of refuse bins available
	4. Provide water supply schemes
	5. Construct drinking troughs for livestock
	6. Line VIP pits
	7. Pit content removal or chemical treatment (Issue of affordability, chemicals may also affect ground water)
	8. Lining of graves
	9. Urinal diversion / bio digesters / anaerobic process. Left with fertilizer
	10. Construct water reservoirs
Management & Institutional Measures	11. Conduct a geo-hydrological study of the high risk areas
	12. Law enforcement and monitoring and investigation of illegal dumping
	13. Ground Water Pollution Management Plan – includes taking water samples and testing it
	14. Improve solid waste removal services
	15. Control and monitor agricultural pollution through the use of fertiliser
	16. Monitor and evaluate the treatment of water drinking sources on a regular basis
	17. Actively monitor the process of shale gas exploration
Societal Measures	18. Education (understanding of water pollution)
	19. Promote health and hygiene education
	20. Promote waste management and recycling
	21. Promote utilising organic fertiliser
	22. Promote awareness raising regarding the long-term negative impact of shale gas development on available surface water supplies and underground water supplies

5.2.11 Disaster Risk Project Proposals: Strong wind/ Tornado

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 strong wind 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 strong winds
	5	Implement attenuation measures such as windbreaks in high risk areas i.e. plant trees
	6	Identify alternate suitable venues/facilities for emergency services
	7	Study and understand the impact of climate change on development
	8	Do not shear animals during this season
Engineering & Construction Measures	9	Conduct a feasibility study of the area before any construction commences
	10	Develop and maintain severe weather early warning systems
	11	Implement robust construction methods according to building codes especially regarding the roofs of the housing structures i.e. makes use of roofs with gables. And propose and utilize alternative construction materials to the perishable pine tress that are currently being utilized
	12	Provide robust community facilities that are less vulnerable to severe weather and can be used as temporary emergency shelter
	13	Ensure known strong wind/tornado occurrences are considered in all municipal infrastructure construction projects
	14	Require financial incentives to employ and retain engineers
	15	Erect signs to warn community of high risk area
Economic Measures	16	Pro-active maintenance
	17	Suggest the implementation of an emergency fund at local municipal level for each LM in the CHDM
	18	Adequate provision for the maintenance buildings to reduce vulnerability to tornadoes
	19	Procure insurance on important infrastructure that can be damaged by tornadoes
	20	Institute and enforce fines or other punitive measures for non-adherence to building codes
	21	Provide accessible and affordable insurance packages for high risk communities

Risk Reduction Category	Risk Reduction Project Proposals	
Management & Institutional Measures	22	Plan for the support of affected communities
	23	Develop and maintain search & rescue emergency response teams
	24	Develop and implement preventative maintenance programmes
	25	Ensure that standard operating procedures for disasters are developed and maintained. This should be tailored for each LM
	26	Facilitate strategic planning of resources to cover all areas during emergencies
	27	Plan and ensure strategic distribution of Disaster Management resources across area
	28	Educate building inspectors and infrastructure maintenance teams on known tornado threats
	29	Mutual aid agreements to be established for relief and response
	30	Ensure availability of mobile command vehicles and emergency housing
	31	Identifying hotspots / high risk areas – develop database of tornado events and damage / impact experienced
Societal Measures	32	Develop Awareness training and workshops in high risk areas
	33	Develop and inform communities of response actions to early warning systems
	34	Ensure Coordination and cooperation with NGO's such as ADRA
	35	Community awareness and involvement of the youth
	36	Collect community-based information on past tornado events and make publicly available for school and research projects
	37	Identify and utilize indigenous knowledge systems. Cultural heritage of rondavels not be ignored

5.2.12 Disaster Risk Project Proposals: Heavy snowfall

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	Identify alternate suitable venues/facilities for emergency services
	3	Study and understand the impact of climate change on development
	4	Do not shear animals during this season
Engineering & Construction Measures	5	Conduct a feasibility study of the area before any construction commences
	6	Develop and maintain severe weather early warning systems
	7	Provide robust community facilities that are less vulnerable to heavy snowfall and can be used as temporary emergency shelter
	8	Ensure known occurrences of Heavy snowfall are considered in all municipal infrastructure construction projects
	9	Erect signs to warn community of high risk area
Economic Measures	10	Pro-active maintenance
	11	Suggest the implementation of an emergency fund at local municipal level for each LM in the CHDM.
	12	Institute and enforce fines or other punitive measures for non-adherence to building codes
	13	Provide accessible and affordable insurance packages for high risk communities
Management & Institutional Measures	14	Plan for the support of affected communities
	15	Develop and maintain search & rescue emergency response teams
	16	Develop and implement preventative maintenance programmes
	17	Ensure that standard operating procedures for disasters are developed and maintained. This should be tailored for each LM
	18	Facilitate strategic planning of resources to cover all areas during emergencies
	19	Plan and ensure strategic distribution of Disaster Management resources across area
	20	Educate building inspectors and infrastructure maintenance teams on known tornado threats
	21	Mutual aid agreements to be established for relief and response
	22	Ensure availability of mobile command vehicles and emergency housing
	23	Identifying hotspots / high risk areas – develop database of heavy snowfall events and damage / impact experienced

Risk Reduction Category	Risk Reduction Project Proposals	
Societal Measures	24	Develop awareness training and workshops in high risk areas
	25	Develop and inform communities of response actions to early warning systems
	26	Ensure Coordination and cooperation with NGO's such as ADRA
	27	Community awareness and involvement of the youth
	28	Collect community-based information on past tornado events and make publicly available for school and research projects
	29	Identify and utilize indigenous knowledge systems. Cultural heritage of rondavels not be ignored

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

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 CHDMAF, such a lead department must manage all planning and budgeting processes for said project. The Disaster Management department of the CHDM 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 Chris Hani Disaster Management Centre.

