CITY OF UMHLATHUZE DISASTER MANAGEMENT PLAN LEVEL 2

"Disaster Management is Everybody's Business"

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1. ABBREVIATIONS

The following abbreviations are / may be used in this document:

ABBREVIATION:	MEANING:
DMAF	Disaster Management Advisory Forum
DMC(s)	Disaster Management Centre(s) including the PDMC and Municipal DMCs
DMF	Disaster Management Framework
DMIS	Disaster Management Information System
DMP(s)	Disaster Risk Management Plan(s) which includes reference to contingency plans and arrangements
DRM	Disaster Risk Management
IDP	Integrated Development Plan
ISDR	The International Strategy for Disaster Risk Reduction
JOC	Joint Operations Centre
KPA	Key Performance Area
MDMC	Municipal Disaster Management Centre
MIDRMC	Municipal Interdepartmental Disaster Risk Management Committee
NDMC	National Disaster Management Centre
NDMF	The National Disaster Management Framework as Gazetted in Government Gazette number 27534 of 29 April 2005
NGO	Non-governmental Organisation
PDMC	Provincial Disaster Management Centre
SOPs	Standard / Standing Operating Procedures / Protocols as per the NDMF
The Act	The Disaster Management Act, 2002 (Act 57 of 2002)

2. DEFINITION OF TERMS

Capacity: A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personnel or collective attributes such as leadership and management.

Capacity building: Efforts aimed to develop human skills or infrastructures within a community or organization needed to reduce the level of risk. It may also include the development of institutional, financial, political and other resources, such as technology, at different levels and sectors of the society.

Contingency planning: The forward planning process for an event that may or may not occur, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place to prevent or respond effectively to an emergency situation.

Criteria: Standards, rules, guides or tests against which a judgment or decision is based.

Development: A process for improving human well-being through reallocation of resources that may involve some modification to the environment. It addresses basic needs, equity and the redistribution of wealth.

Disaster: A natural or human-caused event, occurring with or without warning, causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope with its effects using only their own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and

insufficient capacity or measures to reduce the potential negative consequences of the disaster risk.

Disaster Operations Centre: A fully equipped dedicated facility within the disaster management center of a particular sphere. Such a 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 for the purpose of multidisciplinary strategic management of response and recovery operations, when a local, provincial or national disaster occurs or is threatening to occur.

Disaster risk management: The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to prevent or to limit (mitigation and preparedness) adverse effects of hazards.

Disaster risk reduction: The conceptual framework of elements considered with the possibilities to minimize 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.

Early warning: Timely and effective information, through identified institutions, that allows individuals, households, areas and communities exposed to a hazard to take action to avoid or reduce the risk and prepare for effective response.

Early warning system: A system that allows for detecting and forecasting impending extreme events to formulate warnings on the basis of scientific

knowledge, monitoring and consideration of the factors that affect disaster severity and frequency. Early warning systems include a chain of concerns, namely: understanding and mapping the hazard; monitoring and forecasting impending events; processing and disseminating understandable warnings to political authorities and the population; and undertaking appropriate and timely actions in response to warnings.

Elements-at-risk: Environmental, human, infrastructural, agricultural, economic and other elements that are exposed to a hazard, and are at risk of loss.

Entity: A governmental agency or jurisdiction, private or public company, partnership, nonprofit organization, or other organization that has disaster risk management responsibilities.

Focal/nodal point for disaster risk management: An individual responsible for coordinating the disaster risk management responsibilities and arrangements of a national, provincial or municipal organ of state or a municipal entity. The term is also used to refer to an individual with similar responsibilities in an NGO or the private sector.

Geographic information system (GIS): Analyses that combine relational databases with spatial interpretation and outputs, often in the form of maps. A more elaborate definition is that of computer programmers for capturing, storing, checking, integrating, manipulating, analyzing and displaying data related to positions on the earth's surface. Typically, GIS is used for handling maps. These might be represented as several different layers where each layer holds data about a particular kind of feature. Each feature is linked to a position on the graphical image of a map. Geographic information systems are increasingly being utilized for hazard and vulnerability mapping and analysis, as well as for the application of disaster risk management measures.

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

Hazard analysis: Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behavior.

Human-made hazards: Disasters or emergency situations that are caused directly or indirectly by identifiable human actions, deliberate or otherwise.

Joint Operations Centre: The sphere within a response management system where the combined or joint tactical co-ordination and management of a significant event or disaster involving multi-agency operations takes place.

Line function: The departments that implement government policy.

Mitigation: Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards on vulnerable areas, communities and households.

Monitoring: A system of checking and observing to ensure that the correct procedures and practices are being followed.

Municipal entity: A company, co-operative, trust, fund or any other corporate entity established in terms of any applicable national or provincial legislation and which operates under the ownership control of one or more municipalities, and

includes, in the case of a company under such ownership control, any subsidiary of that company. The term can also refer to a service utility.

Municipal Infrastructure Grant (MIG): The Municipal Infrastructure Grant is a conditional grant mechanism to fund infrastructure programmes. The MIG is managed by DPLG.

Municipal organ of state: A municipality, a department or other administrative unit within a municipality or a municipal entity.

National Qualifications Framework (NQF): An integrated national approach to education and training in South Africa. It specifies how different education and training standards and/or qualifications must be set and how courses must be accredited. It emphasizes lifelong learning and facilitates access to, as well as mobility and progression within, education and training through the accumulation of credits in the learning process and, where appropriate, for work experience. It was established in accordance with the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995).

Natural hazards: Natural processes or phenomena, such as extreme climatological, hydrological or geological processes, that may constitute a damaging event. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.

Organ of state: Any state department or administration in the national, provincial or local sphere of government.
It includes any functionary or institution exercising a power or performing a function in terms of the Constitution or a provincial constitution, or any functionary or institution exercising a public power or performing a public function in terms of any legislation.

Own revenue: Income rose by a municipality from tariffs and taxes.

Preparedness: Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Prevention: Actions to provide outright avoidance of the adverse impact of hazards and means to minimize related environmental, technological and biological disasters.

Primary agency/entity: The agency/entity tasked with primary responsibility for a particular disaster risk management activity.

Priority disaster risk: A risk identified as a priority through a scientific evaluative process in which different disaster risks are evaluated and ranked according to criteria determined by the broader socio-economic and environmental context in which the risk is located. The process of determining these criteria should be consultative, and involve scientific, civil society and government stakeholders.

Private sector: Refers to everything which is privately owned and controlled, such as business, banks and insurance companies, the stock exchange and private schools.

Provincial organ of state: A provincial department or a provincial public entity functioning within the provincial sphere of government (defined in section 1 of the PFMA).

Public awareness: The processes of informing the general population, increasing levels of consciousness about risks and how people can act to reduce

their exposure to hazards. Public awareness activities foster changes in behavior, leading towards a culture of risk reduction.

Rapid-onset disasters: A disaster caused by natural events, such as earthquakes, floods, storms, fires and volcanic eruptions. Although such events are more sudden, the impact can also be heightened by underlying problems associated with poverty.

Recovery: Decisions and actions taken immediately after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.

Relief: The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can include the provision of shelter, food, medicine, clothing, water, etc.

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 organizing itself to increase this capacity for learning from past disasters for better future protection and to improve disaster risk reduction measures.

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

Response management system: A system designed to provide a systematic approach to ensure the effective co-ordination and management of operational, tactical and strategic response efforts. It involves the combination of resources and procedures in a common organizational structure for the purpose of achieving rapid and effective response.

Risk assessment (disaster risk assessment): A process to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

Risk (disaster risk): The probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, disrupted economic activity or environmental damage) resulting from interactions between natural or human-induced hazards and vulnerable conditions. Conventionally risk is expressed as follows: Risk = Hazards x Vulnerability. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability

Significant event: An event which does not necessarily justify the classification of a disaster but is of such a magnitude or importance that extraordinary measures are required to deal with it effectively. The term can also be applied to a situation where multiple single emergencies are occurring simultaneously within a given jurisdiction, placing undue demands on scarce resources. Together, these events may constitute a disaster. A significant event can also represent a new or unexpected shift in hazard, vulnerability or risk patterns, calling for closer investigation in order to better anticipate future changes in disaster risk.

Slow-onset disasters: Disasters which result when the ability of people to support themselves and sustain their livelihoods slowly diminishes over time. Slow-onset disasters usually take several months or years to reach a critical phase.

Support agency/entity: The agency/entity tasked with secondary responsibility for a particular disaster risk management activity.

Technological hazards: Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Threat: A physical event or process that contains the possibility of being damaging or causing harmful consequences or loss. A threat is less specific than a particular hazard or risk, but may be reclassified as a 'risk' if it shifts from presenting merely the possibility of loss to a more certain probability of harm or damage. (See Risk.)

Vulnerability: The degree to which an individual, a household, a community, an area or a development may be adversely affected by the impact of a hazard. Conditions of vulnerability and susceptibility to the impact of hazards are determined by physical, social, economic and environmental factors or processes.

3. MISSION

The City of uMhlathuze is committed to fulfill the Disaster Management functions as set out in the relevant statutory reequipments, including, but not limited to its own Disaster Management Framework and shall always make sure that Disaster Management forms an integral part of the municipality's Integrated Development process. The City recognizes the issues of environmental impact and shall endeavor to fulfil the objective of section 24 of the South African Constitution.

To contribute towards the 'safer city concept' through a disaster management service geared to prevent, mitigate, confine and manage hazards and disasters in an affordable, effective and efficient manner, in line with the District, Provincial and National disaster management frameworks.

4. VISION

The municipality is striving to have a fully fledged Disaster Management Services that always ensure a uniform and integrated disaster management services within its area of jurisdiction, as well as ensuring the health and safety of its citizens by putting all pro-active measures in place to prevent, mitigate risks that make its citizens vulnerable to disasters.

In line with the vision of the municipality it is to contribution towards the vision of the City of uMhlathuze through disaster risk management in offering high quality of life for all its citizens through sustainable development, resilient and inclusive economic growth

5. OVERVIEW OF THE CITY OF UMHLATHUZE DISASTER MANAGEMENT PLAN

5.1. BACKGROUND

The preventative, risk-reduction and preparedness elements of the Municipal DRM Plan must be implemented and maintained on a continuous basis. The emergency response or re-active elements of the Municipal DRM Plan will be implemented in the City of uMhlathuze whenever a major incident or disaster occurs or is threatening to occur within the municipal area. The Disaster Management Act requires the City to take the following actions:

- to prepare a Municipal Disaster Risk Management Plan for its area according to the circumstances prevailing in the area and incorporating all municipal entities as well as external role-players;

- to co-ordinate and align the implementation of its Municipal DRM Plan with those of other organs of state, institutional and any other relevant role-players; and

- to regularly review and update its Municipal DRM Plan (ref. Disaster Management Act, 57 of 2002 - Section 48).

The Municipal Disaster Risk Management Plan should :-

- form an integral part of the City's IDP so that disaster risk reduction activities can be incorporated into its developmental initiatives,
- anticipate the likely types of disaster that might occur in the City's area and their possible effects,
- identify the communities at risk,
- provide for appropriate prevention, risk reduction and mitigation strategies,
- identify and address weaknesses in capacity to deal with possible disasters,

- facilitate maximum emergency preparedness,
- establish the disaster risk management policy framework and organisation that will be utilized to mitigate any significant emergency or disaster affecting the City,
- establish the operational concepts and procedures associated with day-to-day operational response to emergencies by municipal Departments and other entities. These SOPs will also form the basis for a more comprehensive disaster response.
- incorporate all special Hazard / Risk-specific and Departmental DRM Plans and related emergency procedures that are to be used in the event of a disaster. These will provide for –

(i) the allocation of responsibilities to the various role players and co-ordination in the carrying out of those responsibilities;
(ii) prompt disaster response and relief;

(iii) disaster recovery and rehabilitation focused on risk elimination or mitigation;
(iv) the procurement of essential goods and services;
(v) the establishment of strategic communication links;
(vi) the dissemination of information.

6. PURPOSE

The Municipal Disaster Risk Management Plan is designed to establish the framework for implementation of the provisions of the Disaster Management Act, 57 of 2002, as well as the related provisions of the Municipal Systems Act, 32 of 2000.

The purpose of the Municipal DRM Plan is to outline policy and procedures for both the pro-active disaster prevention and the reactive disaster response and mitigation phases of Disaster Risk Management.

It is intended to facilitate multi-agency and multi-jurisdictional co-ordination in both pro-active and re-active related programmes.

7. LEGAL FRAMEWORK

7.1. The Constitution of the Republic of South Africa 1996

The Constitution redefined local government as a sphere of government that is distinctive from, yet interdependent and inter-related with provincial and national government. Importantly, the Constitution conferred developmental duties to local government.

7.2. Public Finance Management Act No. 1 of 1999 (as amended by the Public Finance Management Amendment Act No. 29 of 1999)

To regulate financial management in the national and provincial governments; to ensure that all revenue, expenditure, assets and liabilities of those governments are managed efficiently and effectively; to provide for the responsibility of persons entrusted with financial management in those governments; and provide for matters connected therewith.

7.3. Municipal Systems Act of 2000

The Act introduces changes towards the manner in which municipalities are organized internally, the way they plan and utilize resources, monitor and measure their performance, delegate authority, deliver services and manage their finances and revenue. Critically, the Act formalizes a range of alternative service delivery mechanisms that could be used to complement traditional service delivery mechanisms / arrangements used by municipalities.

7.4. Municipal Demarcation Act of 1998

The Municipal Demarcation Act of 1998 provided for the re-demarcation of municipal boundaries and this resulted in the rationalization of 843 municipal entities into 284 larger and possible economically viable entities.

7.5. Municipal Structures Act No. 117 of 1998 as amended in 1999 and 2000

The Act defined new institutional arrangements and systems for local government. Importantly, the Act laid a foundation for local government performance management and ward committee systems.

7.6. White Paper on Local Government of 1998

The White Paper on Local Government is a broad policy framework that proposes wholesale changes in the areas of political, administrative structures of local government, electoral systems, demarcations, finances, services, infrastructure development, planning and so forth. The White Paper maps out a vision of developmental local government that is committed to working actively with citizens to identify sustainable ways of meeting their social, economic and material needs and thereby improve their quality of life. Developmental local government envisages the transformation of municipal administrations into rationalized, representative, less bureaucratic, people-centered, efficient, transparent, accountable and responsive entities.

7.7. The Fund Raising Act No. 107 of 1978

It provides for the declaration of a disaster by the President in order to provide relief to the Victims of disasters.

7.8. Disaster Management Act 57 of 2002

Streamlines and unifies disaster management and promotes a risk reduction approach particularly at provincial and municipal levels. It eliminates the confusion around disaster declaration and addresses current legislative gaps.

7.9. National Disaster Management Framework (Notice 654 of 2005)

The framework provides guidelines for the development of the provincial and municipal disaster management frameworks. This also provides the key

performance areas and enablers required for the implementation of the Disaster Management Act.

7.10. Policy Framework for Disaster Risk management in the Province of KwaZulu-Natal (Provincial Gazette 372 of 22 January 2010)

The framework provides guidelines for the development of the municipal disaster management frameworks. This also provides the key performance areas and enablers required for the implementation of the Disaster Management Act.

7.11. Fire Brigade Act No. 99 of 1987

This Act forms an important element of disaster management in terms of norms and standards in the prevention of fires or any hazards leading to risks and or disasters.

7.12. National Veld and Forest Fires Act No. 101 of 1998

It emphasizes the formation of Fire Protection Associations for the purpose of predicting, preventing, managing and extinguishing veld fires.

7.13. The National Environmental Management Act of 1999

Provides for environmental management strategies so as to prevent and mitigate environmental disasters.

8. THE CUSTODIAN OF THE DISASTER MANAGEMENT PLAN

The Head of the City of uMhlathuze Disaster Management Centre is the custodian of this Disaster Management Plan and is responsible for its regular review and updating.

The Head of the Centre is also responsible for ensuring that a copy of the plan as well as any amendments to the plan is submitted to the:

- Provincial Disaster Management Centre (PDMC)
- Neighbouring Local Municipalities and King Cetswayo District Municipality Disaster Management Centre.

- Sector departments, and other stakeholders

9. A GUIDING FRAMEWORK FOR DEVELOPING A CITY DISASTER MANAGEMENT PLAN

9.1. CONCEPT OF OPERATIONS

South Africa launched the White Paper (Policy Document) on Disaster Management on 19 January 1999. This White Paper underscores the importance of preventing human, economic and property losses and avoiding environmental degradation. The Disaster Management Act 57 of 2002 gives effect to the White Paper on Disaster Management. The National Disaster Management Framework (NDMF) was also developed to assist with and direct the implementation of the Act. The requirements of the Act and the Framework stipulate that all Organs of State, as part of the Disaster Management Programmes, must develop a Disaster Management Plan as well as capacitate and empower personnel in implementation of said plans.

The challenge is thus to implement the requirements of the Disaster Management Act and associated National, Provincial and Municipal Disaster Management Frameworks effectively and efficiently in all spheres of government, which includes Provinces, Municipalities, all Organs of State and their associated entities.

City of uMhlathuze recognised that South Africa is susceptible to a range of hazards, both natural and technological, which have the capacity to impact significantly on the City's strategies and initiatives. The sustainability of initiatives will therefore depend very much on the success of the management of the risks associated with these hazards.

The three levels of planning are broken up into a portfolio of ten manageable critical outcomes and a series of action steps for each one. Figure 1 below shows

the three disaster risk management planning levels, their critical outcomes and the action steps that need to be taken to achieve each critical outcome. It also shows the role of the guidelines and other supporting documents in achieving the critical outcomes.

Figure 1: Three levels of disaster risk management

LEVEL OF PLAN	CRITICAL OUTCOMES	
1	1	Establish foundational institutional arrangements for disaster risk management
	2	Develop the capability to generate a Level 2 Disaster Risk Management Plan
	3	Develop and implement contingency plans for known priority risks
2	1	Establish processes for comprehensive disaster risk assessments
	2	Identify and establish consultative mechanisms for specific priority disaster risk reduction projects
	3	Develop a supportive information management system
	4	Develop emergency communication capabilities
3	1	Establish specific institutional arrangements for coordinating and aligning disaster risk management plans
	2	Establish mechanisms to ensure informed and ongoing disaster risk assessments
	3	Institute mechanisms to ensure ongoing relevance of disaster risk management policy frameworks and plans

9.2 CONSULTATIVE PROCESS

This draft document is a concerted effort by the City in consultation with relevant stakeholders. Experts and documentation were further consulted to provide inputs to identify and outline the following aspects.

- Hazards and risks prevalent in the City;
- Contingency plans for disaster risk reduction; and
- Stakeholder roles and responsibilities

10. BACKGROUND AND PROFILE OF THE CITY OF UMHLATHUZE

The City of uMhlathuze (KZ 282) is situated on the north-east coast of the province of KwaZulu-Natal, about 180 kilometres north-east of Durban. The City of uMhlathuze comprises of the central business Citys of Richards Bay, eMpangeni, Heatonville and Buchanana in Ntambanana.

The City further comprises of the townships of eSikhaleni, eNseleni, Ngwelezana, Felixton, Mandlanzini, uMzingazi, and rural areas which are under traditional authorities, of KwaDube (Inkosi Dube), KwaDlangezwa (Inkosi Mkhwanazi), KwaBhejane (Inkosi Khoza), KwaMadlebe, (Inkosi Zungu), Buchanana (Inkosi Mthiyane and Inkosi Biyela), Obizo (Inkosi Cebekhulu), Somopho (Inkosi Mthembu in Macekane), Luwamba and Fatima (Inkosi Biyela).

The City of uMhlathuze also boasts with luxurious urban residential settlements in Mereensee, Birdswood, Aquadene and Arboretum in Richards Bay and Hillview, Kidare, Nyala Park, Grantum Park, Panorama as well as Richem in eMpangeni.

The 34 wards City of uMhlathuze is also home to the deepest Harbour in the continent and vast land for heavy duty industries. The likes of Richards Bay Minerals (RBM) Foskor, South 32/ BHP Billiton and many others are situated and effectively operates within the City of uMhlathuze. A vast track of serviced land under the auspices of the Richards Bay Industrial Development Zone (RBIDZ) is set aside for foreign direct investments.

UMhlathuze's total area is 1195 km² with a population of 410 449. The municipal population has, on average, increased by 1.45% per annum from 2011 (2011 Census). The area under the City of uMhlathuze has various major economic sectors comprising of mining, manufacturing, agriculture, commercial farming and tourism.

The municipality borders a coastline that spans approximately 45 kilometres. The N2 highway traverses the City of uMhlathuze in north-east direction towards Mpumalanga Province, Swaziland and Mozambique borders and south-west towards Durban, Pietermaritzburg, Eastern Cape and Gauteng Province splits on the South-West route.

The Provincial Main Road (R34) passes through eMpangeni towards Melmoth, Vryheid, Newcastle and eventually Gauteng and Mpumalanga split.

The link to these entire Provinces through rail and road network makes the City of uMhlathuze and its harbor and industries easily accessible for commercial purposes especially imports and exports.

The City also boasts with a very busy regional Airport. The capacity of the Richards Bay airport will soon be expanded to accommodate more facilities in the new location convenient to commercial and leisure travellers.

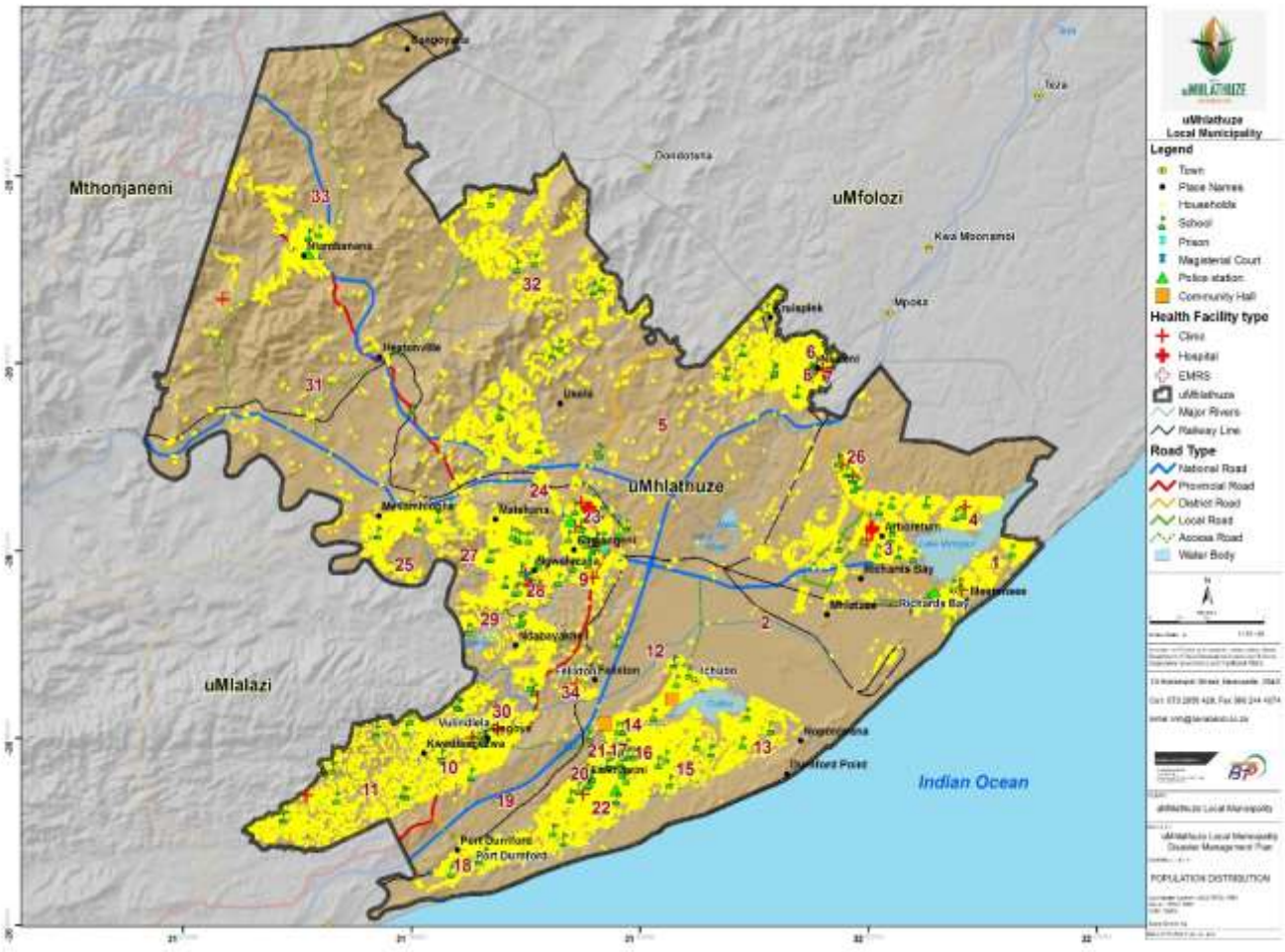
There are a number of natural and man-made features that have shaped and continue to shape the City of uMhlathuze. The area is inundated with eco-system of wetlands and natural water features such as Lakes Cubhu, Mzingazi, Nsezi and Nhlabane.

Major rivers include the uMhlathuze River which the City is named after and Nsezi River.

Thula-Thula Private Game Reserve, eNseleni Game Reserve, Alkantstrand Blue Flag Beach, The Water Front precinct, Birding bushes and ample private accommodation establishments with internationally acclaimed hotel brands in our City are created to cater for all travellers ranging from researchers, business and leisure.

Apart from the areas of natural significance, there is a large tract of land under commercial agricultural production.

10.1 POPULATION DYNAMICS



10.3 CLIMATOLOGICAL CONDITIONS

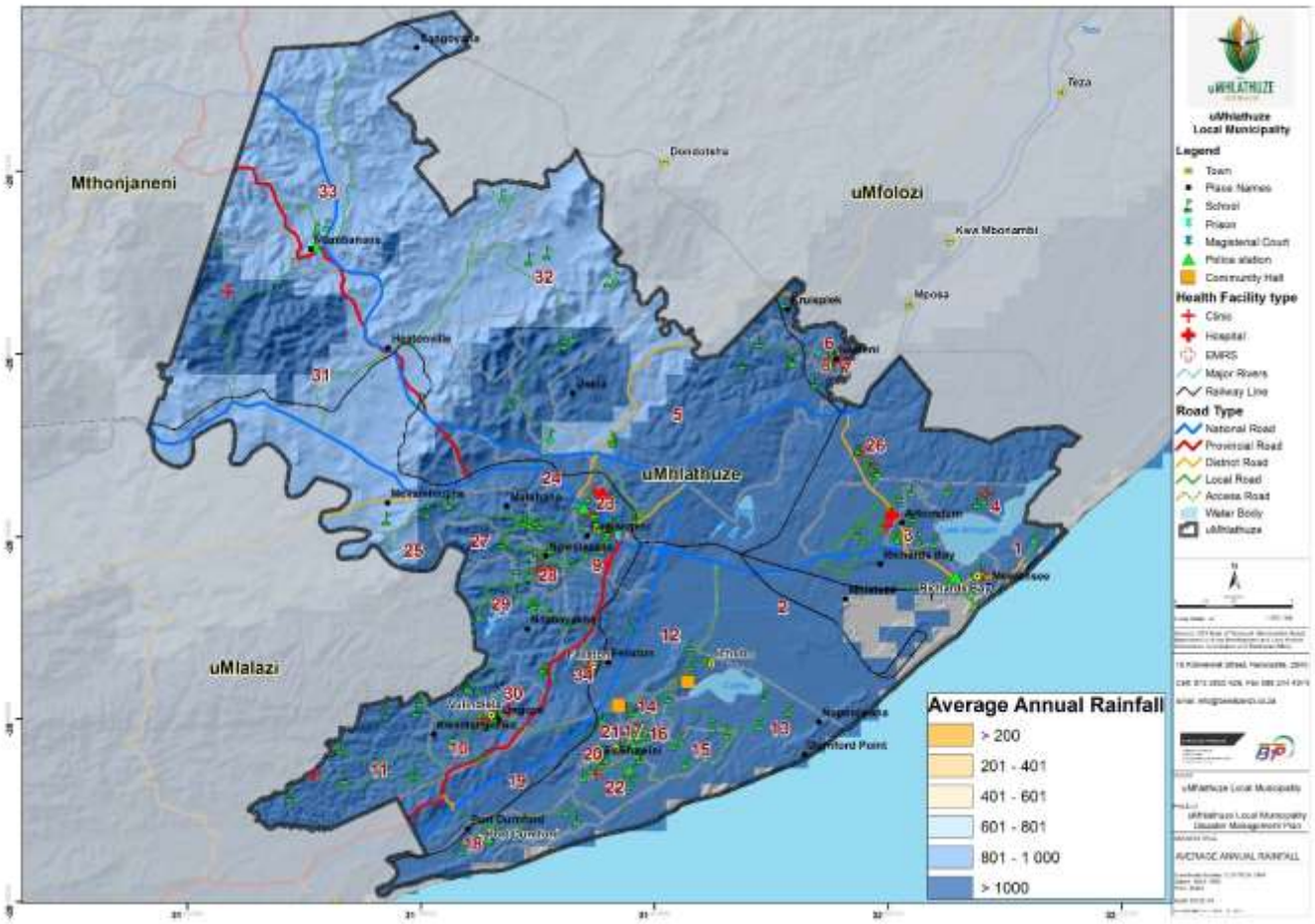
The climate of southern Africa is influenced strongly by the position of the subcontinent in relation to the major circulation features of the southern hemisphere. However, in all areas topography exerts a strong control on rainfall and produces clear orographic anomalies that are particularly evident in the case of the City of uMhlathuze.

The following climate related factors are considered as important for development in the municipal area,

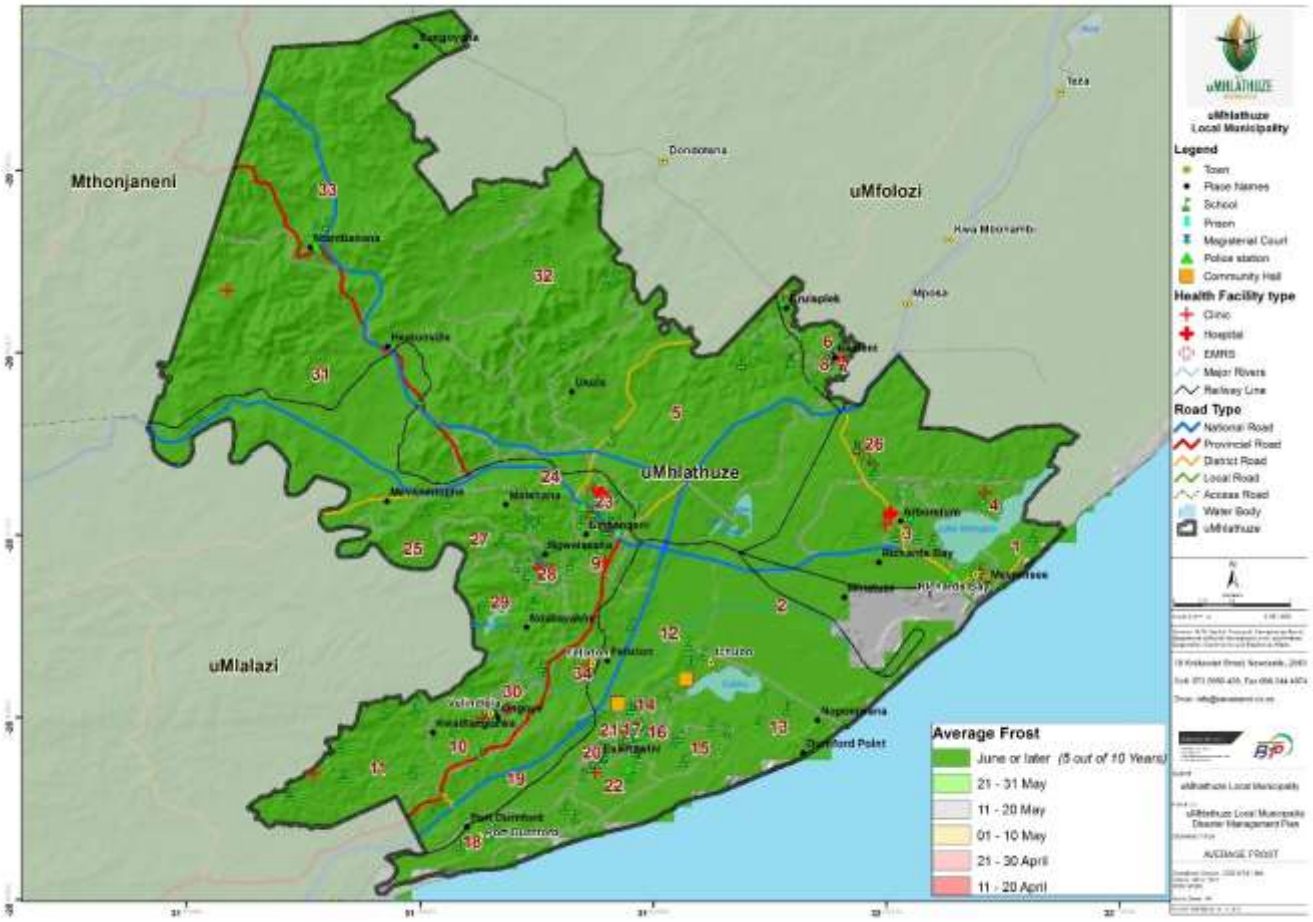
- Precipitation
- Temperature
- Evaporation
- Aridity zones
- Rainfall erosivity
- Moisture availability

In terms of the South Africa weather system, City of uMhlathuze falls within coastal summer rainfall areas. Rainfall is aerographic in nature with the impact of the mountains and topography shown on the map. Rainfall in the municipal area ranges between 600mm to more than a 1000mm per annum. As the rainfall map indicates, rainfall exceeds 1000mm per annum in areas of the mountainous southeast. Rainfall in these areas is generally more than 800mm per annum but between 600mm and 800mm per annum as one reaches the savannah landscape in the northern parts of the municipal area.

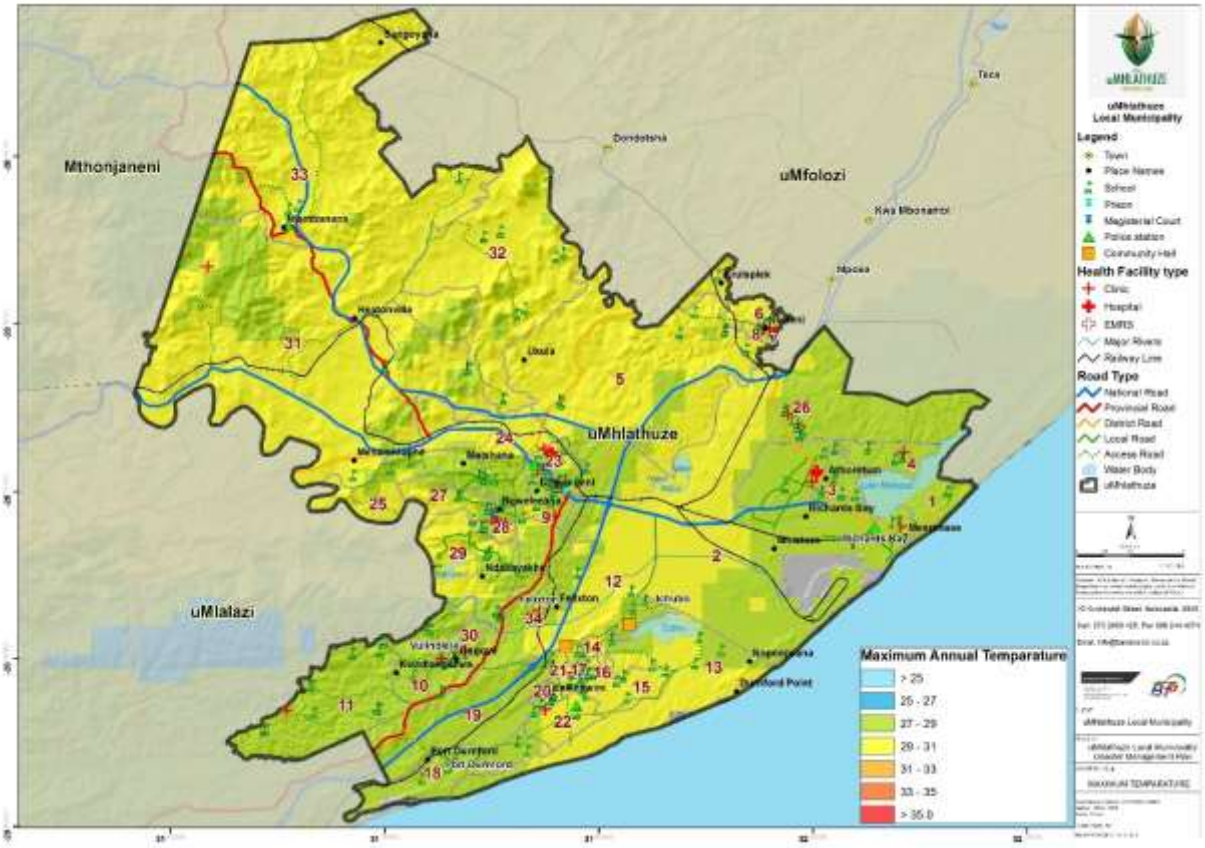
10.3.1 ANNUAL RAINFALL



10.3.2 FROST

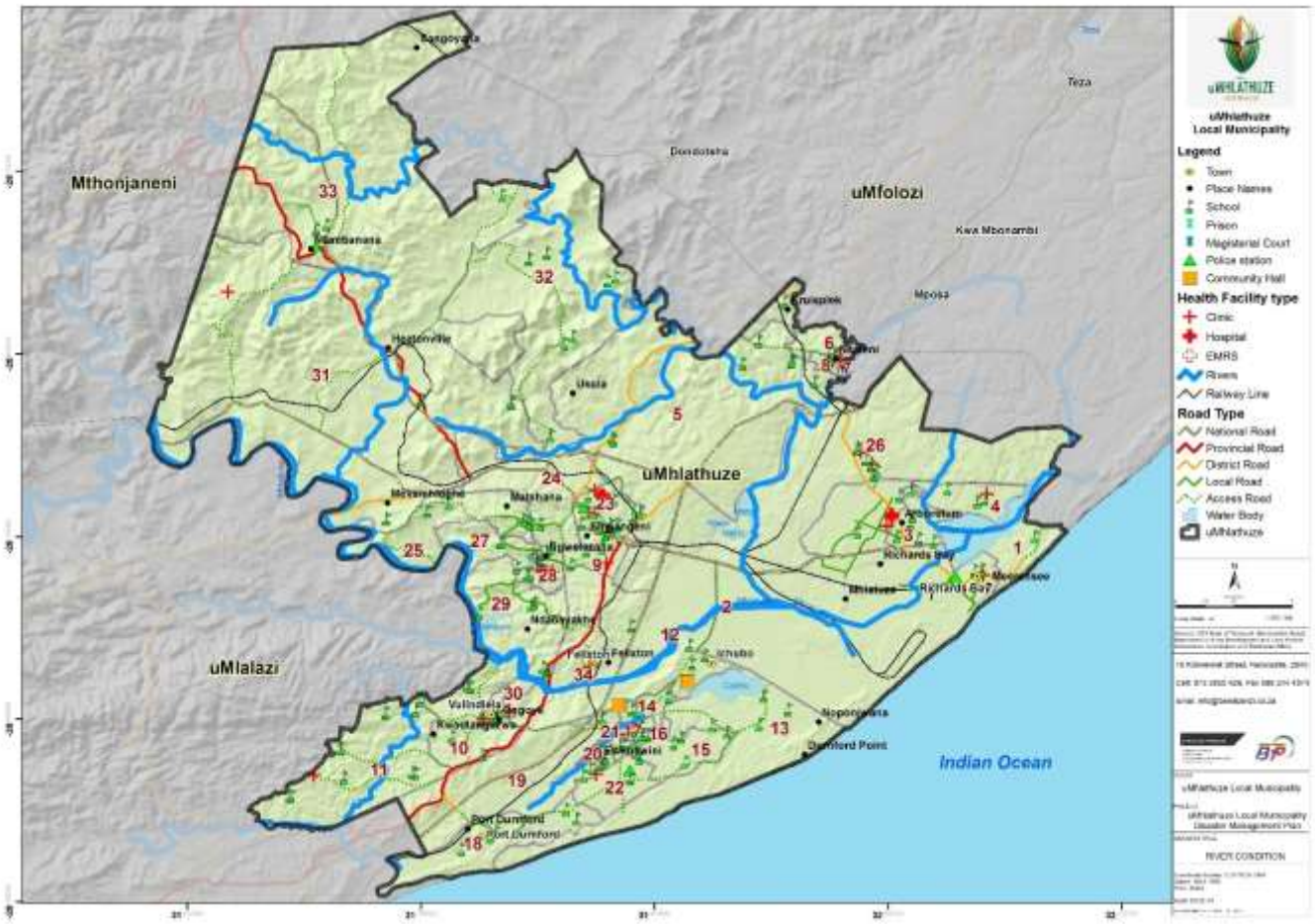

Mthonjaneni
uMfolozi
uMhlathuze
uMlalazi
uMhlathuze Local Municipality
Legend
Town
Place Names
School
Prison
Magisterial Court
Police station
Community Hall
Health Facility type
Clinic
Hospital
EMRS
Major Rivers
Railway Line
Road Type
National Road
Provincial Road
District Road
Local Road
Access Road
Water Body
uMhlathuze
Average Frost
June or later (5 out of 10 Years)
21 - 31 May
11 - 20 May
01 - 10 May
21 - 30 April
11 - 20 April