5.3 Risk reduction capacity for the Chris Hani Municipality

The organisational structure for risk reduction within the municipality includes Chris Hani Disaster Management, Disaster Management representatives of each Local Municipality within the District, the Chris Hani District Disaster Management Advisory Forum, the top-management team of the CHDM, 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 Project evaluation mechanism: Evaluate and prioritise future IDP projects in the context of disaster risk

The use of this mechanism is considered as a Standard Operating Procedure (SOP) for Disaster Management evaluation of proposed development projects.

The objective of this evaluation mechanism is to evaluate and prioritise future IDP projects in the context of disaster risk. Disaster risk evaluation criteria for approval of for example infrastructure projects should be based on the following questions:

- Does the footprint of the planned project fall within any existing identified disaster risk affected area?
- What will the potential disaster risk exposure of the planned project be (seriousness, manageability, urgency, growth) to existing disaster risks?
- Can the planned project pose any threat to its surroundings in terms of potential hazard impact generated by the project (seriousness, manageability, urgency, growth)?
- Can risk (1) to the project and/or risk (2) from the project be reduced through design changes or other measures?
- If risk is reduced to a level as low as reasonably possible through appropriate measures, will the potential benefit of the project outweigh the remaining potential risk "cost" of the project?

A procedure should be implemented whereby the DMC reviews all proposed IDP projects with this evaluation mechanism, or where line departments are capacitated to self-evaluate their project proposals. The table below can assist the DMC in evaluating project proposals in order to prioritise developmental initiatives focused on vulnerability reduction and resilience building.

Project name / description	Development approval and prioritisation questions						Relative risk posed by project	Project priority
	Project falls within hazard affected area(s)	Project can pose a threat to surrounding areas	Risk to the project can be reduced significantly	Risk from the project can be reduced significantly	The benefits of the project outweigh the potential risk "cost"	Does the potential project directly address risk reduction of any potential disaster risk		
	Unknown = 4 *Yes multiple = 3* *Yes = 2* *No = 1*	*Unknown = 4* *Yes high risk = 3* *Yes low risk = 2* *No = 1*	*Unknown = 4* *No = 3* *Yes moderate confidence = 2* *Yes high confidence = 1*	*Unknown = 4* *No = 3* *Yes moderate confidence = 2* *Yes high confidence = 1*	*Unsure = 4* *No = 3* *Yes moderate confidence = 2* *Yes high confidence = 1*	*Not considered = 4* *No = 3* *Yes to some degree = 2* *Yes confirmed = 1*		
Worst project	4	4	4	4	4	4	24	5
Best project	1	1	1	1	1	1	6	1
No risk assessment	4	1	1	1	1	1	9	2
Medium high project	3	3	3	3	3	3	18	4
Medium low project	2	2	2	2	2	2	12	3

5.5 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 CHDM 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; and
- 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 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 Chris Hani 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 Response Capacity

The establishment of a 24/7 monitoring, notification and activation and emergency or disaster management operational support is a key requirement of this Plan. The availability of such a centre will enable the DMC to quickly mobilise appropriate resources to respond to major incidents and disasters. This centre, and in its absence the Municipal Disaster Management Co-ordinator, will maintain an up-to-date list of contact details for all parties that may need to be informed about or requested to respond to major incidents and disasters affecting the municipal area.

Disaster and emergency services contacts for each local Municipality and the CHDM is provided later in this section.

6.3 Declaration of incidents and disasters

It is advisable that the CHDM adopts a formal policy for the declaration of a major incident or emergency and disasters. The following table outlines a possible five-level incident declaration methodology followed by two tables for early warning levels and incidents for local municipalities and the CHDM.

Five incident levels	Interpretation of incident levels	Emergency levels
Level 5	Disaster	**General Emergency – Warning** "We expect or have a general emergency that is likely to significantly affect additional people, property, the environment or economy. We have insufficient resources to deal with the incident and need urgent assistance."
Level 4	Major Incident	**Site Emergency – Watch**

		"We expect or have an emergency and there is a possibility that it may significantly affect additional people, property, the environment or economy. We may require additional external assistance and request agencies to be on standby to assist."
Level 3	Incident	**Alert – Advisory** "We expect or have an incident which is contained and will not significantly affect additional people, property, the environment or economy. We have sufficient resources to deal with the incident but may require limited external assistance."
Level 2	Minor Incident	**Unusual event** "We have had a minor incident which will not significantly affect additional people, property, the environment or economy. Our resources are sufficient and we do not require external assistance."
Level 1	Occurrence	**Once-off occurrence** "We have an occurrence which only affects a small number of individuals and does not significantly affect any additional communities, property, the environment or economy. Our resources are sufficient to deal with the occurrence and we do not require assistance from external role-players."