10.3.3 TEMPERATURE



10.3.4 TOPOGRAPHICAL CONDITIONS

10.3.5 RIVER CONDITION STATUS



IMPLEMENTATION OF THE PLAN ALIGNED WITH THE DISASTER MANAGEMENT FRAMEWORK

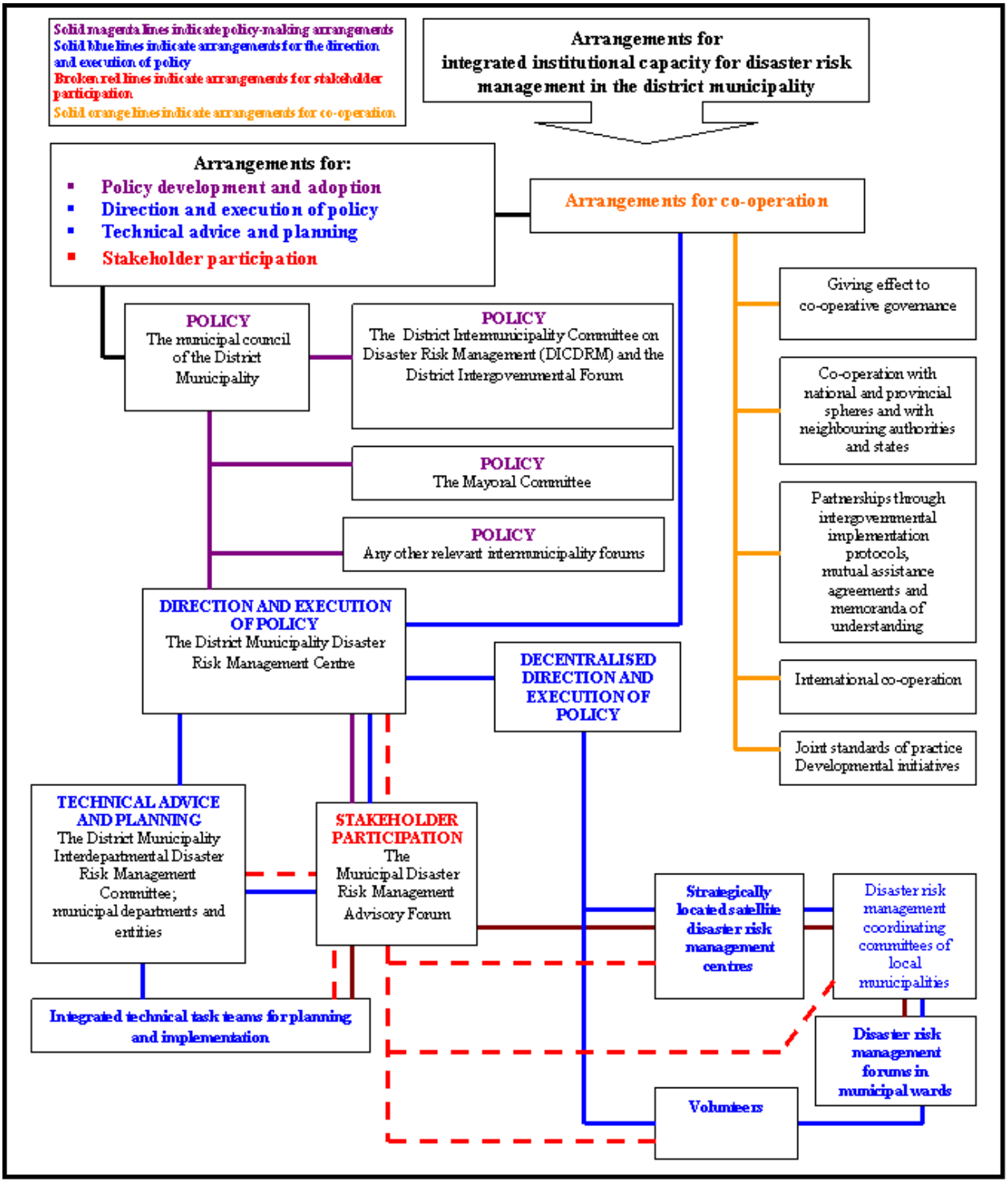
11. KEY PERFORMANCE AREA 1

INTEGRATED INSTITUTIONAL CAPACITY FOR DISASTE RISK MANAGEMENT

11.1. OBJECTIVE

To establish integrated institutional capacity within the City sphere to enable the effective implementation of disaster risk management policy and legislation.

An overview of the arrangements for integrated institutional capacity for disaster risk management in the City is summarised in the figure below.



11.2. The City Disaster Management Centre

To optimally perform all statutory responsibilities for the direction and execution of the municipality's disaster risk management policy framework, the City of uMhlathuze Municipal Disaster Risk Management Centre must be adequately resourced in terms of personnel, systems and infrastructure. In this regard, it must comply with the minimum criteria for the employment of suitably skilled personnel, systems and infrastructure set out in the National Disaster Risk Management Guidelines (published in Handbook 2 of the *South African Disaster Risk Management Handbook Series*) and in any provincial guidelines, and must be approved and adopted by the municipal council.

11.3 The head of the municipal disaster risk management center

In terms of section 45(1) of the Act, the municipal council must appoint a suitably qualified person as head of the municipal disaster risk management center. The appointment is subject to the applicable provisions of the Local Government: Municipal Systems Act No. 32 of 2000 (known as the Systems Act). The head of the centre should be appointed / situated at senior management level.

The head of the City of uMhlathuze Municipal Disaster Risk Management Centre is responsible for the exercise by the centre of its powers and the performance of its duties. In this regard, the head takes all the decisions of the centre, except decisions taken by another person as a result of a delegation by the head of the centre. The head performs the functions of office in accordance with section 44 of the Act.

The head of the centre performs the functions of office:

- in accordance with the NDMF and the key responsibilities prescribed in the NDMF;
- in accordance with the disaster risk management policy framework of the KwaZulu Natal Province;

- in accordance with the disaster risk management policy framework of the City of uMhlathuze Municipality;
- subject to the municipal council's IDP and other directions of the council; and
- in accordance with the administrative instructions of the municipal manager.

11.4 Delegation or assignment of the powers of the head of the centre

The head of the centre may, in writing, delegate any of the powers or assign any of the duties entrusted to the municipal centre in terms of the Act to a member of staff of the municipal disaster risk management centre. The municipal manager must give effect to such delegation or assignment of powers. Such delegation is, however, subject to limitations or conditions that the head of the centre may impose. Such delegation or assignment does not divest the head of the municipal disaster risk management centre of the responsibility concerning the exercise of the delegated power or the performance of the assigned duty.

The head of the municipal disaster risk management centre may confirm, vary or revoke any decision taken in consequence of a delegation or assignment, but no such variation or revocation of a decision may detract from any rights that may have accrued as a result of such a decision.

11.4.1 Portfolio: Strategic direction and integrated institutional capacity for disaster risk management

The Head of the Disaster Risk Management Centre must be supported by adequate and appropriately qualified staff to perform the following tasks so as to provide strategic direction and to effectively implement integrated institutional capacity for disaster risk management in the municipality:

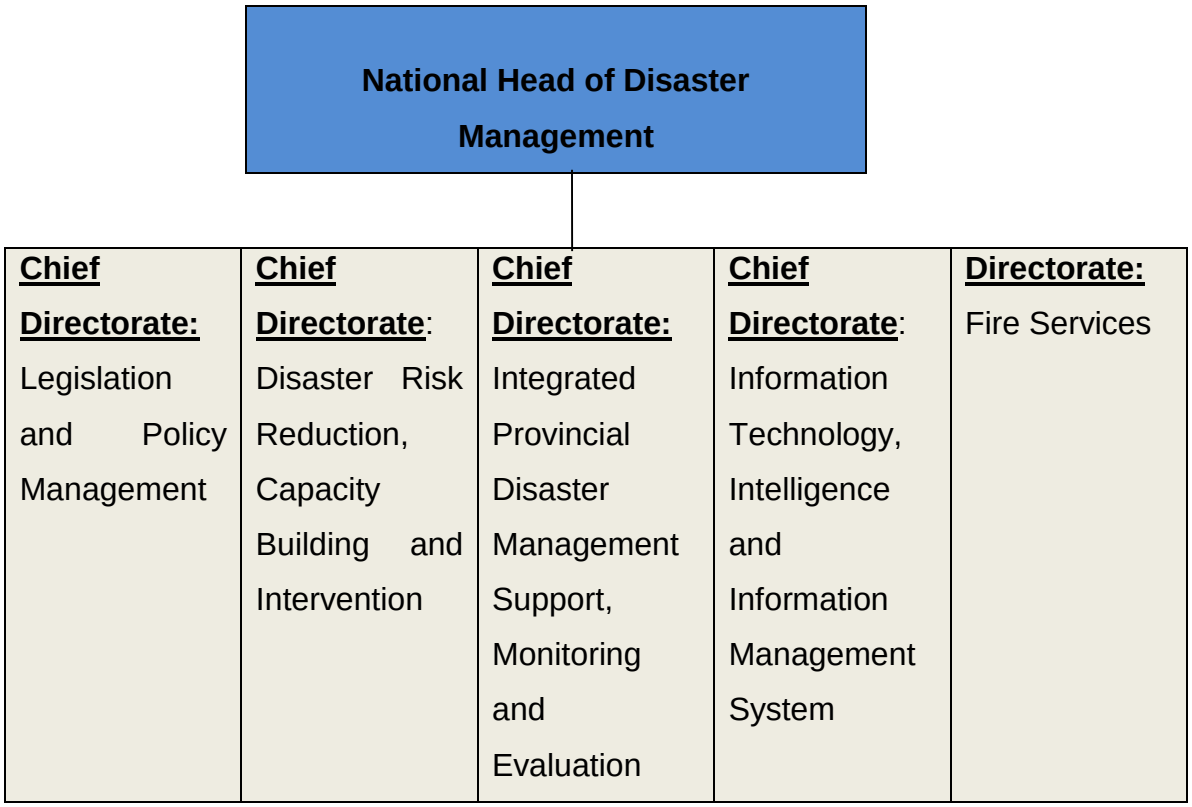
- Develop, implement and maintain a policy framework for disaster risk management in the municipality.
- Develop and implement an integrated disaster risk management strategy for the municipality.

- Establish arrangements for the development and adoption of integrated disaster risk management policy by the municipal council.
- Establish arrangements through relevant intergovernmental forum/s for the integration of disaster risk management legislation and policy between the municipality and neighbouring municipalities.
- Establish arrangements for integrating and monitoring the execution of disaster risk management legislation and policy in municipal council departments and other entities in the administration of the council.
- Establish arrangements through the relevant intergovernmental technical support structure/s for integrating the execution of disaster risk management policy between the municipality and neighbouring municipalities.
- Provide the secretariat for the Municipal Disaster Risk Management Advisory Forum.
- Establish and maintain arrangements for stakeholder participation in disaster risk management in the municipal area.
- Establish and maintain arrangements for the engagement of technical advice in disaster risk management in the municipal area.
- Establish mechanisms to promote the recruitment, training and participation of volunteers and other role players in disaster risk management in the municipal area.
- Establish and maintain effective decentralized operations through the establishment of strategically located satellite disaster risk management centres.
- Establish and maintain arrangements for the application of the principles of co-operative governance.
- Establish and maintain mechanisms for co-operation with the national and provincial spheres, neighbouring authorities and the international disaster risk management community.
- Establish effective mechanisms to ensure sound financial management.
- Apply generic management practices.

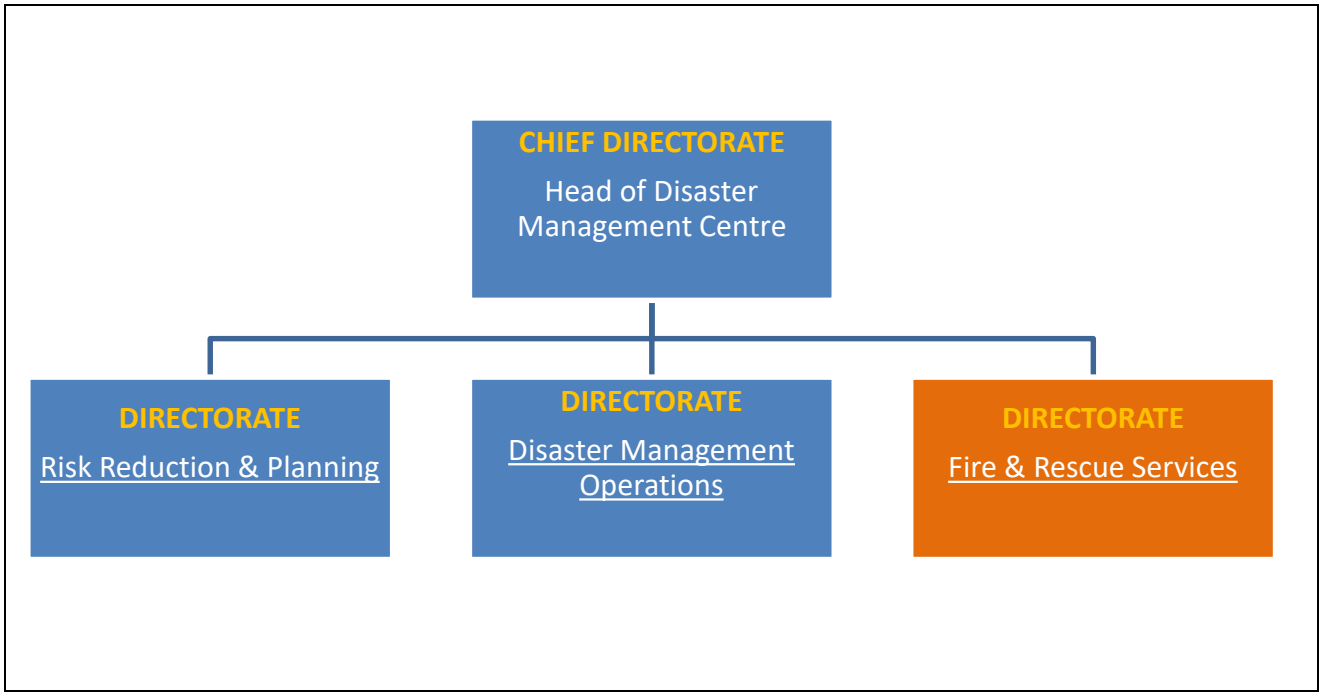
- Establish mechanisms for effective reporting, monitoring and evaluation.
- Initiate mechanisms for improvement of performance.
- Make recommendations regarding funding for disaster risk management and initiate and facilitate mechanisms for making funding available for the purpose of disaster risk management in the municipality.
- Establish and maintain sound administrative and organizational procedures for the effective operation of the disaster risk management centre.

The information bellow illustrates a uniform approach in all spheres of government on how disaster management structure should look like for the effective implementation of the Act.

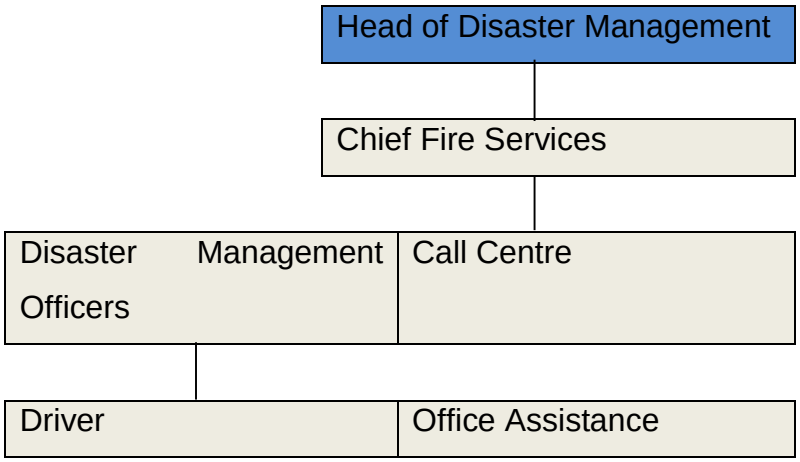
National Disaster Management Centre Top Structure



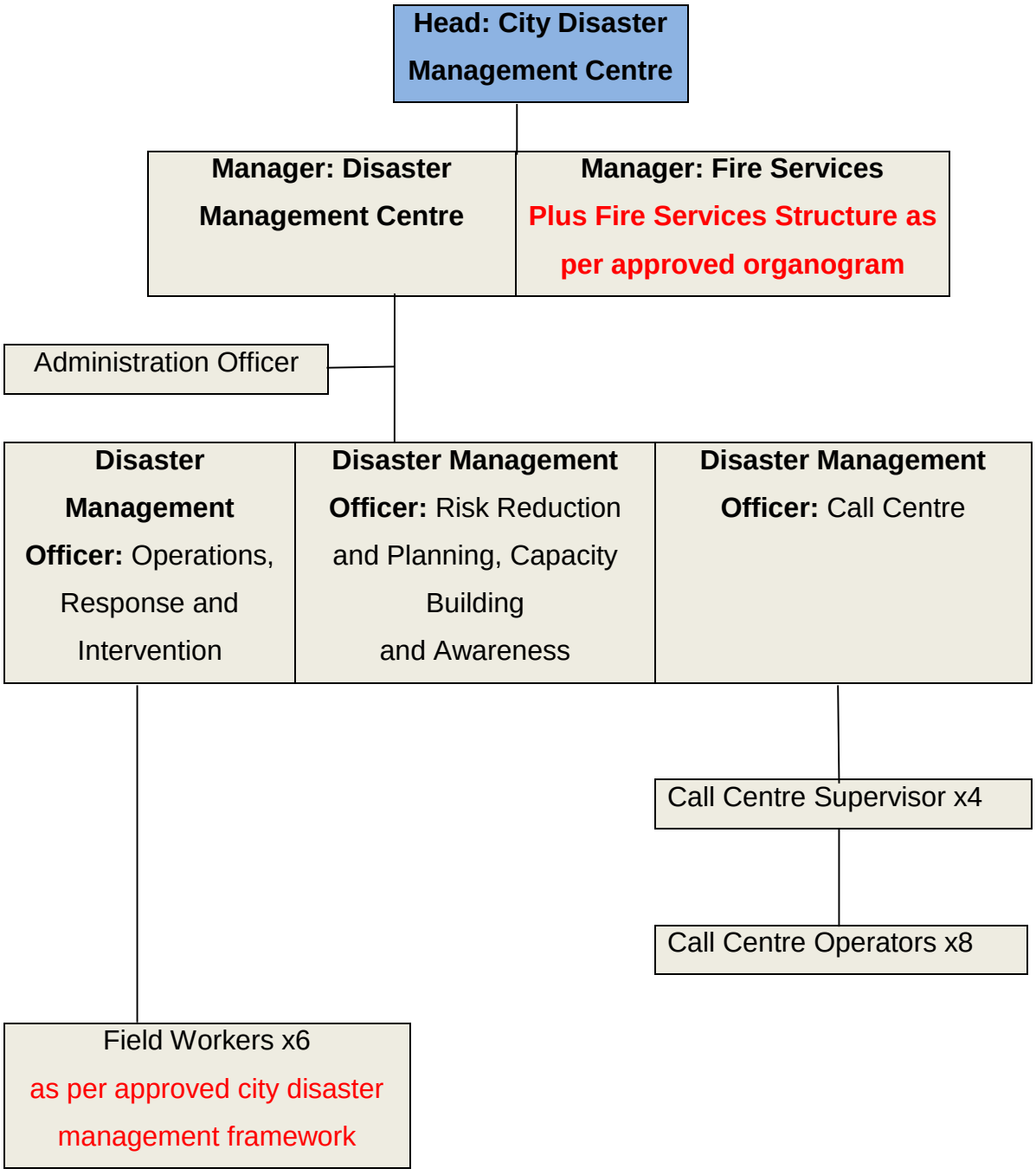
Provincial Disaster Management Centre Top Structure



King Cetshwayo District Disaster Management Centre Structure



City Of UMhlathuze Disaster Management Centre Recommended Structure to implement the plan excluding other supporting staff like Receptionist,etc



NB: This structure is being reviwed

The above organograms are aligned from the national to the local and it is in consistent with the National Disaster Management Framework and what the province has already adopted. It was realized that fire is a specialized service and its function is limited solely to fire matters but disaster management is cross cutting. The proposed organogram is of ease to the smooth running of the function without limitations as per above National, Provincial and District Disaster Management Structures.

To ensure continuous monitoring of progress with regard to the execution of the provisions of the DM Act, the national and provincial disaster risk management frameworks and the National Disaster Risk Management Guidelines, the centre must submit a progress report, in an agreed format, for consideration at every meeting of the appropriate portfolio or standing committee.

The centre must prepare a report annually and submit it to the municipal council. It must, at the same time, submit a copy of the report to the National Disaster Management Centre (NDMC) and the provincial disaster risk management centre.

11.4.2 Portfolio: Integrated risk reduction planning and practice

The Head of the Disaster Risk Management Centre must be supported by adequate and appropriately qualified staff to perform the following tasks so as to effectively implement integrated risk reduction planning and practice in the municipality:

- Conduct comprehensive and progressive disaster risk assessments which will contribute to the development of disaster risk profiles that are current and relevant, and which will inform the planning and practice of holistic, integrated disaster risk reduction and contingency planning and implementation.

- Establish and maintain mechanisms for assessing and continuously monitoring disaster risk, updating and disseminating disaster risk information, and exercising quality control over the conduct of disaster risk assessments.
- Submit disaster risk assessment reports for the municipality to the technical advisory committee, the provincial disaster risk management centre and the NDMC for scrutiny and approval.
- Develop and apply a uniform disaster risk reduction policy in the municipal area.
- Establish technical task teams for the development and implementation of integrated disaster risk management plans in the municipal area. These plans should be consistent with the findings of disaster risk assessments. Disaster risk management plans should include:
    - strategies, programmes and projects aimed at risk reduction by municipal departments, other municipal entities and other disaster risk management role players in the municipal area; and
    - the preparation of hazard-specific contingency and response and recovery operational plans for the coordination of response and recovery efforts by municipal departments and other municipal entities, and other disaster risk management role players in the municipal area.
- Establish mechanisms to facilitate and monitor the progress being made by the technical task teams with the development, integration and implementation of priority risk reduction strategies, programmes and projects affecting the municipal area as a whole.
- Establish and maintain mechanisms for the integration of risk reduction plans, projects, programmes and practices into Integrated Development Plans (IDPs) and all other developmental strategies in the municipal area.
- Submit the municipality's disaster risk management plans to the NDMC, the provincial disaster risk management centre concerned, neighbouring municipal disaster risk management centres and other relevant disaster risk management role players in the municipal council area.

- Institute joint standards of practice for disaster risk management in the municipal area which are consistent with national and provincial standards.
- Establish mechanisms to facilitate planning for the integrated management of cross-boundary risks (with neighbouring municipalities) by entering into mutual assistance agreements and memoranda of understanding for the purpose of disaster risk management.
- Monitor the alignment of the municipality's disaster risk reduction plans and strategies with the plans of neighbouring municipalities.
- Develop the capacity to provide a consultative and advisory service on disasters and disaster risk management in the municipal area.
- Exercise quality control, monitor progress and review the effectiveness of risk reduction programmes and projects, and contingency plans.
- Consult with the Municipal Disaster Risk Management Advisory Forum on the development of disaster risk management plans and other relevant disaster risk management issues.

11.4.3 Portfolio: Integrated response and recovery planning and Practice

The Head of the Disaster Risk Management Centre must be supported by adequate and appropriately qualified staff to execute the requirements for establishing, managing and maintaining a fully functional disaster operations centre within the municipal disaster risk management centre. The centre must have capabilities for the real-time strategic direction and management of significant events and disasters.

To effectively implement integrated response and recovery planning and practice in the municipal area, the following must be done:

- Participate in the activities of technical task teams responsible for the development and implementation of contingency plans and response and recovery operational plans to ensure rapid, appropriate and effective disaster

response and recovery when disasters occur or are threatening to occur in the municipal area.

- Facilitate the development of by-laws to call for extraordinary measures in terms of section 55(2) of the DM Act, and make recommendations regarding the issuing of directives when disasters occur or are threatening to occur in the municipal area.
- Establish a disaster operations center in the municipal disaster risk management center and maintain it in a state of readiness.
- Plan and conduct regular table-top exercises, drills, rehearsals and simulations to evaluate the effectiveness of contingency plans and to test the state of preparedness for prompt integrated response and recovery operations in the municipal area.
- Establish and maintain the capacity and the capability for the technical identification and monitoring of hazards, and facilitate the development of early warning systems in the municipal area.
- Establish and maintain the capacity and the capability to prepare and issue hazard warnings of significance in the municipal area.
- Institute joint standards of practice for the management of multi-agency responses in the municipal area that are consistent with national and provincial criteria.
- Develop and apply uniform mechanisms for the identification and dissemination of early warnings, disaster assessments, classifications and declarations of disasters, and integrated and coordinated response, recovery and relief operations.
- Develop and implement the capability for assessing the magnitude and severity, or the potential magnitude and severity, of a disaster when it occurs or threatens to occur, and make recommendations on the classification of local disasters and states of disaster.
- Provide advice and make recommendations regarding the classification and declaration of a state of disaster.

- Ensure adequate capability and capacity to support the head of the center with the strategic direction and management of coordinated and integrated disaster response, relief and recovery efforts, and rehabilitation and reconstruction in the event of a local disaster or local state of disaster.
- Mobilise municipal council infrastructure and resources to support neighboring municipalities if requested to do so, in the event of a disaster.
- Channel and coordinate appeals for additional assistance to the provincial disaster risk management center or the NDMC when resources are depleted and the scope of a disaster falls outside that of a local disaster.
- Establish mechanisms to ensure the routine review of all significant events and/or disasters occurring or threatening to occur in the municipal area and the ensuing review and updating of plans.

11.4.4 Portfolio: Disaster risk management education, training, public awareness and research (Knowledge management)

The Head of the Disaster Risk Management Centre must be supported by adequate and appropriately qualified staff to develop and implement an education, training, awareness and research (knowledge management) programme in the municipal area.

In order to achieve this goal, the following key tasks need to be undertaken:

- Establish, develop, manage and maintain a functional training facility and the reference library component of the disaster risk management centre.
- Develop and implement an integrated public awareness strategy, based on the municipality's risk profile, to promote risk-avoidance behaviour and to ensure an alert and informed public. The strategy should be targeted at all relevant role players and stakeholders in the municipal area.
- Develop and establish a media relations strategy for disaster risk management in the municipal area.
- Conduct ongoing analyses of needs and resources in the municipal area to guide disaster risk management knowledge management strategies.

- Develop and implement a disaster risk management training and education framework which is consistent with the national and provincial frameworks, makes provision for accessible training, education and research opportunities and programmes for disaster risk management stakeholders in the municipal area, and includes the introduction of disaster risk management education in school curricula in the municipal area.
- Establish and facilitate a technical advisory body to guide disaster risk management awareness, training, education and research in the municipal area.
- Develop, implement and maintain dynamic mechanisms for monitoring, evaluating and continuously improving disaster risk management practice, projects and programmes in the municipal area.
- Establish a strategic disaster risk reduction research agenda which is linked to policy and the Indicative Risk Profile.
- Promote the participation of local research institutions in the municipal council's research programmes.

11.4.5 Administration

The Head of the Disaster Risk Management Centre must be supported by adequate and appropriately qualified staff to execute the requirements for information management and communication in the municipal area. These requirements include developing, establishing, managing and maintaining a comprehensive disaster risk management information management system, including geographic information system-based (GIS) applications, for the municipal disaster risk management centre. To achieve this, the following must be done:

- Maintain a resource database, including a reporting and performance management facility.
- Facilitate disaster risk assessment and disaster risk reduction planning and decision making, mapping, monitoring and tracking.

- Guide and inform focused disaster risk management and development planning and decision making.
- Facilitate awareness of and training, education and research in disaster risk management.
- Facilitate funding and financial management for disaster risk management.
- Serve as a conduit and repository for information concerning disaster risk management in general, disasters and threatening disasters.

The Head of the Centre must be supported by adequate and appropriately qualified staff to develop, establish, manage and maintain a comprehensive telecommunications system for the municipal disaster risk management centre. To achieve this, key tasks include:

Facilitate the exchange of information between role players and stakeholders, including communities at risk.

- Facilitate timely dissemination of early warnings.
- Facilitate public awareness and preparedness.
- Enable timely decision making to ensure rapid and effective response and recovery operations.
- Facilitate integrated and coordinated multi-agency response management.
- Record and track real-time disaster response and recovery operations.
- Establish capacity and capabilities for specialised early warning detection, monitoring of potential hazards and dissemination services.
- Provide for incident monitoring and procedure implementation.
- Provide for real-time information management.
- Mobilise key staff in the event of significant events, disasters or threatening disasters.
- Establish a call-taking facility for lifeline service problems.

The following the proposed for Disaster Management Centre Unit.

11.4.6 Equipment

Various different sets of equipment are required in the DMC. The amount and type of equipment will be determined by the proposed layout and size of the centre. However, general equipment that might be required at the DMC include:

- A dedicated DMC building / office space.
- Furniture including desks, tables, chairs, room dividers and desk dividers. The furniture should ideally be modular furniture, with wheels to facilitate easy movement of furniture.
- Information Technology includes personal computers, laptops, printers, scanners and copiers.
- A strong room / safe.
- Stationary and Office supplies, including White board and permanent markers in various colours, normal staplers, and heavy duty staplers, document punch, paper clips, staple puller, push pins, masking tape, writing pads, pens, pencils, rubber bands, erasers, 'post-it' pads, various paper for printers/plotters, file folders, CDs, DVD.
- Communication, navigation and data capturing equipment, including telephones, fax machines, switchboard, radios, cell phones, chargers, public address equipment and GPS Devices.
- Audio-visual equipment including televisions (with access to the major satellite channels), radios, video cassette, DVD, and CD players, data and transparency projectors, white screens, flip chart easel and pads.
- Reference Material including map books, maps and blueprints.
- Medical and Safety Equipment, including Fire Extinguishers and First-Aid kits.
- Kitchen and Food related equipment and appliances, including cutlery, dishes, cups, saucers, refrigerators, stove/oven, microwave oven and tea trolley.

- Back-up services infrastructure, including generator and fuel (if required), water tanks and pumps.
- Food/Drink groceries including coffee, tea, sugar, long life milk and bottled water.
- Sanitation requirements, including disinfectant, hand soap, towels, and other sanitation items.
- Cleaning and Maintenance requirements, including soap and washing liquids, cleaning equipment, buckets and vacuum cleaner.
- Other equipment, including electrical extension cords, notice boards and flashlights.
- Vehicles, the DMC also require a suitable vehicle(s) in order for officials to effectively travel and have access to disaster areas. This vehicle should ideally have 4x4 capabilities, seeing that officials should be able to travel in rural, or undeveloped areas.

11.4.6 Decentralized arrangements for the integrated execution of disaster risk management policy in the area of the City municipality

The head of the center must establish mechanisms to ensure integration and joint standards of practice in the execution of disaster risk management policy throughout the City of uMhlathuze Municipality.

11.4.7 DISASTER MANAGEMENT ADVISORY FORUM AND MUNICIPAL DISASTER MANAGEMENT COMMITTEES

11.4.7.1 PURPOSE

Section 44(1)(b) of the Disaster Management Act No. 57 of 2002 (Act) calls for an integrated and coordinated approach to disaster risk management in municipal areas. To make provision for the integration and coordination of disaster risk management activities and to give effect to the principle of co-operative governance in the City of uMhlathuze, the municipal council may establish a Disaster Risk Management Advisory Forum. Section 51 of the Act makes provision for the establishment of such a forum.

11.4.7.2 MANAGEMENT AND ADMINISTRATION

The advisory forum must be established by the portfolio councilor responsible for the disaster risk management function in the City of uMhlathuze. The advisory forum must be chaired by the head of the disaster risk management center of the City of uMhlathuze.

The disaster risk management centre must provide the secretariat for the advisory forum and must ensure that accurate records of the activities of the forum are maintained.

11.4.7.3 COMPOSITION OF THE DISASTER RISK MANAGEMENT ADVISORY FORUM

The advisory forum must comprise all the relevant stakeholders and role players in disaster risk management in the municipality, including non-governmental and community-based organisations, individuals or groups with special technical

expertise, representatives of the local municipalities in the City and representatives of neighbouring City municipalities.

- The head of the City Disaster Management Centre;
- A senior representative of each department designated within the City of uMhlathuze;
- Officials of the respective municipal disaster management in City of uMhlathuze;
- Representatives of organized local government in the City;
    - Organized business in the City of uMhlathuze;
    - Representatives of mines in the City of uMhlathuze;
    - Organized labour in the City of uMhlathuze;
    - Organized agriculture in the City of uMhlathuze;
    - Traditional leaders in the City of uMhlathuze;
    - The insurance industry in the City of uMhlathuze;
    - Religious and welfare organizations in the City of uMhlathuze;
    - Medical, paramedical and hospital organizations in the City of uMhlathuze;
    - Other relevant non-governmental organizations and relief agencies in the City of uMhlathuze;
    - Institutions that can provide scientific and technological advice or support to disaster management;

The DMAF makes recommendations to the DDMC and act in an advisory capacity with regard to matters pertaining to disaster risk management. The DDMAF also supports the programmes of the PDMC by providing technical expertise.

The role of the DDMAF is also expected to:

- Drafting disaster risk management plans;
- Promoting joint standards of practice;

- Developing the information management and communication system;
- Contributing critical information to the directory of institutional role players;
- Assisting with effective communication links;
- Advising and making recommendations on training and public awareness;
- Participating in the review of programmes and policy.

The meetings of the DDMAF take place quarterly, or on ad-hoc basis depending on the prevailing circumstances such as disaster or urgent matters that requires the attention of the DDMAF.

11.4.7.4 MUNICIPAL DISASTER MANAGEMENT COMMITTEES

The local (for each local municipality) disaster management committees facilitates integrated and coordinated planning by providing a forum for collaboration on joint cross-departmental plans and programmes aimed at disaster risk reduction and other relevant activities associated with disaster risk management. It assists with supervising the preparation, coordination, monitoring and review of disaster management activities and their integration into IDP processes.

11.4.7.5 VOLUNTEERS

a. DISASTER MANAGEMENT SET UP

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

In terms of section 43(11) clause B of the Disaster Act No. 57 of 2002, a City Municipality has a legislative responsibility to establish in its administration a City of uMhlathuze Disaster Management Unit for its Municipal Area. The act allows the Municipality to establish a Disaster Management Unit after a consultation process with the community.

City of uMhlathuze Disaster Management has committed itself towards achieving the requirements of the said Act. The main objective of the Municipality is to run the unit in a stainable manner based on principles of co-operative governance.

11.4.7.6 DISASTER MANAGEMENT VOLUNTEER CONCEPT

The Volunteer training program is total based on the need to develop a support program of community emergency services operations that will focus on helping the communities to deal with disasters or unusual circumstances. These areas include, but not entirely limited to the following:

- Structural and runaway fires;
- Floods
- Outbreaks
- Community evacuation
- First Aid to assist victims injured during the occurrences
- Emergency family / household support interventions (accommodation, feeding and utilities)
- Damage assessment, quantification and packaging of needs,
- Marshalling for crowd control and management,
- Traffic control and regulating,
- Research and profiling risks in particular areas

11.4.7.9 Technical advisory committees

A technical advisory committee (TAC) must be appointed by the municipal disaster risk management centre prior to commissioning any disaster risk management projects for the City municipality. The purpose of the TAC is to provide scientific and technical advice, to monitor the progress of disaster risk management projects and to assist with the validation and/or interpretation of the findings.

In addition, any municipal department and/or municipal entity in the City municipality or a department and/or municipal entity in any of the City's local municipalities intending to commission a disaster risk management projects for its functional area may appoint a TAC to provide scientific and technical advice, to monitor the progress of the disaster risk management project and to assist with the validation and/or interpretation of the findings.

A TAC must function and meet as required in accordance with predetermined terms of reference, which must be documented and submitted to the City of uMhlathuze Disaster Risk Management Centre for approval before being formally adopted by the TAC.

All proposed disaster risk management projects planned by departments and municipal entities in the City municipality and in local municipalities in the City must be submitted to the City of uMhlathuze Disaster Risk Management Centre. These proposed assessments must also be sent to the relevant provincial disaster risk management centre and the NDMC for technical review and approval before being commissioned.

TAC's may also be established at local Municipal level, but should be established through a formal Council Resolution.

Ward structures

The existing ward structures and ward-committee meetings will be utilised for implementing disaster risk reduction at ground level.

Assignment of responsibilities

The following table summarises the main responsibilities of the different structures at Municipal level, with regard to disaster risk management efforts:

DISASTER MANAGEMENT SUMMARY ROLES AND RESPONSIBILITIES-POWERS & FUNCTIONS **Populate**: Input / Implement / Obtain / Disseminate						
Component:	**Mayor and Municipal Manager**	**Council**	**Disaster Management Officials & Volunteers**	**Departments and Organs of State**	**Advisory Forum**	**Other external role players**
Disaster Risk Management Policy	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate	Input Obtain Disseminate Implement
Disaster Risk Assessment & Planning	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate	Input Obtain Disseminate RA:- Plans: Implement
Declaring a State of Disaster	Input Obtain Disseminate Implement	Declare	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate	Obtain Disseminate
Disaster Response and Recovery activities	Obtain Disseminate Implement	Input Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate	Input Obtain Disseminate Implement
Designating members of the Advisory Forum & Volunteers	Input Disseminate Implement	Disseminate	Input	Obtain	Obtain Disseminate	Obtain Disseminate
Communication of information, training & research	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate
Reporting, Monitoring and Evaluation	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement	Input Obtain Disseminate Implement

Specific roles and responsibilities for municipal departments and organs of state

The following general responsibilities pertain to each and every municipal department of the City of uMhlathuze. These general responsibilities are the minimum requirements in order to give effect to the DMA. It should however be noted that these lists are not exhausted and serve as a guide for departments to take their own initiatives.

The City's main stakeholders in disaster management and their primary responsibilities are summarised in the table below:

STAKEHOLDER	PRIMARY ROLES AND RESPONSIBILITIES
The Municipal Council	The Municipal Council declares a state of disaster and receives and considers reports with regard to disaster risk management.
The Municipality's Municipal Manager	The Municipal Manager is overall responsible for governance in the Municipality, including effective disaster risk management.
The Municipality's Disaster Management Function	The Disaster Management Functions are overall disaster risk management and co-ordination, as per section 44 of the Disaster Management Act. Each Municipal Organ of State (which implies each Municipality Department and each Municipal Entity), will complete its own disaster management plans, to be incorporated into the Municipality's Municipal Disaster Management Plan.
Fire and Emergency Management Services	Assist with disaster risk reduction, implementation and co-operation.
The Disaster Management Volunteers	The formal, trained volunteer unit assist Disaster Management in their functions.
The residents and communities affected	Assist with disaster risk reduction and co-operation.
The Ward Councillors	The Ward Councillors assist with community liaison.

STAKEHOLDER	PRIMARY ROLES AND RESPONSIBILITIES
The Community Leaders	The Community Leaders assist with community liaison.
Non-Governmental Organisations (NGOs) and Community Based Organisations (CBOs)	The NGOs and CBOs assists with disaster risk reduction and co-operation.
Private sector and industry	Assist with disaster risk reduction and co-operation.
EMRS	Assisting with prevention/mitigation, response and recovery actions. Treating and transporting of patients.
Corporate Services and Financial Services	Assisting with administration, legal advice and funding.
Communication & Public Participation	Assisting the disaster management function with communication and awareness.
Technical Services	Assisting with prevention/mitigation, response and recovery actions. (Engineering, Development, Infrastructure)

Mutual assistance agreements

The following principles will apply to all stakeholders in disaster risk management in the City of uMhlathuze:

1) Detailed disaster risk management planning, prevention, mitigation, response and recovery-related actions will be executed by all relevant institutions and stakeholders / role players in the City of uMhlathuze though applying the principles and requirements as foreseen by the Act, the NDMF, PDMF, City DMF and this Plan.
2) Mutual Aid Agreements will be signed between relevant stakeholders.
3) The principles of co-operation, effective communication and information management, reporting and alignment (joint standards of practice) of planning and implementation on disaster risk management will at all-time be adhered to by all institutions, stakeholders and role players.
4) Disaster risk management information systems will be implemented in a coordinated and aligned fashion throughout the City of uMhlathuze to ensure effective information management.

5) Training, capacity building and research on disaster risk management will continually be executed at all levels of government and for and by stakeholders in the City of uMhlathuze.

6) The involvement and co-operation of non-governmental role players and historical information, to be *inter alia* gathered through indigenous knowledge, is of paramount importance. Traditional leaders in the local municipalities will be properly consulted and informed with regard to disaster risk management initiatives in their areas.

7) The local disaster management function will execute detailed research; obtain all required technical advice and inputs required and guide and monitor disaster risk management implementation, co-operation, communication and information dissemination in the City of uMhlathuze.