Early Warning Levels

Early Warning Levels	LMs	Early Warning Levels	CHDM
EW-L-0	Normal	**EW-D-0**	
EW-L-1	Local Alert	**EW-D-0**	Normal
EW-L-2	Local Watch	**EW-D-1**	District Alert
EW-L-3	Local Warning	**EW-D-2**	District Watch
		EW-D-3	District Warning

Incident Levels

Incident Levels	LMs	Incident Levels	CHDM
1	Occurrence	1	Occurrence
2	Minor Incident	1	Occurrence
3	Incident	2	Minor Incident
4	Major Incident	3	Incident
5	Disaster	4	Major Incident / Disaster

IIMP includes an automated warning system.

The responsibility for making such declarations should be clearly assigned and should preferably be assigned to a senior standby manager or senior control centre supervisor on duty. The declaration will be made to the public and to stakeholders that may be assisting in such cases. These levels must be communicated to assisting agencies along with pre-determined rendezvous points and staging areas and should be addressed in mutual assistance agreements or SLAs.

6.4 Disaster Preparedness Plans

6.4.1 Disaster Preparedness Plan: Fire – Structural and Veld

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 with resources
2	Respond resources	Fire Services Control Centre	Local authority fire call centre	Immediately	To limit impact by saving lives, property, livestock and critical structures/facilities.
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

No	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 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
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

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
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 (disaster management ward committee, volunteer units, ward structures, LMs and FPAs, disaster management and relevant departments)	Pre-determined venue	Within one week	To evaluate actions and improve future response
26	Update plans and procedures	All role-players(disaster management ward committee, volunteer units, ward structures, LMs and FPAs, disaster management and relevant departments)	At service HQ	ASAP	Effective service delivery

Additional hazard-specific contingency options could include:

- Strengthen firefighting capacity and capability in high risk areas;
- Implement environmental monitoring stations;
- Improve acquisition and activation of firefighting resources;
- Enhance community-level teams with firefighting training and basic equipment to act as first responders;
- Determine the need for emergency shelter; and
- Determine the need for emergency sustenance and transport.

6.4.2 Disaster Preparedness Plan: Flooding

	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; and
- Determine the need for emergency sustenance and transport.

6.4.3 Disaster Preparedness Plan: Storms / Severe Weather Storms (hail and cold snap)

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

No	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 damage	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 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. Create pamphlets and visit the 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/ Church groups and organisations/ SASSA/CDWs	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; and
- Determine the need for emergency sustenance and transport.

6.4.4 Disaster Preparedness Plan: Road Accident

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 (Traffic Department, SAPS, Fire & Rescue, EMS)	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	Assess information	All services	JOC	Immediately	To plan actions
7	Design plan of action	DM Co-ordination Team / JOC Team	JOC	After assessment	To facilitate response and relief
8	Implement response actions	District Disaster Management Team, SAPS, EMS	Affected area	ASAP	To prevent injury / mortality and to provide basic needs / services
9	Provide relief	Relevant Stakeholders	At affected area / relief centre	After assessment	To minimize impact
10	Mopping up	Relevant Stakeholders	Affected area	ASAP	To normalize community
11	Assess possibility of further damage	District Disaster Management Team, Traffic Department, EMS, SAPS	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
12	Issue early warning to areas affected by road closure	District Disaster Management Team, Traffic Department, EMS, SAPS	Vulnerable areas	Immediately	To minimize and/or prevent further disruption / damage
13	Road closures	Municipality / Prov Traffic	On Site	ASAP	To prevent loss of life and property
14	Communication with population of affected areas	Traffic Department/ Municipality / Media / Disaster Management / SAPS	On-site media liaison point / Media Centre close to JOC	ASAP	To prevent loss of life through public communication
15	Arrange temporary accommodation	Municipality / Social services/ NGO's	Available venues	When needed	To provide temporary accommodation – emergency shelter
16	Organize medical search parties	EMS / Fire & Rescue	On site	ASAP if people reported missing / unaccounted for	To treat medical cases
17	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
18	Verification of impact assessment	Traffic Department of Province, district or region/ 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; and
- Determine the need for emergency sustenance and transport.

6.4.5 Disaster Preparedness Plan: Drought

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	Build dams/ catchment areas.	Department of Agriculture, Disaster Management, Dept of Water, Working for water	In high risk areas	Pre-drought. Before season.	To sustain local economy and avoid death of livestock and increase in unemployment.
2	Establish grazing camps.	Department of Agriculture, farmers.	In high risk areas	Immediately	To sustain local economy and avoid death of livestock and increase in unemployment.
3	Fence off grazing areas.	Department of Agriculture, farmers.	In high risk areas	Immediately	To prevent overgrazing which can potentially exacerbate drought.
4	Establish fire belts	Department of Agriculture, farmers, local fire station.	In high risk areas	Immediately	To sustain local economy and avoid death of livestock and increase in unemployment.
5	Adjust emergency animal feeding stock supplies.	Department of Agriculture, farmers.	In high risk areas	Immediately	To sustain local economy and avoid death of livestock and increase in unemployment.
6	Notify response teams (Dept of Agriculture, EMS, Dept. Water Affairs, SAWS)	Local Authority	24 Hour Call centre	Immediately	To activate response teams
7	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
8	Determine impact	District Disaster Management and Services Standby Teams	At affected area	Immediately	To determine the actions and level of response required