CAPACITY ANALYSIS AND REQUIREMENTS

Limited capacity currently exists in the City of uMhlathuze and specifically to fulfil all the functions required by the Act.
Capacity requirements are as follows:

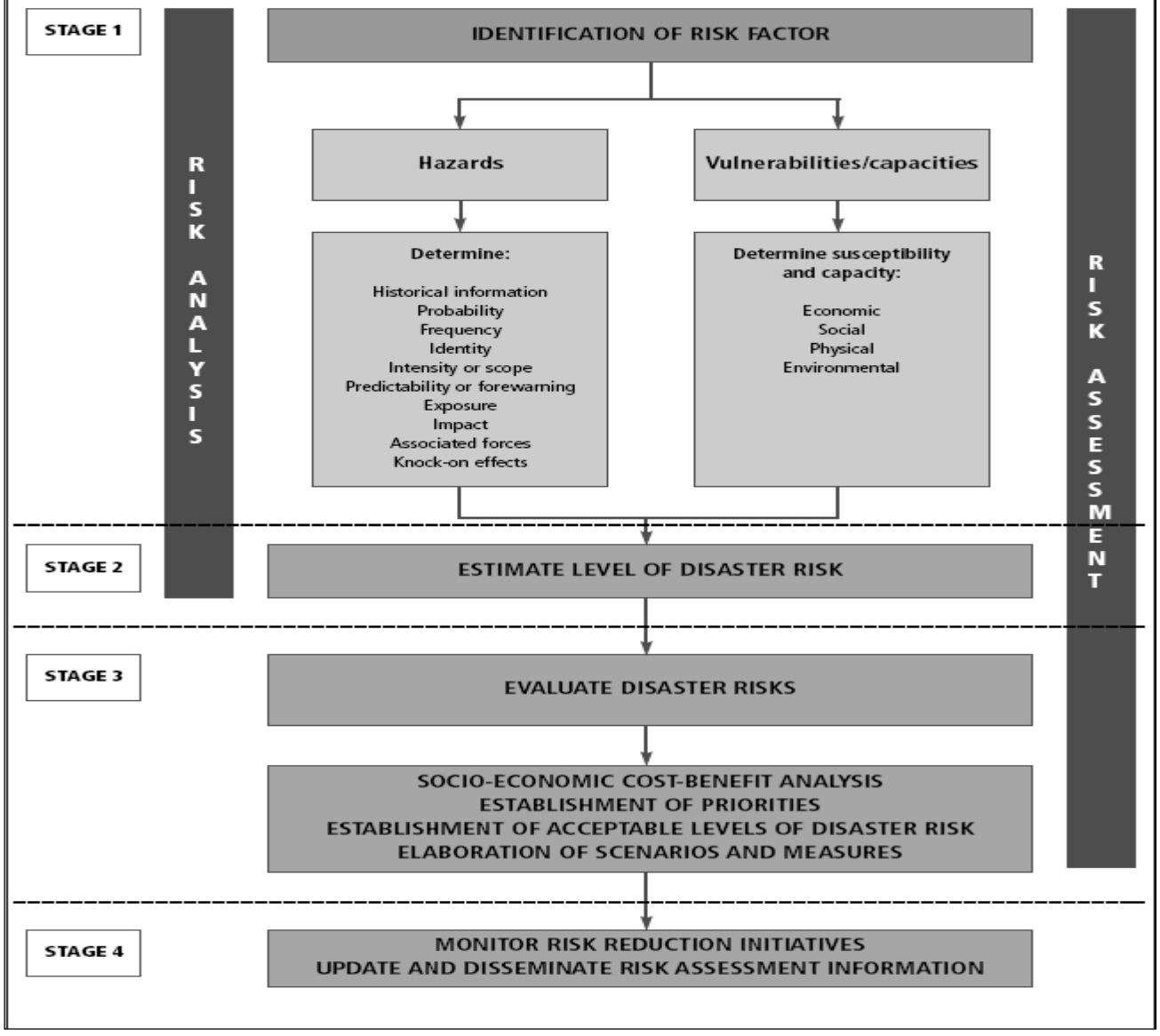
- Additional personnel
- Fully functional Disaster Management Centre
- A Disaster Management Information System as per National Guidline
- Designated vehicles
- Additional funding / budget
- Additional training.

12. KEY PERFORMANCE AREA 2: DISASTER RISK ASESSMENT

12.1. OBJECTIVE

Establish a uniform approach in identifying, assessing and monitoring disaster risks that must inform disaster management planning and disaster risk reduction undertaken by organs of state and other role players.

Figure 2.1: The basic stages of a disaster risk assessment



The City of uMhlathuze current disaster risk profile is based on a detailed disaster risk assessment process. The risk profile for the City of uMhlathuze identified during risk analysis workshops with communities throughout the City as well as historical data gathered from incident assessments over the past four years. The data

collected from the stakeholders was compared with the desktop hazard assessment results, and the hazard severity was adopted.

City of uMhlathuze Risk rating are shown below:

Main Category (CITY RISK RATING)	RISK (City)
Communicable Diseases: Pandemic	0.95
Hydro-meteorological Hazards - Severe Storms (Lightning)	0.90
Hydro-meteorological Hazards - Severe Storms (Heavy Rainfall)	0.86
Hydro-meteorological Hazards - Floods (River)	0.83
Fire Hazards - Veld/Forest Fires	0.77
Hydro-meteorological Hazards - Severe Storms (Wind, Hail)	0.75
Fire Hazards - Formal & Informal Settlements / Urban Area	0.75
Hydro-meteorological Hazards - Severe Storms (Snow)	0.72
Transport Hazards - Road Transportation	0.71
Geological Hazards - Rock-fall	0.71
Hydro-meteorological - Drought	0.70
Pollution - Air Pollution	0.70
Transport Hazards - Air Transportation	0.69
Transport Hazards - Rail Transportation	0.67
Environmental Degradation - Erosion	0.66
Pollution - Water Pollution	0.65
Disease / Health - Disease: Animal	0.61
Hazardous Material - Hazmat: Spill/Release/Fire/Explosion (Storage & Transportation)	0.59
Pollution - Land Pollution	0.57
Environmental Degradation	0.57
Geological Hazards - Earthquake	0.55
Structural Failure - Dam failure	0.52
Infrastructure Failure / Service Delivery Failure - Information Technology	0.52
Major Event Hazards (Cultural, Religious, Political, Recreational, Commercial, Sport)	0.51
Disease / Health - Disease: Plants	0.46
Civil Unrest - Terrorism	0.45
Civil Unrest - Xenophobic Violence	0.44
Hydro-meteorological Hazards - Extreme Temperatures	0.38
Civil Unrest - Refugees / Displaced People	0.37

12.2. DISASTER RISK ASSESSMENT

City of uMhlathuzey faces many different types of risks on a daily basis, including veld and structural fires, lightening, floods and snow. However, disaster risk specifically refers to the likelihood of harm or loss due to the action of natural and man-made hazards or other external threats on vulnerable structures, services, areas, communities and households.

Disaster risk assessment is the first step in planning an effective disaster risk reduction programme (NDMPF, 2005). Disaster risk assessment provides an objective and transparent information for making decisions on countermeasures to reduce disaster risk.

Disaster risk assessment examines the likelihood and outcomes of expected disaster events. Disaster risk assessment includes the investigation of related hazards and conditions of vulnerability that increase the chances of loss and also the capacity or resources to deal with such hazards and vulnerabilities.

12.3. DISASTER RISK ASSESSMENT METHODOLOGY

The stages of a disaster assessment, as suggested in National, Provincial and District Disaster Risk Management Policy Frameworks are the following (shown in the order in which they are normally conducted).

- Hazard identification to identify the nature, location, intensity and likelihood (probability or frequency) of a threat;
- Vulnerability analysis to determine the existence and degree of vulnerabilities and exposure to a threat(s);

- Capacity analysis to identify the capacities and resources available to reduce the level of risk, or the effects of a disaster;
- Risk analysis to determine levels of risk; and
- Risk evaluation to make decisions about which risks need countermeasures and priorities

Risk Analysis Methodology

This component represented the technical work, based on the total risk assessment process as depicted in the risk assessment process diagram and covered stages 1 and 2 thereof. The Disaster Buster™ Risk Mappers were used as a "manual" guide for the collection of information, though a Geographic Information System (GIS) based planning system was used for the support of disaster risk assessment process to support the collection and processing of data, the review of data in a spatial context, and the ability to analyses spatial context for assessing community vulnerability.

Hazard, vulnerability and capacity analysis process

DMS followed a classic hazard, vulnerability and capacity analysis adapted from the NOAA[1] model.

12.4. DISASTER RISK ASSESSMENT MODEL

Disaster risk (hazard; vulnerability & capacity) assessments provide a piece of reality from a subjective perspective. No risk assessment model can be designed to be conducted once and then discarded. It must lead to action and must be followed by regular review and revision to allow continuous changes in the environment and continuous improvements.

After a vigorous investigation of disaster risk assessment models, the DMC adopted the disaster risk assessment model designed by Disaster Management Solution Model, referred herein as the DMS Model. The DMS Model was used during the preparations for the City of uMhlathuze Disaster Management Plan in 2019.

12.4.1. Hazard Analysis

When performing the hazard analysis the following factors are vital in determining the nature of a hazard:

- Likelihood/probability
- Frequency in which the hazard is occurring
- Predictability: ability to the event
- Most likely magnitude of the event if it occur

The hazard criteria are scored as per the table below:

PROBABILITY		FREQUENCY		PREDICTABILITY		MAGNITUDE	
No Chance	*1*	*Once in 20 Years*	*1*	*100% Predictable*	*1*	*Affect a Very Small Area e.g Village*	*1*
Slight Possibility	*2*	*Once Every 5 Years*	*2*	*Fairly Accurate to Predict*	*2*	*Affect an area like a ward*	*2*
50/50 Chance	*3*	*Once a Year*	*3*	*50/50 Chance to Predict*	*3*	*Affect an area like a Municipality*	*3*
Very Good Chance	*4*	*Once a Month*	*4*	*Slight Chance to Predict*	*4*	*Affect Multiple Municipalities*	*4*
100% Certain	*5*	*Once a Week*	*5*	*Cannot Predict*	*5*	*Affect alarge area Like a Province*	*5*

12.4.2. Vulnerability Analysis

When performing the vulnerability analysis the following factors were vital in determining the level of vulnerability:

- Political factors
- Economic factors
- Social factors
- Technological factors
- Environmental factors

The vulnerability criteria were scored as per the table below:

VULNERABILITY ANALYSIS			
POLITICAL		**ECONOMICAL**	
Very stable political situation	*1*	*no financial impact*	*1*
limited cooperation between all political parties conducive to development	*2*	*very low financial and economical impact*	*2*
limited political instability leading to uncertainty in local community	*3*	*limited financial and economical impact to a number of families*	*3*
disruptive political activities negatively influencing the community life	*4*	*Serious financial and economical impact on the total community*	*4*
Dysfunctional political structures could result in civil unrest	*5*	*Very serious & Catastrophic economical and financial impact*	*5*
SOCIAL/HUMAN		**TECHNOLOGICAL**	
No social impact	*1*	*No impact or destruction of settlement, infrastructure and services*	*1*
Slight injuries and/or discomport to individuals	*2*	*Very little damage on settlement, infrastructure and services*	*2*
Multiple injuries and/or displacement of a small number of families	*3*	*Limited damage on settlement, infrastructure and services*	*3*
Fatal injuries and multiple injuries and/or displacement of a large number of families	*4*	*Serious damage on settlement, infrastructure and services*	*4*
Multiple fatalities and multiple injuries and/or permanent displacement of the total community	*5*	*Total destruction of settlement, infrastructure and disruption of services*	*5*
ENVIRONMENT			
No impact	*1*		
Little impact	*2*		
Limited impact on a small area or ecosystem	*3*		
Serious impact on a small area or ecosystem	*4*		
Serious impact on a large area or ecosystem	*5*		

12.4.3. Capacity assessment

The capacity assessment was conducted based on the following critical factors:

- Institutional and management capacity
- Programme capacity
- Physical capacity/resources
- People capacity and competencies
- Support network

CAPACITY ANALYSIS	
INSTITUTIONAL AND MANAGEMENT CAPACITY	
Limited institutional arrangements with little or limited leadership directing the DM function	*1*
Established basic functional arrangements, leadership	*2*
Well established institutional arrangement. Leadership take an active role in DM matters	*3*
Exceptional leadership, well balanced management capacity in place and well structured and managed institutional capacity	*4*
100% in place	*5*

PROGRAMME CAPACITY	
No or limited programme capacity	*1*
Level 1 plan in place	*2*
Level 2 plan in place	*3*
Full compliance to the Act and Framework with a level 3 plan in place	*4*
100% demonstrated and tested plans in place with 100% support by all role-players	*5*

12.4.4. Disaster Risk Quantification

Using the definition of a "Disaster", Disaster Risk can be subdivided into three distinct components:

- Hazard
- Vulnerability
- Capacity

The levels of risk were calculated using the disaster equation (figure 1) and each of the risk variables (i.e. hazard, vulnerability and capacity) were also calculated using a relevant criteria.

$$\boldsymbol{Disaster\ Risk = Hazard \times \frac{Vulnerability}{Capacity}}$$

12.4.5 DISASTER RISK ASSESEMENT RESULTS

Metrics

Ward	Struct Fire	Veld Fire	Strong Winds	Lightning	Hailstorm	Heavy Rains	Floods	Drought	Hazmat	Coastal Erosion	Epidemic	
1												Strong winds, lightning and heavy rains are occurring as the ward is coastal and has a lot of industries that exposes the community to polluting emissions and chemical spillages

2												The community is more vulnerable on strong winds, hail storm, heavy rains because of the quality of building in the ward and that it is also coastal and close to industries.
3												Most challenges are weather and fire related, though other risks are eminent but their impact is thus far minimal.
4												The area is exposed to a number of risks like any other but the impact recorded not been of bigger scale.
5												Settlements are unplanned and mostly rural with poor drainage systems, communities are building along the rivers with not access for emergency intervention
6												Settlements are unplanned and mostly rural with poor drainage systems, communities are building along the rivers with not access for emergency intervention
7												Settlements are unplanned and mostly rural with poor drainage systems, communities are building along the rivers with not access for emergency intervention
8												The area do experience risk at a minimal scale which in a way needs a lot attention
9												It is a suburb ward with a portion of RDP housing dwellers, mainly that's where fires are experienced as most are rental houses. Overloading of electricity appliances, low structural maintenance
10												People are residing in a very populated area and are full of informal rental structures. Rain water has not channelling infrastructure
11												The ward has a mix of structures that are not resilience to stand different weather challenges and those that are solid to withstand weather challenges. Part of it very rural and have open fields and plantation
12												It has a small scale suger cane plantation, traditional and informal dwellings. The impact of risks are very visible and Cubhu dame os also in this ward
13												Settlement is informal and is covered with plantation, some mining developments and it is coastal. It also sharing iCubhu dams that supplies water in the area and surroundings with ward 12.
14												The ward is densely populated with vulnerable groups and informal settlement. Some communities have their houses built along uMzingwenya river that because of being a wetland by its nature flooding is always a challenge. It has a mix of township, traditional and informal dwellings, Part of H2, Dube village, Gobandlovu and Madlankala
15												Settlement are more traditional with a mix of plantations small scale agricultural activities, it has natural drainage system and the general population is poor, it is under developed which makes it traditionally adaptive to risks
16												People are residing in a very populated area and are full of informal rental structures. Rain water has not channelling infrastructure
17												Part of the ward is the township dwellings the other are communities have their houses built along uMzingwenya river that because of being a wetland by its nature flooding is always a challenge. It has a mix of township, traditional and informal dwellings
18												This is the traditional settlements that are out of the township and it is exposed to a number of risks which its impact devastating. It is also coastal with unmanaged beach where most of the drowning's occurs. I is also covering a lot of plantation and shares uMzingwenya river.
19												Running rain water are not controlled and normally destroy anything on its way especially vulnerable groups with no means defend themselves.. Some communities have their houses built along uMzingwenya river that because of being a wetland by its nature flooding is always a challenge. It has a mix of township, traditional and informal dwellings
20												The ward is densely populated with vulnerable groups and informal settlement. Some communities have their houses built along uMzingwenya river that because of being a wetland by its nature flooding is always a challenge. It has a mix of township,

												traditional and informal dwellings
21												It a formal settlement that affect by air pollution because there are many industries near in this settlement and there is a lot of crime.
22												This is the Traditional settlement that are out of the township .This settlement covered with plantation and flooding becomes a challenge during heavy rainfall
23												It is a formal settlement which is over population. Some of areas surrounded by sugar cane farming, crime is a high risk that affect this community because they are suburb dwellers.
24												This ward is an informal settlement surrounded by many tavern that cause a high rate of crime. Some areas are suffering by extremely poverty because of unemployment
25												It is an informal settlement with uMhlathuze Dam, plantation of sugar cane and livestock .this ward has lot of crime
26												It a formal settlement that affect by air pollution because there are many industries near in this settlement and there is a lot of crime.
27												This is a traditional and an informal settlement area is exposed to a number of risks that are linked under development.
28												It a formal and informal settlement and it has public hospital. Most dwellings are in a flood plain are that uMhlanga and around the hospital
29												The area is traditional rural area with some developments but it does have risks that are weather related and the impact is based on quality of structures.
30												It is traditional settlement away from most amenities, drought, fires and poverty is at its high.
31												It is traditional settlement away from most amenities, drought, fires and poverty is at its high.
32												It is traditional settlement away from most amenities, drought, fires and poverty is at its high.
33												It is traditional settlement away from most amenities, drought, fires and poverty is at its high. Some settlement are built on the banks of the river which now and again overflows
34												It is an area that has a mix of rural settlements, semi-suburb, quarry mining and sugar cane farming

12.4.5.1. PANDEMIC: COVID 19

Since the discovery of the Novel Corona Virus 2019 (COVID-19) in Wuhan, China in December 2019 and the subsequent declaration of a pandemic by the World Health Organisation (WHO), the rapid spread of the virus and its variants has resulted in continuing health, economic, and development impacts globally. Following the WHO recommendations to prevent and reduce the transmission of the virus, Governments across the world have implemented various levels of national lockdowns including strict curfews, limiting public gatherings, travel bans and restrictions and many have mandated their citizens to exercise social distancing and to wear face masks at all times in public. In 2020 and throughout 2021, as the focus of governments' COVID strategies shifted to the mass roll-out of vaccines, development works also need to be adjusted to support health

systems that minimize COVID-19 deaths, account for varying variants, while ensuring livelihood opportunities and protection of natural resources.

This literature review of other Disaster Risk Management (DRM) Plans and pandemic responses offers a compilation of resources that are meant to guide how the City of uMhlathuze (CoU) in KwaZulu Natal province can incorporate timely responses to pandemics such as the COVID-19 pandemic in its Level 2 Disaster Management Plan. A review of international, regional, and South African best practices will aid identification of any gaps in the current CoU Disaster Management Plan. It will also contribute to identifying related implementing guidelines to address these gaps to ensure:

1. the alleviation of the impacts of pandemics;
2. safeguarding of the health of citizens;
3. continuous business operations;
4. services, and supplies assurance; and
5. natural environment protection

through improved awareness and resilience. The following sections will identify available knowledge and expertise gaps, challenges, and areas of improvement in relation to pandemic responses.