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
9	Implement appropriate emergency intervention	First responders on scene	At scene	On arrival	To protect life and property and neutralize any impacting hazard
10	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
11	Assess information	All services	JOC	Immediately	To plan actions
12	Design plan of action	DM Co-ordination Team / JOC Team	JOC	After assessment	To facilitate response and relief
13	Implement response actions	District Disaster Management Team, SANDF, SAPS, EMS	Affected area	ASAP	To prevent injury / mortality and to provide basic needs / services
14	Provide relief	Relevant Stakeholders	At affected area / relief centre	After assessment	To minimize impact
15	Mopping up	Relevant Stakeholders	Affected area	ASAP	To normalize community
16	Assess possibility of further damage	District Disaster Management Team, SAWS	Entire area	Immediately	To minimize and/or prevent further disruption / damage
17	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
18	Institute recovery measures	PDMC, Treasury, Dept of Agriculture, Relevant Departments	JOC	Once situation is under control	To restore normal activities in area
19	Communication with population of affected areas	Municipality / Media / Disaster Management / Dept of Agriculture	On-site media liaison point / Media Centre close to JOC	ASAP	To prevent loss of life and property though public communication
20	Arrange temporary feed for livestock	Municipality / Social services/ SASSA/ NGO's	Available storage areas	When needed	To provide temporary accommodation – emergency shelter

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
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 assist struggling farming communities;
- Determine the need for emergency feed and water for livestock; and
- Determine the need for emergency sustenance.

6.4.6 Disaster Preparedness Plan: Erosion/ Overgrazing

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 (Dept of Agriculture)	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	Assess information	All services	JOC	Immediately	To plan actions
6	Design plan of action	DM Co-ordination Team / JOC Team	JOC	After assessment	To facilitate response and relief
7	Implement response actions	District Disaster Management Team, Department of Agriculture and other relevant community role-players	Affected area	ASAP	To prevent injury / mortality and to provide basic needs / services
8	Provide relief	Relevant Stakeholders	At affected area / relief centre	After assessment	To minimize impact
9	Assess possibility of further damage	District Disaster Management Team, Department of Agriculture	Affected area	Immediately	To minimize and/or prevent further disruption / damage
10	Issue early warning to areas vulnerable to further erosion	District Disaster Management Team, Department of Agriculture	Vulnerable areas	Immediately	To minimize and/or prevent further disruption / damage
11	Institute recovery measures	PDMC, Treasury, Relevant Departments	JOC	Once situation is under control	To restore normal activities in area

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
12	Communication with population of affected areas	Municipality / Media / Disaster Management / Department of Agriculture	On-site media liaison point / Media Centre close to JOC	ASAP	To prevent loss of life and property though public communication
13	Rapid initial impact assessment	DMC and/or Department of Agriculture	In affected area	If damage suspected	To establish impact and immediate required repair to infrastructure as well as assistance required from province / national
14	Verification of impact assessment	Province / NDMC / Contracted impact assessment team	Areas with damages or loss	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; and
- Determine the need for emergency sustenance.

6.4.7 Disaster Preparedness Plan: Rock fall, landslides and mud flow

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, Traffic Dept, 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, Traffic Dept, Dept of Engineering and Infrastructure, SAPS, EMS	Affected area	ASAP	To prevent injury / mortality and to provide basic needs / services

No	What must be done	Who must do it	Where it must be done	When it must be done	Why it must be done
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
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; and
- Determine the need for emergency sustenance and transport.

6.4.8 Disaster Preparedness Plan: Lightning

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, 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

No	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 damage	District Disaster Management Team, SAWS	Entire area	Immediately	To minimize and/or prevent further disruption / damage
13	Institute recovery measures	PDMC, Treasury, Relevant Departments	JOC	Once situation is under control	To restore normal activities in area
14	Road closures	Municipality / Prov Traffic	On Site	ASAP	To prevent loss of life and property
15	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
16	Arrange temporary accommodation	Municipality / Social services/ NGO's/ ESKOM	Available venues	When needed	To provide temporary accommodation – emergency shelter
17	Rapid initial impact assessment	ESKOM/ 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
18	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
19	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; and
- Determine the need for emergency sustenance and transport.

6.4.9 Disaster Preparedness Plan: Sewage and/or drainage failure

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, Dept. Water Affairs)	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	Road closures	Municipality / Prov Traffic	On Site	ASAP	To prevent loss of life and property
15	Communication with population of affected areas	Municipality / Media / Disaster Management / SAPS	On-site media liaison point / Media Centre close to JOC	ASAP	To prevent further damage though public communication
16	Arrange temporary accommodation	Municipality / Social services/ NGO's	Available venues	When needed	To provide temporary accommodation – emergency shelter
17	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
18	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
19	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.

6.4.10 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/ Department of Water Affairs/ Working for Water	In affected area	Upon receiving notification	To determine origin and perpetrator(s)
3	Assess health risk as result of pollution	Environmental Health/Department of 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
8	Monitor process of shale gas exploration and development	Public/ Municipal Officials/ DMC	Municipal offices/ DMC	Upon receiving notification	To notify relevant departments; To determine Preparedness Plan: Sewage and drainage failure

6.4.11 Disaster Preparedness Plan: Strong wind/tornado

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

No	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 damage	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 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; and
- Determine the need for emergency sustenance and transport.

6.4.12 Disaster Preparedness Plan: Heavy snowfall

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

No	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 damage	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 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; and
- Determine the need for emergency sustenance and transport.

6.5 Preparedness capacity for the Chris Hani District Municipality

The organisational structure for preparedness within the Municipality includes Chris Hani Disaster Management, Disaster Management representatives of each Local Municipality within the District, the Disaster Management Advisory Forum, the top-management team of CHDM, the focal points for Disaster Management within municipal departments within the Municipality, departmental planning groups, preparedness planning groups, Joint Response & Relief Management Teams, Recovery and Rehabilitation Project Teams, and the Chris Hani 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. On-going capacity building programmes will be required to ensure the availability of adequate capacity for disaster preparedness.

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

6.6 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; and
- The level of preparedness will also depend on training and experiential learning during operations and exercises.

It can therefore be recommended that the District should consider establishing 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.

6.7 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 standard operating procedure (SOP) 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 13.

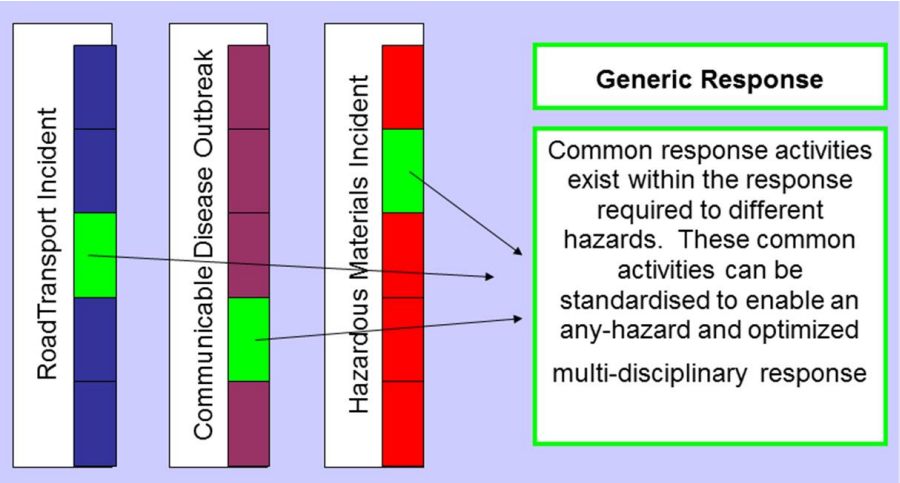


Figure 11: Reason for any-Hazard response procedure

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.

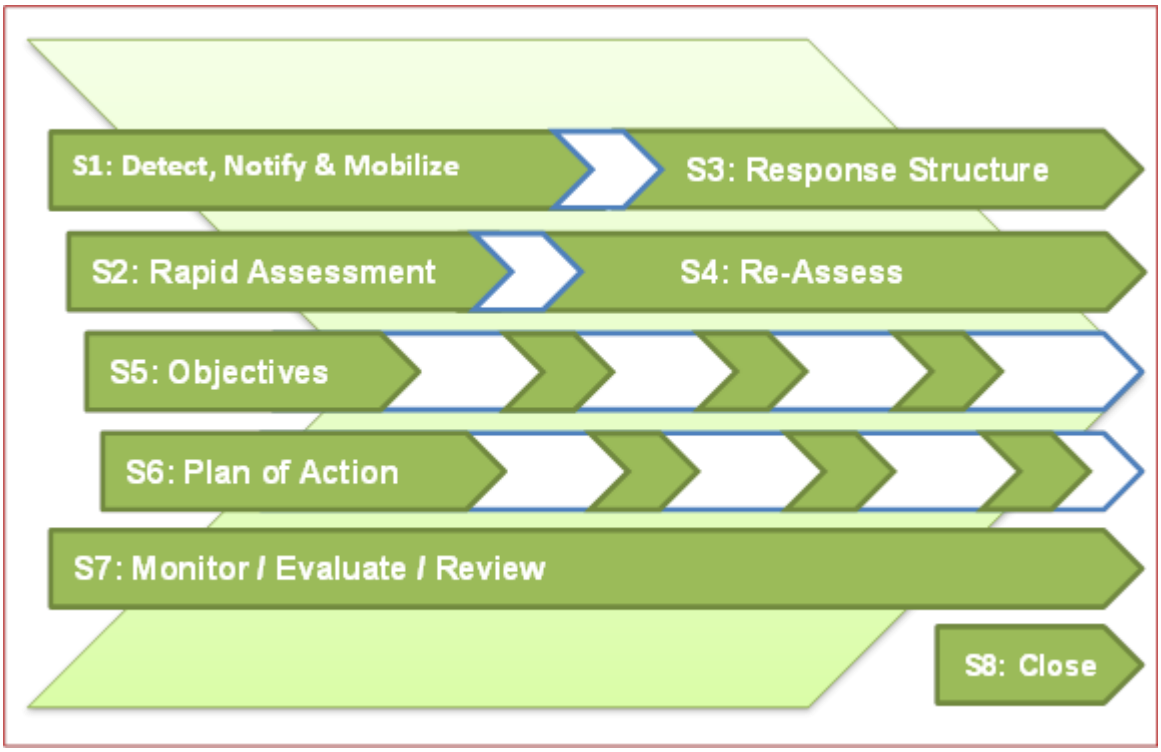


Figure 12: Any-Hazard Response Procedure

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 incident management objectives;
6. Deciding on an action plan;
7. Implementation;
8. Establishing a strategic response structure;
9. Monitoring & Evaluation; and
10. Close incident and document.