PANDEMIC RESPONSE PLAN

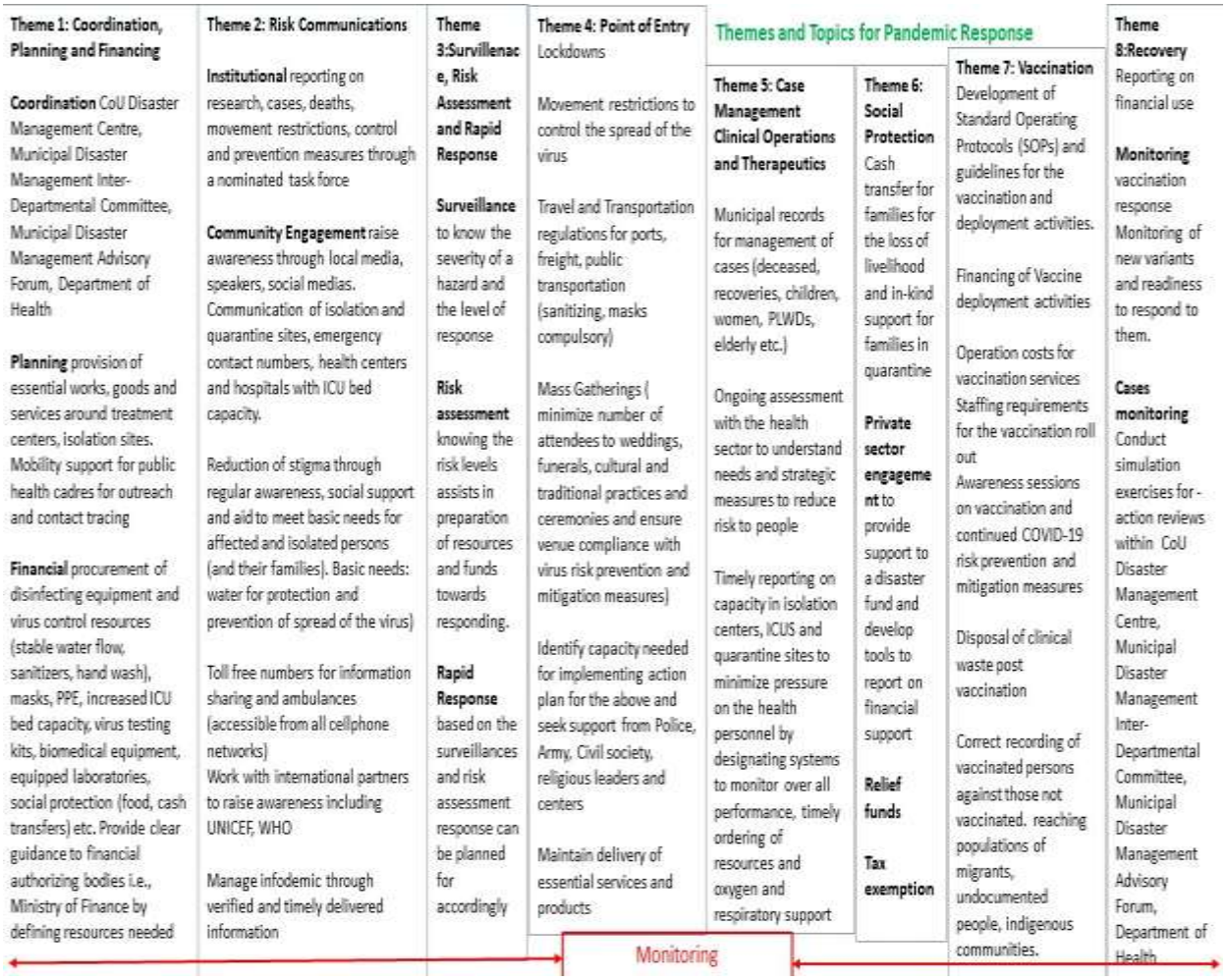
The CoU Disaster Risk Management Plan requires strengthening to support the municipality's effective response and recovery from natural disasters, human-induced disasters, epidemics, and pandemics (Table 2). Therefore, it makes it challenging to calculate resources and financial support (logistics, facilities, medical supply, food, ventilators, ICU beds, isolation facilitates, quarantine sites, testing kits and biometrics, laboratories, essential workers, and first responders, etc.) necessary for impactful and lifesaving pandemic response.

The Government of the Republic of South Africa set out relief funds to support businesses and individuals during the COVID-19 pandemic including the COVID-19 Youth Relief Fund, launched online learning support programs, the National

Committees Commission relief fund for non-government organisations, sports, arts and culture relief funding, emergency tax relief for businesses[2]. In the absence of documented recovery measures in the CoU Disaster Risk Management Plan, it is unclear how much the relief funds and other initiatives have benefited the municipality.

Monitoring of resource use and finances is challenging when there are no clear monitoring guidelines. According to the CoU Council, COVID-19 expenditure reporting was in line with the Supply Chain Management Policy (SCM), MFMA, and circulars 100, 101, and 102 of the National Treasury. In the absence of response and recovery planning and reporting, it is challenging to monitor the extent of the impact of the allocated relief funding.

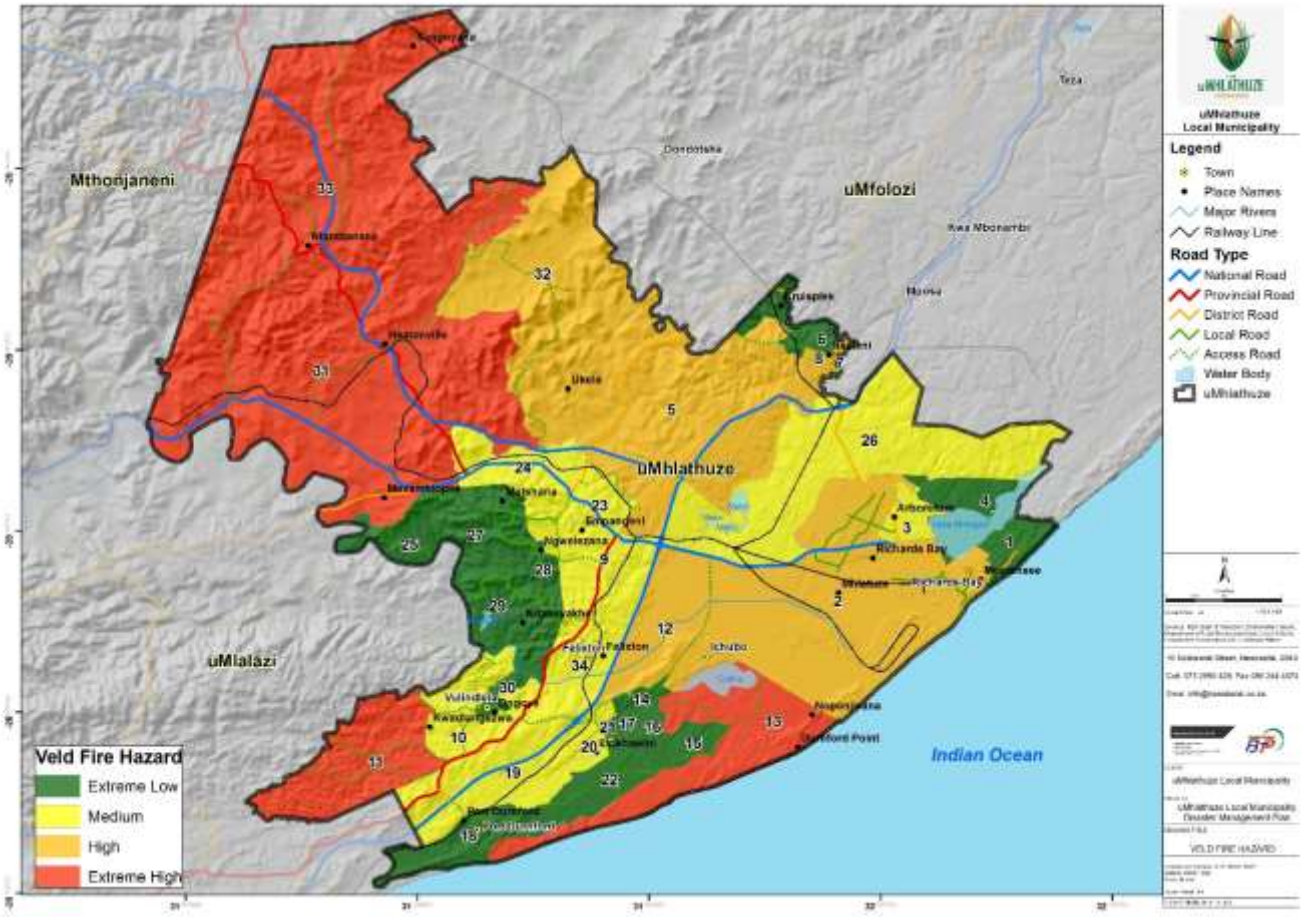
PROPOSED THEMES FOR PANDEMIC REPSONSE



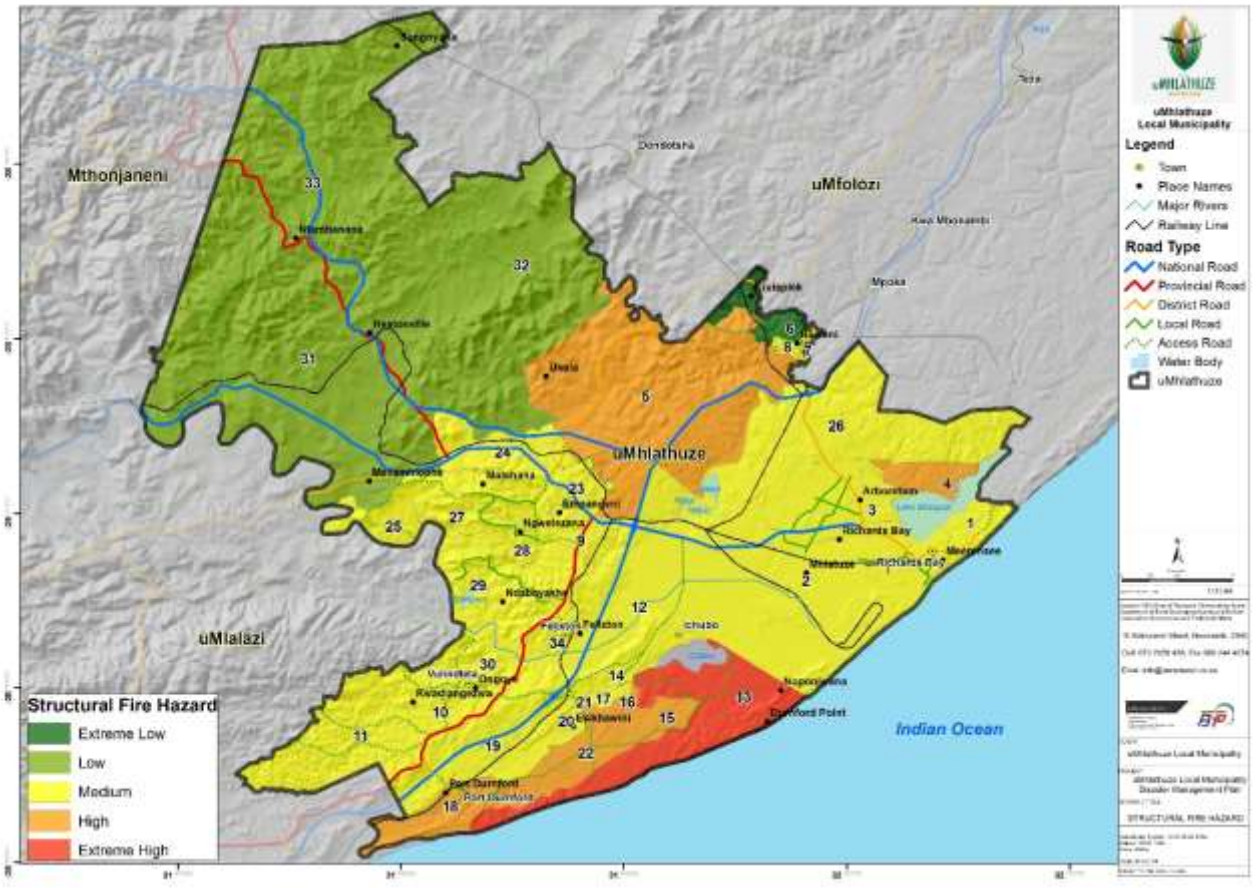
12.4.5.2. VELDFIRES

Fire has a fundamental role of sustaining biodiversity, but if it is not managed properly it may result in ecosystem degradation. Veld fires can have severe impacts on the environment like loss of biodiversity and ecologically sensitive areas, and air pollution from smoke and haze. There are also environmental factors or processes that increase the susceptibility of the environment to impacts of veld fires. These factors like environmental degradation, topography and weather play an important role in increasing vulnerability to veld fires.

Those veld fires that resulted from strong winds and extremely dry winter conditions, damaged approximately 15 000 ha of land. Plant and animal communities in particular are at greater risk of extinction because their traditional habitats are irreversibly being modified by severe fires. Other notable adverse effects have been loss of livestock, agricultural crops and power outages.



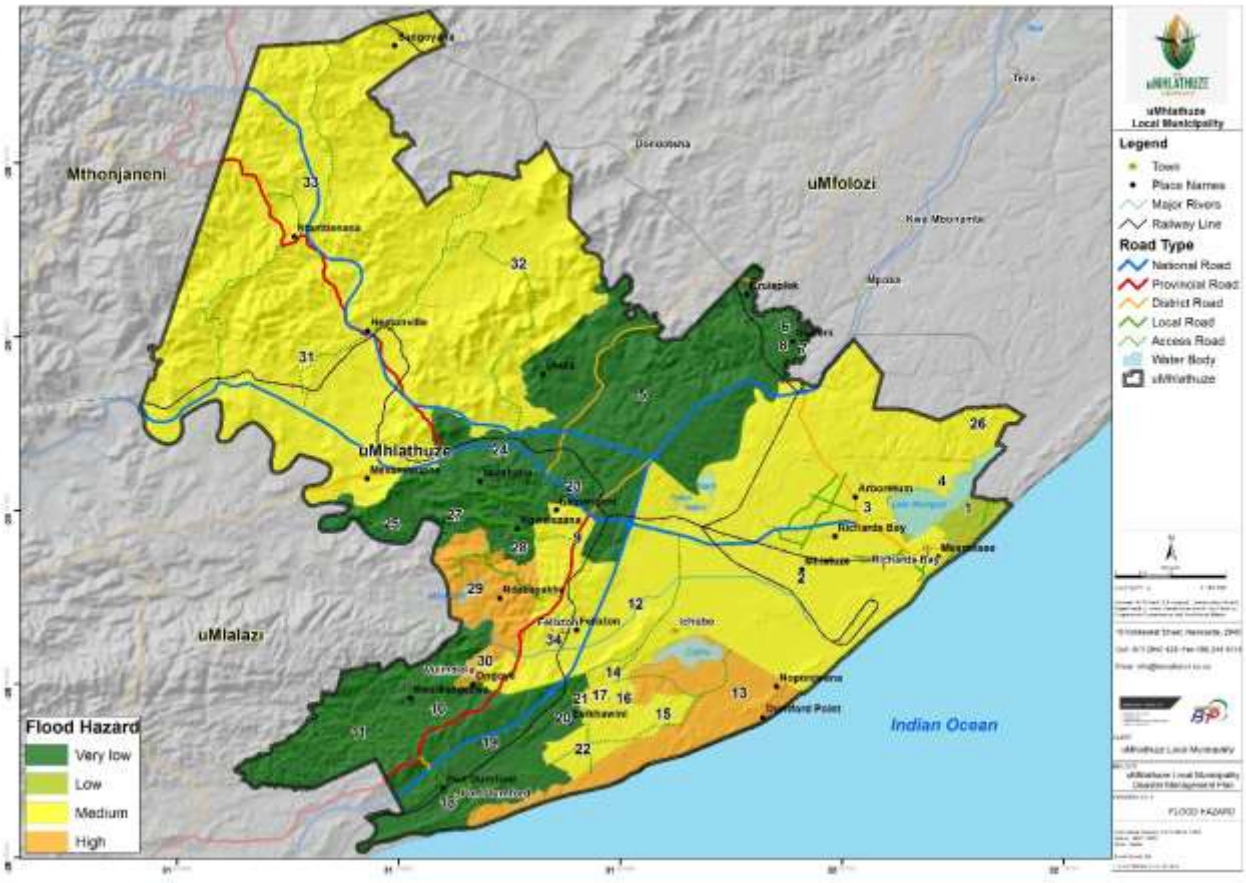
City of uMhlathuzeCity Municipality veld fires hazard analysis.



City of uMhlathuzeCity Municipality structural fires hazard analysis.

12.4.5.3 FLOODS

Higher rainfall occurring during November to January summer season period causes floods in low lying areas and erosion of land has become a regular feature in the City of uMhlathuze. The City has in the past witnessed worst form of disasters caused by floods and landslides rendering normal life paralyzed by way of disruption of means of communications caused due to damage of roads and bridges and also blockage of roads.



City of uMhlathuze floods hazard analysis.

12.4.5.4 THUNDERSTORMS AND LIGHTNING

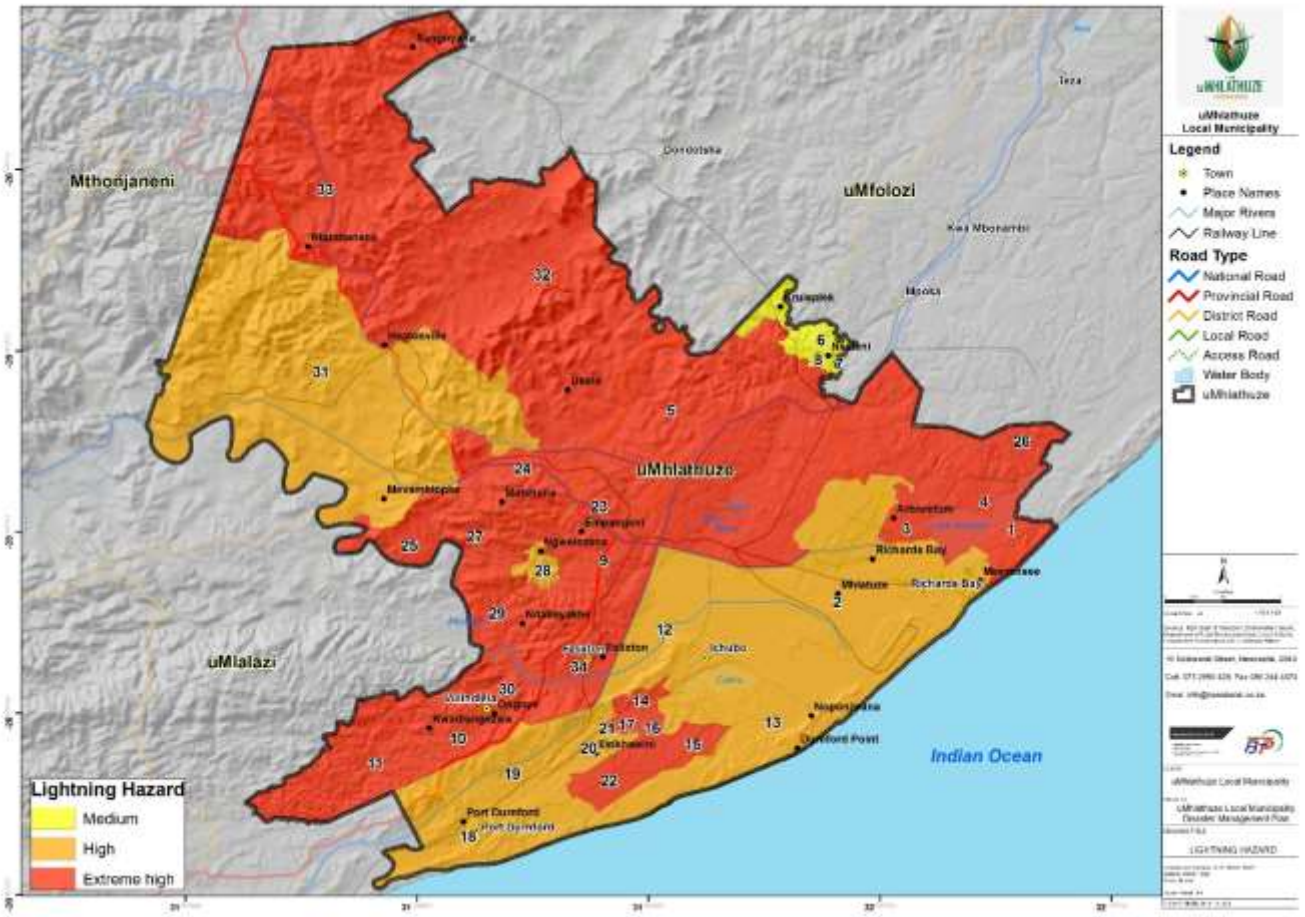
The City of uMhlathuzeCity municipality is exposed to a wide range of natural and human-induced hazards that can cause widespread hardship and devastation to lives.

Natural disasters are often frightening and difficult for the communities to understand because they have no control over when they happen. The scale of natural disasters that are common phenomena in our City can be managed and controlled, hence the level of preparedness for communities and organs of state, as well as civil society organizations, to deal with the dangers that natural disasters is of critical importance.

The City of uMhlathuze Management Centre (DMC) has observed that since 2007 seasonal incidents occur in their extreme and this may be attributed to the effects of climate change. Over the past few seasons, the City has experienced:

- Heavy rainfall which caused flooding in a number of areas;
- Severe drought that causes serious shortage of water for both domestic and livestock use;
- Runaway veld fires that have ravaged the City and destroyed a lot of property, livestock, grazing lands and even claimed innocent people's lives:
- Fatal lightning strike incidents

City of uMhlathuze has particularly singled out fatal lightning strikes as a common trend in its area of jurisdiction during the summer season.



City of uMhlathuze lightening hazard analysis.

12.4.5.5 DROUGHT

According to SA Weather Service, most of these areas have been constantly receiving less than average rain fall in the past five years. As a result of the reduction in rainfall, there has been a constant reduction in crops yielded by farmers as well as a steady decline in water reserve sources. In view of the above and taking into account hydrological studies by the Department Water Affairs and reports from the Department of Agriculture the identified affected areas are indeed experiencing hydrological drought. Hydrological drought is simply defined as the deficiencies in the surface and subsurface water supplies which is measured stream flow, reservoirs, and groundwater levels.