This procedure is compatible with KPA 4 of the South African Policy Framework for Disaster Management, as well as the Unified Command procedure accepted and implemented by the National Disaster Management Centre prior to the 2010 FIFA World Cup™. Each step in the procedure will now be described in more detail. Minimum performance requirements will also be mentioned within these sub-sections.

6.7.1 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 Chris Hani 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 6.4 from page 84) as well as pre-defined hazard-specific contingency plans.

6.7.2 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. See section 6.3. *Declaration of a disaster.*

6.7.3 Establish response management structure

Once the initial response has been effected and services arrive on the scene, the process for the implementing a 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 and must build on existing response levels and strengthen the deployments and actions on scene.

Structures to co-ordinate 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 (Disaster Management is 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.

6.7.4 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.

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

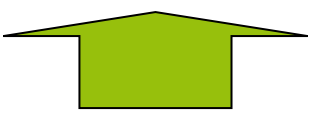
Re-assess Hazard

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

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.	

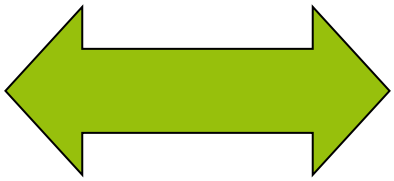
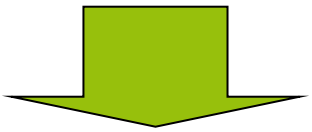
Look around - Look at the topography and natural environment and establish what effect it would have on the hazard behaviour and impact	
Look down - Look at the built environment, the natural environment and the economic activities and establish how the hazard can possibly affect these activities. It is also important to consider/establish land owner and type of facility – e.g. key points being affected.	

Figure 13: Re-assess the situation

Do a complete evaluation to establish the severity and implications of the problem (direct and indirect implications). See section 6.3. *Declaration of a disaster.*

6.7.5 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.

Deciding on an Action Plan

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

6.7.6 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.

6.7.7 Establishing a 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.

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 Chris Hani 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).

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; and
- Monitor, re-assess and adapt strategy.

Structures to provide relief

In case of an incident or disaster (see section 6.3. *Declaration of a disaster)* 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

6.7.8 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 on-going 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.

6.7.9 Close incident & document

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

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.

Complete Review (Post Mortem)

After each incident, copies of all messages, reports and incident logs of all services must be submitted to the Chris Hani 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.

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.

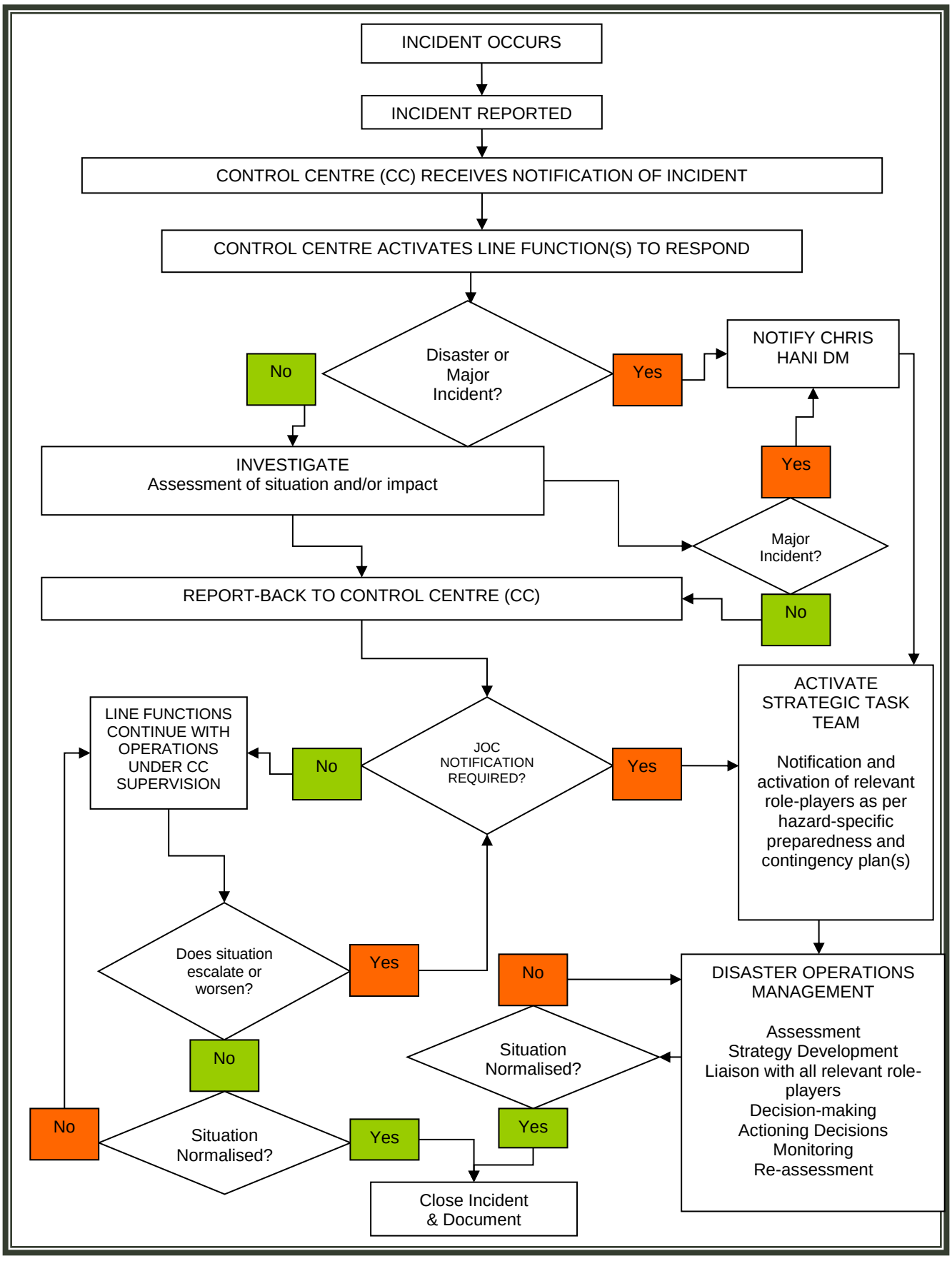


Figure 14 Response Management Flowchart for Incidents

6.8 Disaster management status reporting standards

See section 6.3 *Declaration of incidents and a disaster*.

6.9 Declaration of a state of disaster and disaster classification

It is advisable that the Chris Hani 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 Chris Hani 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 Chris Hani District Municipality, 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 CHDM 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.

See section 6.3 *Declaration of a disaster* for the different levels of incidents. 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.

6.10 Gaps and recommendations

A lack of communication and ineffective inter-agency co-operation 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. The CHDM 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 as amended. The Disaster Management Advisory Forum (CHDMAF) shall be responsible for the review of the municipal Disaster Management plan on an annual basis. It is 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 CHDMAF may implement an annual review of this plan and re-align all plans and assessments should risk conditions and/or municipal boundaries change. The CHDM 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 Management into their strategies, operational planning and project implementation.

It is strongly recommended that the CHDM institutes the compulsory consideration of Disaster 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 CHDM.

9 Annexures

The following annexures are attached to this plan:

Annexure A: Emergency Numbers List for Chris Hani
Annexure B: Management Responsibilities
Annexure C: Standard Operating Procedure

Annexure A: Emergency Numbers List for Chris Hani

DISTRICT/LOCAL	DEPARTMENT/ ORGANISATION	TEL	FAX
POLICE		10111	
AMBULANCE SERVICES		10177	
CHDM	Department of Human Settlements	0437119600	0865589681
	Department of Human Settlements	0437119740	0437119788
	Department of Human Settlements	0437119572	0865768409
	DRDAR-Regional Office	0459311054	
	CHDM- Head Office	0458084600	0458084600
	CHDM: DMC **TOLLFREE**	0458089000 0800100100	0458382289/2036
	Municipal Manager	045 808 4600	
	Executive Mayor	045 808 4605	
	Communications Manager	0458089000	
	GIS	0458084600	
	GIS	0458084600	
	Human Settlements HOD	043 711 9572	
	IPED Housing Manager	0458074800	0458074820
QUEENSTOWN HOSPITALS	Life Queenstown Private Hospital	045 838 4100	
	Queenstown Frontier hospital	045 808 4200	
CHDM COUNCILLORS	Integrated Planning and economic development	045 808 4800	
	Health and community services	045 808 9000	
	Finance	045 808 4600	
	Governance and administration	045 808 4600	
	SPU and HIV/Aids coordinating committee	045 808 4600	
	Infrastructure	045 808 4600	
DEPARTMENTAL HEADS		045 808 4677	
		045 808 4608	

		045 807 4814	
		045 808 4638	
	Finance	045 808 4722	0458384574
		045 808 4616	045 838 1582
ENOCH MGIJIMA LM (QUEENSTOWN)	Fire	045 839 2233	
	Water	045 839 2733	
	Electrical	045 829 2181	
	Human Settlements	045 807 6400	
	Community Services	045 807 2753	
	Nature Conservation	045 838 1627	
	Lukhanji Sunset Rotary: Brynn Pitt	045 807 3900	
	Traffic	045 807 2761	
	Roundtable: Loren du Plessis		
	Rotary: Edric Russell	045 839 4012	
	Queenstown pastors: Pastor Keith		
EMALAHLENI LM	Emalahleni	0478780046	0867590806
	Emalahleni Disaster Officer	0478780074	
	Emalahleni Disaster Management	0478780045/6	0867590806
	Emalahleni CDW GCLTA	0478780020	0478780112
	SASSA	0478784001	0862760538
	Social Development	0478780300	
ENGCOBO LM	Engcobo Disaster Management	0475485600	0475481078
	Department of Health	0475481254	
	Department of Home Affiars	0475485500	0475483064
	DoE	0475481185	0475481991
	DoT	0475481033	0475481526
	EMS		
	EMS		
	SAPS		
INTSIKA YETHU LM	Community Services		
	GIS	0478748743	
	ESKOM	0118002005	