Drought is assessed by using indicators that are based on meteorological and hydrological variables, such as precipitation, soil moisture, stream flows, reservoir storage, groundwater levels and vegetation conditions. Indicators are variables used to describe the magnitude, duration, severity, and spatial extent of drought. The dry conditions that may lead to the drought situation is assessed using water supply sources and focusing in the following areas:

- Seasonal Rainfall
- Dam Levels (Farm Dams, Major Supply Dams)
- Borehole Levels (Test holes, Springs/wells)
- Stream/River Flow Levels
- Water Restrictions
- Drought vulnerabilities, and
- Potential impacts

Indicator values are used to distinguish between drought threshold levels, and determine when management actions should begin and end. Most of the above-mentioned information is received from various stakeholders who are custodians of the information, such as the South African Weather Service (SAWS), Departments of Agriculture, and Water Affairs. Five general Drought Threshold Levels are utilized to describe drought conditions, namely normal; advisory; watch; warning; and emergency.

Impact of Drought

The lack of water as a result of dry conditions experienced over the past few years is affecting the lives of the people and their livestock in City of uMhlathuze. It has been reported that the situation is getting worse day by day; therefore an urgent intervention is required by government to assist the affected communities.

Meteorological Drought occurs when moisture supply i.e. rainfall or other forms of precipitation such as snow or mist, at a given place is consistently below a climatically appropriate level;

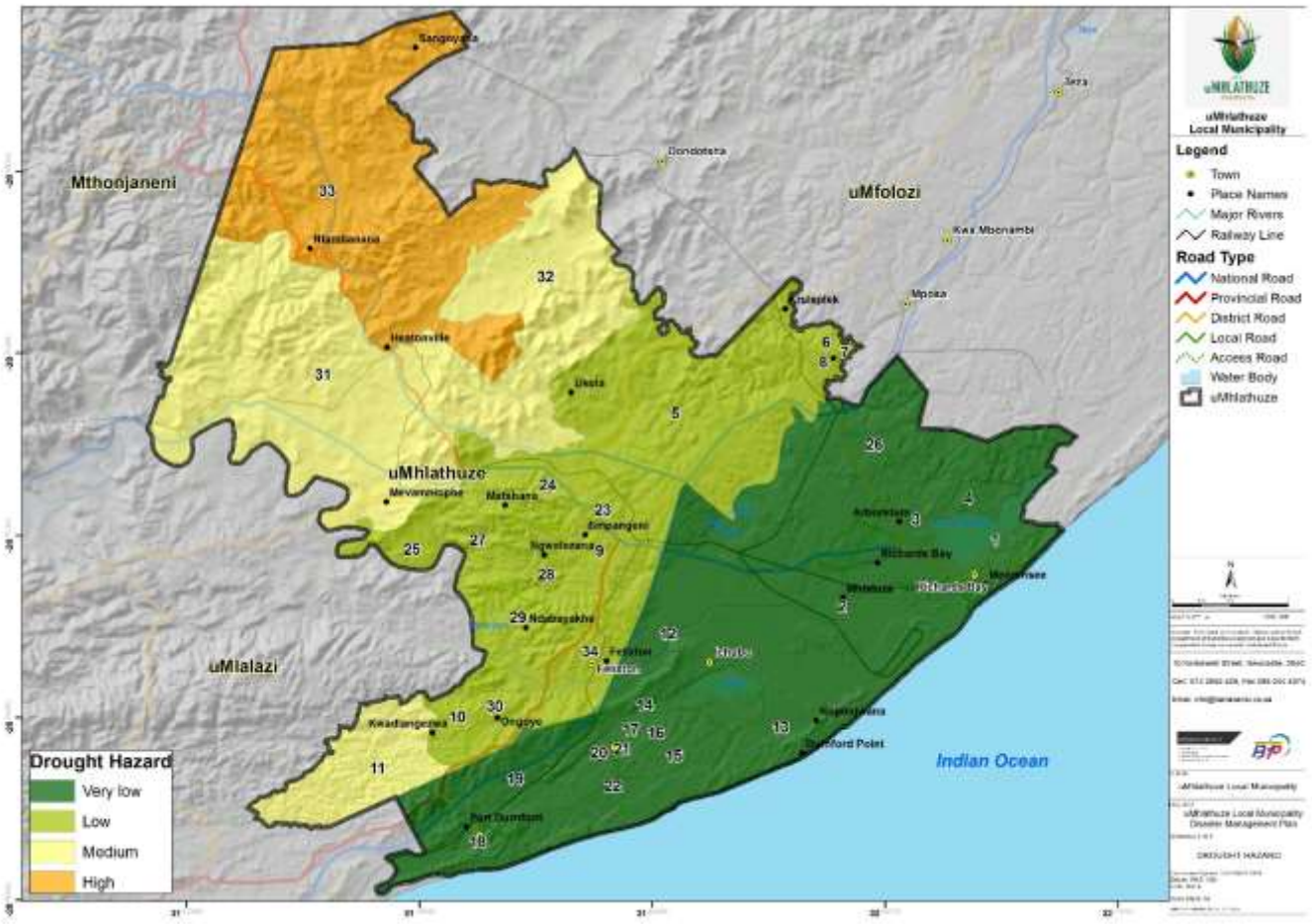
Agricultural Drought occurs when moisture is inadequate to meet the needs of a particular crop, livestock or other dry land agricultural operation and generally occurs during or after a meteorological drought, and

Hydrological Drought occurs when deficiencies in surface and sub-surface water supplies occur and can be measured as stream flow, dam levels and groundwater levels and generally occurs after agricultural drought.

The impacts of drought could be classified into 3 groups, as follows:

- ***Economic Impact*** relates to costs and losses to agricultural, livestock and timber producers, recreation and tourism, decline in food production and to water providers, revenue shortfalls, and increased cost of water transport and of supplemental water resource development.
- ***Social Impact*** relates to deterioration in health, increased conflicts over water, reduced quality of life, changes in lifestyle and re-evaluation of social values, and
- ***Environmental Impact*** relates to damage to animal species and hydrological effects such as lower water levels in dams, reduced flow from boreholes, reduced stream flow, loss of wetlands, estuarine impacts (e.g. changes in salinity levels), land subsidence, reduced recharge, water quality effects (e.g. salt concentration, increased water temperature, pH, dissolved oxygen, turbidity) (KwaZulu-Natal Drought Report 2004).


MOZAMBIQUE
SWAZILAND
Mpumalanga
Free State
LESOTHO
Eastern Cape
Indian Ocean
Umhlabuyalingana
Jozini
uPhongolo
eDumbe
Emadlangeni
Newcastle
Abaqulusi
Nongoma
Big Five Hlabisa
Dannhauser
Endumeni
Nqutu
Ulundi
Mtubatuba
Alfred Duma
Msinga
Mthonjaneni
uMfolozi
Nkandla
King Cetshwayo
uMhlathuze
Okhahlamba
uMlalazi
Inkosi Langalibalele
Umvoti
Mpofana
Maphumulo
Mandeni
KwaDukuza
uMshwathi
Ndwedwe
uMngeni
Impendle
The Msunduzi
Nkosazana Dlamini-Zuma
Mkhambathini
Richmond
eThekwini
Ubuhlebezwe
Umdoni
Greater Kokstad
Umzimkhulu
Umzumbe
uMuziwabantu
Ray Nkonyeni
Legend
King Cetshwayo
Municipalities affected by Drought
KZN Local Municipalities
SA Provinces
Ocean
N
Kilometers
0 15 30 60
Sources: KZN Dept of Transport, Demarcation Board, Department of Rural Development and Land Reform, Cooperative Governance and Traditional Affairs
Coordinate System: GCS WGS 1984
Datum: WGS 1984, Units: Metre
THIS MAP PRINTED ON 16 - 10 - 2019
CLIENT:
uMhlathuze Local Municipality
PROJECT:
uMhlathuze Local Municipality Disaster Management Plan
MAP TITLE
Municipalities Affected by Drought 2017/2018



City of uMhlathuze drought hazard analysis.

13. KEY PERFORMANCE AREA 3: DISASTER RISK REDUCTION

13.1. OBJECTIVE

To ensure that all disaster risk management stakeholders develop and implement integrated disaster risk management plans and risk reduction programmes in accordance with the approved frameworks.

13.2. CORE DISASTER RISK REDUCTION PRINCIPLES

In this section, the focus is on disaster risk reduction strategies required for the identified common risks and hazards in KPA 2. All disaster risk management

plans must give explicit priority to the core principles of disaster prevention and mitigation.

13.2.1. Disaster Prevention

It refers to actions that provide outright avoidance of the adverse impact of hazards and related environmental, technological and biological disasters.

13.2.2. Disaster Mitigation

It refers to structural and non-structural measures that are undertaken to limit the severity of the adverse impact of natural and technological hazards on vulnerable areas, communities and households.

In terms of Section 26(g) of the Municipal Systems Act, 200, Act 32 of 2000, a Municipality's IDP must contain a disaster management plan. Development projects in the Municipality, as contained in the Municipality's IDP, is thus interlinked with disaster management planning and activities. Risk reduction projects identified as part of disaster risk management planning, such as those identified in this plan and the contingency plans developed and risk assessments should be included into the City of uMhlathuze IDP.

There are eight key planning points or requirements that must be applied by all municipal organs of state and municipalities when planning for disaster risk reduction initiatives. These must form part of the annual reporting of the municipalities and municipal organs of state to the DMC.

A number of risk reduction measures can be identified related to the highest rated identified risks. These measures should be decided upon in consultation with the relevant responsible departments. Some of the possible measures are listed below:

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
Fires	Residential related fires. Awareness programmes	Awareness communication materials (pamphlets/calendars), Media campaigns	DISASTER MANAGEMENT CENTRE & FIRE SERVICES
	Veld fires. Awareness programme in and around open spaces, fire breaks administered	Awareness communication materials (pamphlets/calendars), Media campaigns, Notice boards; Fire breaks	DISASTER MANAGEMENT CENTRE & FIRE SERVICES
	Early fire risk predictions. Early warning of high fire risk places & times, based on weather and vegetation/field condition	Early warning system, linked with Weather Services; Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE & FIRE SERVICES
Industrial (including mining) fires / explosions / spillage / accidents	Survey of industries (for fire and hazardous materials risks); associated updating of hazard severity map; Compilation of hazardous materials register/database, indicating the location and contents of facilities spatially and in database format; Stakeholder meetings to	Database design, development and population; Exact information, locality and hazardous materials known. Ensure industries have emergency and evacuation plans in place	DISASTER MANAGEMENT CENTRE

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
	confirm and refine the findings. Integrated register/database		
Epidemics (Human & Animal)	Epidemic statistic tracking and warnings. Early warning of possible epidemics in specific areas	Awareness communication materials (pamphlets/calendars), Media campaigns, Notice boards; Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
	Ensure potable water supply delivery to all settlements, even informal settlements if possible. Water supply delivery programmes in areas where population density is high but water supply not available	Budget allocation for water piping & supply projects	ENGINEERING & MAINTENANCE
	Immunisation programmes.	List of areas and places immunised	PUBLIC HEALTH
	Logging system and monitoring of communicable diseases on a daily basis at clinics and hospitals, on a central database.	Database of communicable diseases updated weekly/monthly; monthly digital reports presented to DMC	PUBLIC HEALTH

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
	Communicable diseases report including graphs		
Infrastructure failure: Power, sanitation, water & other key services	Co-ordination between water, electricity and sanitation services to identify cross-impacts and severity of impacts. Quarterly task group meetings	Co-ordination and integrated planning	ENGINEERING & MAINTENANCE
Surface water/land pollution	Specific incidences quickly and effectively reported and information distributed for possible evacuation. Immediate warnings once incidents take place	Awareness communication materials (pamphlets/calendars), Media campaigns, Notice boards; Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
	Industry, Mining and Private individuals compliance to pollution control requirements. Quarterly/yearly reports; Possible polluter-pays measures, Environmental education of public	List of pollution-control required industries/mines, waste sites etc, specific license requirements; database of industries/mines checked for reporting and compliance quarterly/annually; list of public education initiatives	ENVIRONMENTAL HEALTH

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
	Agricultural awareness. Awareness programmes with farmers with regard to pesticides, herbicides etc. control	Awareness communication materials (pamphlets/calendars), Media campaigns, Notice boards; Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
Air pollution: industrial	Monitor industrial related air pollution, in areas where applicable. Quarterly/yearly reports; Bylaws; license requirements; Possible polluter-pays measures	Industries providing proof of prevention/mitigation measures	DISASTER MANAGEMENT CENTRE
Air pollution: informal settlements	Awareness and subsequent minimisation of air pollution in communities that utilise fuel for heat and cooking, instead of electricity. Awareness programmes in informal settlements	Pamphlets and public meetings where community leaders urge community to utilise electricity rather than fires, where possible	DISASTER MANAGEMENT CENTRE
Transport: rail, road, hazmat	Road maintenance. Road maintenance projects	Budget allocation for road maintenance and upgrade projects	ENGINEERING & MAINTENANCE
	Railway maintenance.	Budget allocation for railway maintenance	SPOORNET & TRANSNET

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
	Railway maintenance projects	and upgrade projects	
	Specific incidences quickly and effectively reported and information distributed for possible evacuation. Immediate warnings once incidents take place	Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
	Hazmat transport inspections on road. Inspections	List of hazmat transporters and spot-checks to ensure they have what they are listed to carry, forwarded bi-monthly to DMC	PUBLIC HEALTH & TRAFFIC SERVICES
	Transport and container inspections by rail. Inspections	List of hazmat transporters and spot-checks to ensure they have what they are listed to carry, forwarded bi-monthly to DMC	PUBLIC HEALTH & TRAFFIC SERVICES
Transport: air	Monitoring of types and severity of incidents that may lead to disasters. Yearly reports and inclusion of data into DMC database	Reports submitted to DMC on yearly basis	DISASTER MANAGEMENT CENTRE

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
Major Events	Preparation and planning, and informing communities of events and disaster plans relating to it. Event plans and pamphlets	Plans designed and distributed well beforehand	DISASTER MANAGEMENT CENTRE
	Database indicating all possible venues and available evacuation and other plans for that venue	Lists of all venues that could house 250+ persons and associated risks for each, submitted to the DMC and/or Citys/Towns	DISASTER MANAGEMENT CENTRE
Drought / water shortage	Alternative dams and/or cross-border water supply negotiations	Budget and programme action plans for specific water supply schemes	TECHNICAL SERVICES
	Installation of water collection and storage containers in strategic locations	Budget and location identification for containers	TECHNICAL SERVICES
	Installation of collection and storage containers at industries and organisations	Awareness communication materials (pamphlets/calendars), Media campaigns, Notice boards; Warnings via television, radio, newspapers, verbal.	TECHNICAL SERVICES
	Installation of collection and storage containers at private homes	Awareness communication materials (pamphlets/calendars),	TECHNICAL SERVICES

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
		Media campaigns, Notice boards; Warnings via television, radio, newspapers, verbal.	
	Linkages of data to monitor long term weather patterns vs water demand. Change monitored and predictions made	Scenarios indicated and planned for	DISASTER MANAGEMENT CENTRE
	Ground water resources. Ground water resources usability known	Ground water quality survey and impact assessment	
Civil unrest (including terrorism)	Monitoring system implemented. Database with incidents indicated	Graphs and probability evaluations updated	TRAFFIC SERVICES AND SAPS
	Incident database to be set up and maintained. Incident database updated and maintained	Incident database designed, developed and implemented; updated	TRAFFIC SERVICES AND SAPS
Floods	Assessment of dam break impacts on existing developments. Dam break flood impacts	Documentation indicating impacts and consequences	TECHNICAL SERVICES
	Develop indicative flood mapping, giving an indication of the 100-year and RMF floodlines along	Major impacts on especially informal and low-income settlements	DISASTER MANAGEMENT CENTRE

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
	the major watercourses. High frequency and risk of flood events, based on past events		
	High water markers and beacons to indicate depth of rivers. Maintenance of beacons, and installation of additional high water markers	Maintaining of beacons; identification of positions for high water level markers; installation of high water markers	TECHNICAL SERVICES
	Flood hazard assessments for selected watercourses. Hazard assessment studies, reports and associated maps	Budget allocation for the various projects	DISASTER MANAGEMENT CENTRE
	Ensuring no development and building in floodline areas. Awareness programmes and law enforcement	Awareness communication materials (pamphlets/calendars), Media campaigns	INTEGRATED DEVELOPMENT PLANNING
	Stormwater maintenance. Ongoing stormwater maintenance	Stormwater asset management register and maintenance scheduled and budgeted for	TECHNICAL SERVICES

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
Storms	Early storm risk predictions based on weather	Early warning system, linked with Weather Services; Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
Environmental degradation	Waste site location and management. Integrated waste management plans	Drafting and acceptance of the waste management plans, and spatial data indicating location of all existing and future waste sites	ENVIRONMENTAL HEALTH
	Erosion protection, especially where sand and gravel mining is taking place. Stricter environmental controls	Decreased erosion and extraction	ENVIRONMENTAL HEALTH
Hazmat transportation	Specific incidences quickly and effectively reported and information distributed for possible evacuation. Immediate warnings once incidents take place	Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
	Hazmat transport inspections on ships. Inspections	List of hazmat transporters and spot-checks to ensure they have what they are listed to carry, forwarded bi-monthly to DMC	DISASTER MANAGEMENT CENTRE

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
	Transport and container inspections by ship. Inspections	List of hazmat transporters and spot-checks to ensure they have what they are listed to carry, forwarded bi-monthly to DMC	DISASTER MANAGEMENT CENTRE
Extreme temperatures	Early temperature risk predictions based on weather	Early warning system, linked with Weather Services; Warnings via television, radio, newspapers, verbal.	DISASTER MANAGEMENT CENTRE
Desertification	Link with Weather Services: Monitoring and studies. Draft medium-longer term contingency plans for areas at risk	Mainly monitoring	ENVIRONMENTAL HEALTH
Plant infestation /overpopulation	Monitoring of types and severity of incidents that may lead to disasters. Yearly reports and inclusion of data into DMC database	Reports submitted to DMC on yearly basis	ENVIRONMENTAL HEALTH
Animal/Insect infestation /overpopulation	Monitoring of types and severity of incidents that may lead to disasters. Yearly reports and inclusion of data into DMC database	Reports submitted to DMC on yearly basis	ENVIRONMENTAL HEALTH

Logical Framework for Disaster Risk Reduction Recommendations per main hazard category- Strategic objective: Ensuring that disaster risk are reduced through prevention, mitigation and effective response and recovery			
Risk:	**KPIs: Measurable performance targets**	**Means**	**Main responsible Department / Stakeholder responsible in the Municipality**
Geological (Earthquake, Landslides, Subsidence, Erosion, Land Degradation)	Detailed Geological Risk Study in areas at possible risk. Monitoring of types and severity of incidents that may lead to disasters. Yearly reports and inclusion of data into DMC database	Contingency Plans for possible occurrences. Reports submitted to DMC on yearly basis	ENVIRONMENTAL HEALTH
Deforestation	Monitoring of types and severity of incidents that may lead to disasters. Yearly reports and inclusion of data into DMC database	Reports submitted to DMC on yearly basis	ENVIRONMENTAL HEALTH
Loss of biodiversity	Monitoring of types and severity of incidents that may lead to disasters. Yearly reports and inclusion of data into DMC database	Reports submitted to DMC on yearly basis	ENVIRONMENTAL HEALTH

The City of uMhlathuze Disaster Risk Management Centre must ensure that disaster risk reduction plans, programmes and projects are incorporated into IDP, spatial development frameworks, environmental management plans and other strategic developmental plans and initiatives in the City of uMhlathuze.

13. KEY PERFORMANCE AREA 4: RESPONSE AND RECOVERY

13.1. OBJECTIVE

To 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, environment 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.

13.2. STRATEGIC IMPERATIVES FOR RESPONSE AND RECOVERY

Response and recovery consists of a series of interconnected steps in a continuum. It is imperative that disaster management practitioners and other related organizations observe and understand these steps as they provide a simplistic sequence for emergency preparedness. These steps are generic and can be adjusted to suit any operational needs of every disaster related organization.

In terms of sections 52 and 53 of the Disaster Management Act, Act 57 of 2002, (the Act) each municipality and municipal entity must draft disaster management plans for their area. These plans include contingency strategies and emergency procedures.

In terms of section 54 of the Act, a Municipality must deal with a local disaster through existing legislation and contingency arrangements, even if a local state of disaster is not declared.

In terms of the National Disaster Management Framework, contingency planning is defined as follows:

> *The forward planning process for an event that may or may not occur, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place to prevent, or respond effectively to, an emergency situation.*

According to section 53(2)(k) of the Act, contingency plans should address:

- the allocation of responsibilities to the various role-players and co-ordination in the carrying out of those responsibilities;
- prompt disaster response and relief;
- the procurement of essential goods and services;
- the establishment of strategic communication links;
- the dissemination of information.

Contingency plans for major disaster risks have been developed and available at the Municipal Disaster Management Centre. Hazard specific disaster response actions will be identified in the contingency plans, but a generic disaster response flowchart is indicated below.