	ESKOM	0118002005	
	Social Development	0478740051/ 5201	0478740109/ 0553
	Agriculture	0478740489	0478740434
	Public works	0458386600/ 0478740057	
	SAPS		
ENOCH MGIJIMA LM (TARKASTAD)	SAPS		0488850044
	SAPS		0488850044
	SAPS	0458460018	
	Social Development	0455460390	0455460391
	Department of Health	0485812921	0488815381
INXUBU YETHU LM	Department of Health	0488812921	0488815381
	Community Services: Department of Health	0488813221	0488815381
	Fire	0488015000	0488810029
	Agriculture		0458469375
	Department of Social Development		0488813578
	SASSA	0488812537	0488812785
	CDW		
	Inkwanca HBCC	0459670933	
ENOCH MGIJIMA LM (STERKSKROOM & MOLTENO)	Waste management project		
	Department of Education.		
	Inkwanca LM	0459670021	0459670467
SAKHISIZWE LM	Fire Services		0458382036
	Chief, Cala		0478770000
	Social Development: Cala	0478770039	0478770013
	NGOs: Cala		0478770000
	Traffic		0459311361

Annexure B: Institutional responsibilities

The institutional responsibilities described here are supplementary to those described in Section 3.4.

Councillors

Councillors must ensure that ward committees are established and involved in Disaster 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.

Director: Health and Community 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 Management plans to ensure municipal services continuation during emergency/disaster situations; and
- Coordinate response and mutual aid agreements with adjacent municipalities and private sector entities.

Managers: Municipal Health Services, Communicable Diseases

The Managers of Municipal Health Services and Communicable Diseases must:

- Ensure that municipal disaster plans are compiled and maintained with regards to the surveillance and prevention of communicable diseases (excluding immunisations), waste management, disposal of the dead, chemical safety and environmental pollution control (water quality monitoring, air quality management, noise management, food safety management and vector control;
- Developing targeted programmes for community participation and involvement;
- Compile pro-active departmental Disaster Management programs to support risk reduction or elimination;
- Compile reactive departmental Disaster Management plans to ensure municipal services continuation during emergency/disaster situations; and
- Coordinate response and mutual aid agreements with adjacent municipalities and private sector entities.

Manager Environmental Management

The Manager Environmental Management must ensure that environmental strategies, policies and programmes promote sustainable development with specific reference to the following:

- Coordinating all aspects of pollution control, waste management, recycling, environmental health, conservation and renewable energy;
- Leading the implementation of environmental policies and practices;
- Ensuring compliance with environmental legislation;
- Carrying out impact assessments to identify, assess and reduce environmental risks; and
- Promoting and raising awareness on climate change and biodiversity.

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 firefighting Disaster Management programs to support risk reduction or elimination;
- Compilation of reactive departmental Disaster Management plans to ensure service continuation during emergency/disaster situations;
- Ensure acquisition of and ensured access to resources for Disaster Management purposes.
- Ensure compliance with relevant legislation e.g. Fire Service Act, Veld and Forest Fire Act, National Building Act; and
- 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.

Director: Technical Services

The Manager Technical Services must ensure that Disaster 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; and
- The conducting of regular environmental impact studies.

Director: Corporate Services

The Manager Corporate Services must ensure that Disaster 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; and
- 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; and
- Ensure that all departmental and emergency responders attend appropriate training and refresher courses.

Manager: Communications

The responsible person must ensure that Disaster 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; and
- Disaster 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 Management programs to support risk reduction or elimination;
- Compilation of reactive departmental Disaster 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; and
- 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 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 (SOPs); and
- 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).

Director: Integrated Planning and Economic Development

The Manager: Planning and Development must ensure that Disaster 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;
- 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; and
- Supply information, to the Disaster Management centre, regarding projects in the District, economic development planning, spatial development and tourism.

Manager: Housing

The Manager must ensure that Disaster Management plans are compiled and maintained with specific reference to the following:

- Compilation of reactive departmental Disaster Management plans to ensure provision of emergency housing during disaster or major incident situations;
- Ensure that risk reduction and mitigation principles are applied in all housing projects;
- Supplying emergency housing resources for Disaster Management purposes; and

- Supply information, to the Disaster Management Centre, regarding housing projects in the District.

Senior Manager: IDP

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

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

Annexure C: Standard Operating Procedures

List of current Standard Operating Procedures (SOPs)

1. SOP 01 - Risk Reduction Procedure (See Section 5.2 *Risk reduction proposals for the Chris Hani Municipality)*

2. SOP 02 – Declaration of Incidents and Disasters (See Section 6.3 *Declaration of incidents and disasters)*

3. SOP 03 – Disaster Preparedness (See Section 6.4 *Disaster Preparedness Plans)*

4. SOP 04 – Any-Hazard Response Procedure (See Section 6.7 *Any-hazard Response Procedure*)

Adopted at the Council meeting of the Chris Hani District held on the 29th June 2020.

Municipal Manager	*Date*