13.3. Early Warnings

Early warnings are designed to alert areas, communities, households and individuals to an impending or imminent significant event or disaster so that they can take the necessary steps to avoid or reduce the risk and prepare for an effective response. Early warnings are issued by various organizations which are responsible for monitoring and evaluating specific risks and hazards. Disaster

management must ensure that strategic links are established with those organizations or agencies that are responsible for disseminating the early warnings in order to develop emergency preparedness plans for responding to a threatening incident.

13.4. Disaster Assessment

On-site assessment includes establishing what resources are necessary to ensure the delivery of immediate, effective and appropriate response and relief measures to affected areas and communities and to facilitate business continuity.

13.5. Relief Measures

Relief operations following significant and/or events classified as disasters must be coordinated. Relief assistance and donations must be equitably distributed.

13.6. Rehabilitation and Reconstruction

The organ of state tasked with primary responsibility for known hazard must facilitate the establishment of project teams.

14. GENERIC PROTOCOLS, PROCEDURES AND CONSIDERATIONS IN THE CASE OF THE ESTABLISHMENT OF A JOINT OPERATIONS CENTRE (JOC): NON-COMMUNITY STAKEHOLDERS

The following generic protocols, procedures and considerations are applicable when a JOC is established.

The purpose of the disaster management protocol is to provide structure and coordination for the pre- and post management of disasters. This is in order to provide for an effective and efficient response that will: -

- Save lives
- Reduce risk.
- Reduce suffering.
- Protect property.
- Protect the environment.
- Reduce economic and social losses; and

- Provide for the safety and health of all responders.

This protocol is to be used by trained individuals and applied in a manner that meets the needs of each particular situation. The many different and complex situations encountered by emergency responders require a considerable amount of judgment in the application of the protocol. Emergency responders shall apply the protocol in a manner that is appropriate for the circumstances of each specific situation and in line with their own SOPs and FOGs.

The protocol must be applied to all incidents, even to routing incidents, in order to provide for familiarity with the system, to be prepared for escalation and to be aware of risks that exist.

The Incident Command system must make provision to identify on-scene the restrictions of the role players so that the necessary information can be given through to the JOC to assist where possible.

All details and incoming information must be made available to the JOC.

14.1. Establishment of the JOC

In the event of a disaster, a Joint Operational Centre (JOC) could be established on request of the Senior Disaster Management Official or any other relevant stakeholder. The role players congregate and work together at the JOC Centre to make decisions, share information and provide support as required to mitigate the effects of the emergency. The JOC is responsible for the coordination of all operations. The JOC should ideally be multi-disciplined in composition. Decisions will be taken through joint consultation. All activities are processed through JOC, which shall be the main nodal point for communications. JOC will assume responsibility for all allocation and distribution of resources. JOC shall always be located in a safe and easily identifiable location. The Head: Disaster Management Official of the Municipality will act as chairperson and handle administration and record keeping. Each function shall control their equipment.

14.2 Resource management

Each functionary will be in control of his own resources, but a central resource list must be kept by the JOC. This will ensure that all resources are managed centrally. Each functionary will be responsible for the maintenance of equipment and support personnel. The main principle being that all resources are centrally coordinated, but with decentralized management.

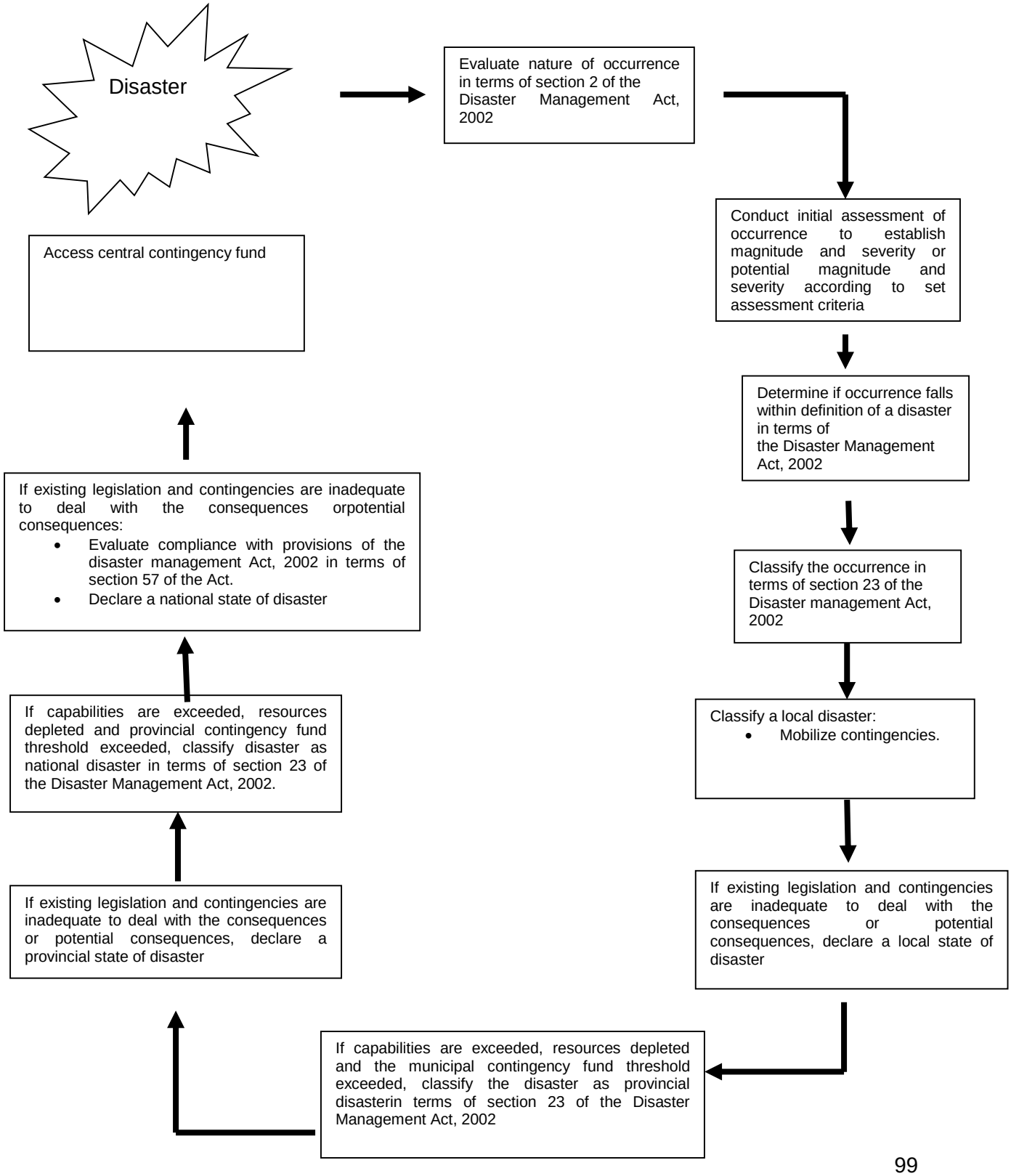
14.3 JOC responsibilities

The actions or decisions which the JOC are likely to be responsible for are:

- Calling out and mobilizing their emergency services, agencies and equipment.
- Co-coordinating and directing their services ensuring that any actions necessary for the mitigation off the effects of the emergency are taken, provided they are not contrary to the law.
- Determine if the location and composition of the JOC are appropriate.
- Designating any area as an emergency or Disaster area.
- Ensuring that an Incident commander (Site Co-ordinator) has been appointed.
- Coordinating and/or overseeing the evacuation of inhabitants considered being in danger.
- Discontinuing utilities or services provided by public private concerns, e.g. Water etc.
- Arranging for services and equipment of the role players notifying, requesting assistance from and/or liaising with various levels of Government and any public or private agencies if necessary.

- Activation if additional volunteers are required and if appeals for volunteers are warranted.
- Activation if additional transport is required for evacuation or transport of person's and/supplies.
- Ensuring that pertinent information regarding the emergency is promptly forwarded to the JOC for dissemination to the media and public.
- Determine the need to establish advisory group(s) and/or sub-committees.
- Authorizing expenditure of monies required dealing with the emergency.
- Maintaining a log outlining decisions made and actions taken, and submitting a summary of the log within one week of the termination of the emergency as required.

PROCESS FOR THE CLASSIFICATION AND DECLARATION OF STATE OFDISASTER



ENABLER 1:

15. INFORMATION MANAGEMENT AND COMMUNICATION

15.1OBJECTIVE

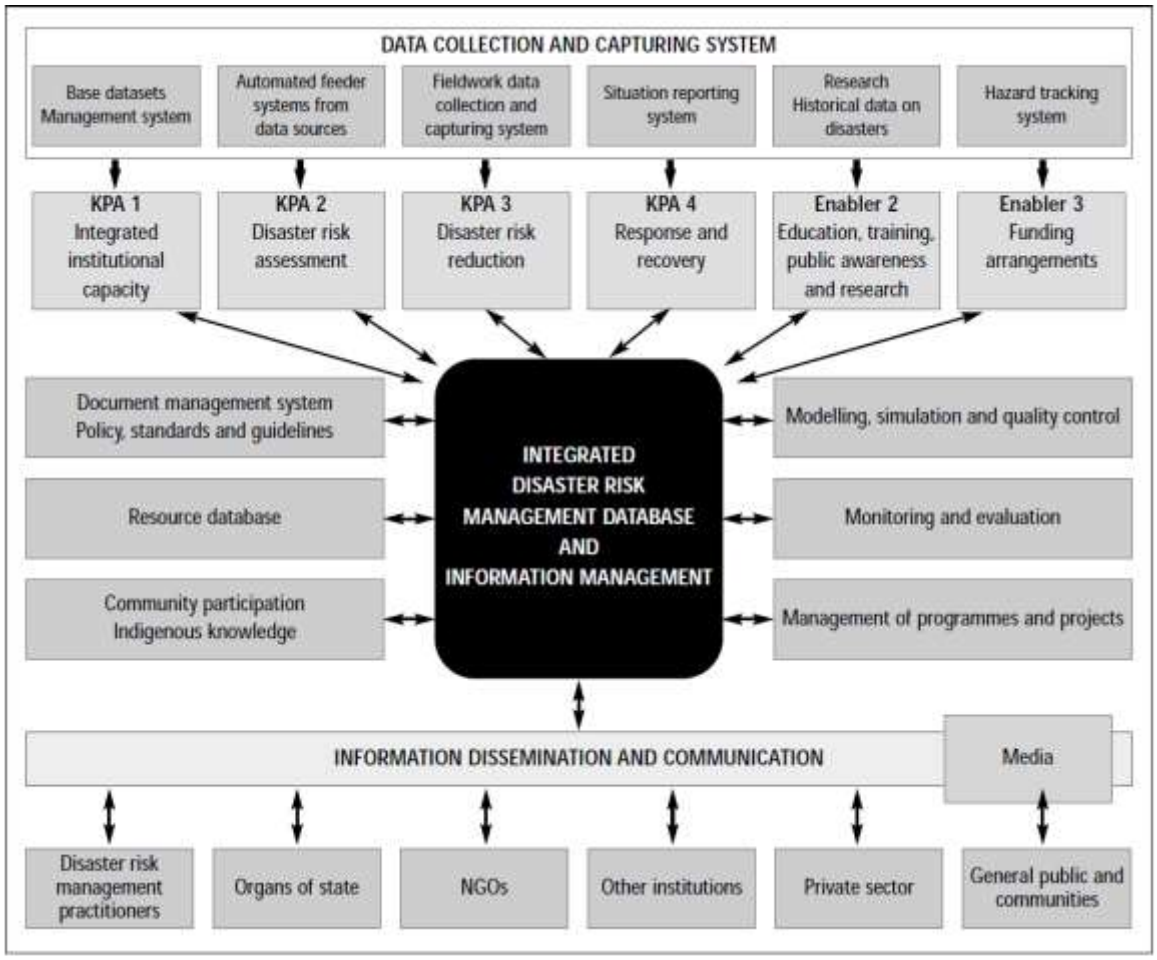
To guide the development of a comprehensive information management and communication system and establish integrated communication links with all disaster risk management role players.

15.2. INFORMATION MANAGEMENT AND COMMUNICATION SYSTEM

The information management and communication system required to execute this plan must include the establishment of communication links that must enable the receipt, transmission and dissemination of information between disaster management Centre and those likely to be affected by disaster risks as well as other role players and stakeholders involved in disaster risk management. The design of the system must take into account the lack of technological infrastructure in areas and communities most at risk, as well as telephonic system failures during disasters. This must require the use of a dedicated two-way provincial emergency radio communication network.

15.2.1. Integrated Information Management and Communication Model

The City of uMhlathuze will adhere to the integrated information management and communication model as contained in the NDMF, summarized below:



Model of an integrated information management and communication system for disaster risk management.

Effective communication is paramount to effective disaster management planning and implementation. Each stakeholder's communication, dispatching and other procedural arrangements are governed by its functional role and its related standard operating procedures. Details of specific disaster incident communication protocols are contained in the disaster contingency plans, where such details are required.

Communication during a disaster or major incident needs to be fast and require the provisioning of accurate information. Designated resources that would be favourably positioned to convey messages and collect information would be communications officers who would act as a communication and information

coordinating hub and municipal representatives who would be in familiar with and trusted by local communities.

The involvement of communities is becoming more prominent to ensure resilience and sustainability.

At the heart of participative strategies is the requirement for a sustainable municipal representative that communities will trust and allow should meetings be held for capacity building or information dissemination.

The nature of communication and information management before an incident is largely gathering and making information available regarding the incident. During the incident it is critical to maintain situational awareness and understanding. In order to fulfill this requirement speed of delivery, accessibility and accuracy is very important. SMSs, direct phone calls and even two-way radios are preferred mechanisms. After an incident the coordination of recovery incidents would need to take place. For this purpose emails and meetings would be sufficient.

ENABLER 2

16. EDUCATION, TRAINING, PUBLIC AWARENESS & RESEARCH

16.1. OBJECTIVE

To promote a culture of risk avoidance among stakeholders by capacitating role players through integrated education, training and public awareness programmes informed by scientific research.

Communication and stakeholder participation in disaster risk management in The City of uMhlathuze will be executed through a consultative process, education and public awareness, initiated by the City of uMhlathuze disaster management function. These processes will include the development of disaster risk management information leaflets, training programmes, media and local-level meetings with disaster risk management role players, including non-governmental institutions (to be preferably invited / co-opted on the local disaster management committee) and the local traditional and community leaders, schools, clinics and communities.

Although the main responsibility to plan for, ensure budgeting and executing education, training and research (and the publication and communication of the results thereof) lies with the City of uMhlathuze disaster management function, local Municipalities and Municipal departments, organs of state and municipal entities will also address these elements pro-actively. This will be co-ordinated through to the City of uMhlathuze disaster management function and the results communicated to the KZN Province Provincial DMC, NDMC and the local disaster management committee.

Training on disaster risk management in The City of uMhlathuze will be in accordance with the NDMF and National Guidelines in this regard. Training can be of an accredited or non-accredited nature. Practical, 'hands-on' training of The City of uMhlathuze disaster management officials need to be executed to ensure that at least the following capabilities have been efficiently established in the City of uMhlathuze disaster management function:

- Public Awareness: Public Awareness is ongoing
- Education: to have brochures for disaster management for primary schools
- Training: training of staff on emergency evacuation
- Integrating all of the above into an effective The City of uMhlathuze Disaster Management operation.

Communication and stakeholder participation in disaster risk management in the City of uMhlathuze is executed through a consultative process, education and public awareness, initiated by the City of uMhlathuze disaster management function. These processes includes the development of disaster risk management information leaflets, training programmes, media and local-level meetings with disaster risk management role players, including non-governmental institutions (to be preferably invited / co-opted on the local disaster

management committee) and the local traditional and community leaders, schools, clinics and communities.

As part of gathering indigenous knowledge (part of detailed hazard identification), at municipal level, local communities and structures will be orientated on the requirements of the Act and the specific element and information required from them in terms of the Act.

Through the hazard identification and disaster information management dissemination processes, indigenous knowledge via local communities and local structure representatives will consequently be directly acquired and involved.

Cross-border disaster risk management co-operation and co-planning is crucial and will be facilitated through the City of uMhlathuze disaster management functionwithin the protocols of Government and as made provision for in section 1.4.4 and 1.4.5 of the NDMF. Memoranda of Understanding will be signed with bordering Municipalities, Citys and Provinces *(section 33 (4) of the Act and sections 1.2.4.1, 1.2.5.1, 1.4.4 and 1.4.5 of the NDMF)*.

Disaster risk management actions and initiatives, such as result of important meetings and new projects, will be communicated to the communities' via media or otherwise.

The City of uMhlathuze Disaster Management, along with City, Provincial and Municipal organs of state and local municipalities will also formulate and implement appropriate disaster risk management public awareness programmes that are aligned with the national disaster risk management public awareness strategy and will play an active part in engaging schools to ensure a practical approach to education and awareness programmes.
School disaster risk management awareness programmes in the City of uMhlathuze will be conducted, assessed and adapted on an annual basis.

Community resilience-building is crucial and a first capacity-building priority is the consultative development of a uniform approach to community-based risk assessment for municipalities and non-governmental and community-based organisations throughout the City of uMhlathuze this will contribute considerably to closer links between disaster risk reduction and development planning in disaster-prone areas and communities.

ENABLER 3

17. FUNDING ARRANGEMENTS FOR DISASTER RISK MANAGEMENT

17.1. OBJECTIVE

Establish funding mechanisms for disaster risk management in the City .

17.2. RECOMMENDED FUNDING ARRANGEMENTS

The table below provides an overview of the recommended funding mechanisms for each of the five disaster risk management activities.

Funding arrangements for disaster risk management are specified in the NDMF as indicated below and these guidelaines will be followed in the City.

Table 7.1: Funding arrangements for disaster risk management		
Activity	**Funding source**	**Funding mechanism**
Start-up activities (KPA 1, Enabler 1)	National government	Conditional grant for local government – district and metropolitan municipalities, where necessary
		Conditional grant for provinces with counter-funding component[1]
		Budget of national departments
Disaster risk management ongoing operations (KPAs 2 and 3)	National and provincial government	Own departmental budgets
	New assignment to local government	Increase in the I (Institutional) component of the equitable share of local government
Disaster risk reduction (KPAs 2 and 3)	National departments	Own budgets
	Provincial departments	Own budgets but can be augmented by application for funding to the NDMC for special national priority risk reduction projects
	District municipalities	Own budgets but can be augmented by application for funding to the NDMC for special national priority risk reduction projects
	In the case of low-capacity, resource-poor municipalities[2]	Additional funding released from the NDMC targeted at these categories of municipalities
Response, recovery and rehabilitation and reconstruction efforts (KPA 4)	National government	Own budget for those departments frequently affected by disasters
		Access to central contingency funds
		Reprioritise within capital budgets for infrastructure reconstruction
	Provincial government	Own budget, particularly for those departments frequently affected by disasters
		Conditional infrastructure grants
		Access to central contingency fund once threshold is exceeded on a matching basis
		Reprioritise within capital budget for infrastructure reconstruction
	Local government	Access to central contingency fund once threshold is exceeded
		Conditional infrastructure grant, i.e. Municipal Infrastructure Grant (MIG)
Education, training and capacity-building programmes (Enabler 2)	All spheres of government	Own budgets and reimbursement through SETAs
		Public awareness programmes and research activities can also be funded through the private sector, research foundations, NGOs and donor funding

Notes:

1. The suggested ratio for counter-funding is 85:15, i.e. 15 per cent of all start-up costs being funded by provincial government.
2. Low-capacity, resource-poor municipalities should be identified through the creation of a composite index that takes into account the operating income of municipalities and their capacity classification as determined by National Treasury.

Source: Partially adapted from FFC, *Submission on the Division of Revenue 2003/04*, Midrand, p. 96.

Cost expenditure on routine disaster risk management activities must be funded through the budgets of the relevant organs of state. Preparedness must be funded through the budgets of national, provincial and local organs of state as part of their routine disaster risk management activities". In light of the above it is evident that the City municipality and all local municipalities in the City must fund and implement disaster risk management from their own budgets. The City municipality may assist local municipalities from time to time with regard to funding for disaster risk reduction activities, but this does not release the local municipal councils from their responsibilities in this regard.

17.3. MONITORING AND UPDATING OF PLAN

Section 53 of Disaster Management Act (Act No. 57 of 2002) stipulates that a City disaster management centre must:

- Monitor progress with the preparation and regular updating of disaster management plans and strategies by City and municipal organs of state involved in disaster management in the City.
- Monitor formal and informal prevention, mitigation and response initiatives by City and municipal organs of state, the private sector, non-governmental organizations and communities, including the integration of these initiatives with development plans.
- Monitor the compliance in the province with key performance indicators in respect of the various aspects of disaster management.
- Measure the performance and evaluate such progress and initiatives from time to time.

18. CONCLUSION

- The Disaster Management plan must be reviewed annually and any amendments thereto must be submitted to the DDMC and PDMC.
- A final document will be circulated to the City Disaster Management Centre, Provincial Disaster Management Centre, and relevant stakeholders.