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CITY OF JOHANNESBURG

DEPARTMENT: PUBLIC SAFETY

DIRECTORATE: DISASTER MANAGEMENT



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DISASTER MANAGEMENT PLAN

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DEFINITION OF TERMS

Climate change – It is any significant change in the measures of climate lasting for an extended period of time.

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.

Disaster – A natural or human-caused event, occurring with or without warning, widespread or local, causing or threatening death, injury or disease, and damage to property, infrastructure or the environment, which exceeds the ability of those affected by the disaster to cope with its effects using only their own resources.

Disaster management – a collective term encompassing all aspects of planning for and responding to significant events and events classified as disasters, including risk reduction (prevention and mitigation), preparedness, response, recovery and rehabilitation. It requires an integrated multi-disciplinary and multi-sectoral approach.

Disaster risk – The probability that an individual, a household, a community, an area, a province or a country is unable to anticipate, resist or recover from the losses sustained from a hazard or other threat without external assistance.

Early warning – The timely provision and dissemination of this information allows individuals, areas, communities and households exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

Mitigation – Measures undertaken to limit the impacts of an event or a disaster e.g. not building houses on fire plains.

Preparedness – Activities and measures, including timely and effective early warnings, taken in advance, which contribute to the ability of organs of state and other institutions involved in disaster management, the private sector, communities and individuals to mobilize, organize, and provide relief measures to deal with an impending or current disaster or the effects of a disaster.

Prevention – in relation to a disaster, means measures aimed at stopping a disaster from becoming a disaster.

Recovery and rehabilitation – Decisions and actions taken 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.

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.

Response – Measures taken during or immediately after a disaster in order to bring relief to people and communities affected by the 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.

Risk reduction – Measures taken to reduce long-term risks associated with human activity or natural events.

Vulnerability – The characteristics that limit an individual, a household, a community, an area, a province or a country's capacity to anticipate, manage, resist or recover from the impact of a hazard or other threat.

These definitions have been compiled from the Disaster Management Act No 57, 2002, as amended as Disaster Management Act, Act 16 of 2015 and the National Disaster Management Framework

EXECUTIVE SUMMARY

In terms of section 41(1) (b) of the Constitution, all spheres of Government are required to “*secure the well-being of the people of the Republic*”. Section 152(1)(d) also requires that local government “*promote a safe and healthy environment*”. In the light of the above, and the established understanding of disaster management, the primary responsibility for disaster management in South Africa is the responsibility of Government. Section 26(g) of the Municipal Systems Act, No. 32 of 2000 stipulates that a disaster management plan must be reflected in the Municipality’s Integrated Development Plan (IDP). Sections 52 and 53 of the Disaster Management Act, No. 57 of 2002 also requires of each municipality and municipal entity to prepare a Disaster Management Plan (DMP).

The Disaster Management Plan establishes the arrangements for disaster management within the City of Johannesburg and has been prepared in accordance with the requirements of the Disaster Management Act, No. 57 of 2002 (the Act) and section 26(g) of the Municipal Systems Act, 2000.

The purpose of the City of Johannesburg (CoJ) Disaster Management Plan (DMP) is to document the institutional arrangements for disaster management planning which includes the assignment of primary and secondary responsibilities for priority disasters posing a threat in the City. It further provides the broad framework within which the Departments will implement the disaster management planning requirements of the Act and other Municipal Entities (ME’s) included in the organisational structure of the City. It establishes the operational procedures for disaster reduction planning as well as the emergency procedures to be implemented in the event of a disaster occurring or threatening to occur in the City. It also aims to facilitate an integrated and coordinated approach to disaster management in the City which will ensure that the City achieves its vision for disaster management embedded in the GDS 2040 which is to build resilient, sustainable and live-able communities. The Disaster Management Plan is in line with the National Disaster Management Framework of 2005 and CoJ Disaster Management Framework of 2006. There are four Key Performance Areas (KPA’s) and three Enablers:

- ✓ KPA 1: Integrated Institutional Capacity for Disaster Risk Management
- ✓ KPA 2: Disaster Risk Assessment
- ✓ KPA 3: Disaster Risk reduction
- ✓ KPA 4: Response and recovery
- ✓ Enabler 1: Information Management and Communication
- ✓ Enabler 2: Education, Training, Public Awareness and Research
- ✓ Enabler 3: Funding arrangements for Disaster Risk Management

The plan provides a background of the CoJ in line with its current (IDP) and GDS 2040 Strategy. The City of Johannesburg DMP contains risk assessment based on field study, observation, primary and secondary data sources. The City's DMP has as far as possible been imbedded in the current reality of the municipality. The risk assessment provides the foundation towards risk reduction planning based on the identified and prioritised disaster risks and vulnerabilities of the communities of Johannesburg. This DMP also provides the City with a guiding framework for future disaster management planning by the municipality as a whole as required by the Act and the Municipal Systems Act No. 32 of 2000. The relationship between, and different roles and responsibilities of, the Departments in the City and Municipal Entities are highlighted. The plan also gives guidance in relation to the declaration of a local state of disaster, disaster classification and the institutional arrangement necessary for the successful implementation of the Act. Each section of this plan contains a number of recommendations, which need to be considered and implemented in order for the CoJ to obtain the results envisaged by the DRMP.

Section 44 (d)(i),(ii) and (iii) of the Disaster Management Act stipulates that Disaster Management Centre may be an advisory and consultative body on matters relating to disasters and disaster management in the municipality for:

- i. Organs of state and statutory functionalities*
- ii. The private sector and non-government organisations*
- iii. Communities and individuals*

1. INTRODUCTION AND BACKGROUND

Section (1) of the Disaster Management Act, No. 57 of 2002, as in amended Disaster Management Act 16 of 2015 defines “*disaster management*” as “*a continuous and integrated multi-sectoral, multi-disciplinary process of planning and implementation of measures aimed at –*

- (a) prevention or reducing the risks of disasters;*
- (b) mitigation the severity or consequences of disasters;*
- (c) emergency preparedness;*
- (d) a rapid and effective response to disasters; and*
- (e) post-disaster recovery, and rehabilitation;”.*

The Municipal Disaster Management Plan serves to confirm the organisational and institutional arrangements within the CoJ to effectively prevent disasters from occurring and to minimize the impact of those hazards that cannot be circumvented. Fundamentally the DMP and Strategic Action Plan 2016-2020 serve as the strategic coordination and co-operation mechanism between all the relevant Departments and Municipal Entities in the City. The risk-specific Plans and the City Departments and Municipal Entities Plans and related emergency procedures are to be designed for tactical and operational levels and must be considered as being subsidiary to the Municipal Disaster Management Plan.

1.1. Scope of a Disaster Management Plan

According to the National Disaster Management Framework, Disaster Management Planning applies to national, provincial and municipal organs of the state that have established foundational institutional arrangements, and are building the capabilities needed to carry out comprehensive disaster management activities. It includes establishing processes for a comprehensive disaster assessment, identifying formal consultative mechanisms for the development of disaster reduction projects, and introducing a supportive disaster management information system and emergency communication capabilities.

Section 52(1)(c) of the DM Act stipulates that The Disaster Management Plan must set out the following:

- i. The way in which disaster management is to be applied in the municipality, taking into consideration expected climate change effects and risks
- ii. The roles and responsibilities as per the disaster management frameworks of all three spheres of government
- iii. It’s role regarding emergency response and post disaster recovery and rehabilitation

- iv. Its capacity to implement its role and responsibilities
- v. Details of its disaster management strategies
- vi. Contingency strategies and emergency procedure when there are disaster, and measures to finance strategies thereof
- vii. Specific measures to deal with vulnerable groups; women, children, the elderly and persons with disabilities

1.2. Stakeholder Participation

Chapter 4 of the Local Government Municipal Systems Act, No. 32 of 2000 requires that through appropriate mechanisms, processes and procedures, the municipality should consult the local community on the preparation or amendment of its plan. The plan will be circulated to departments and entities for comments through various platforms. The comments will subsequently be incorporated for finalization and approval.

1.3. Background

CoJ Metropolitan Municipality is situated in the Gauteng Province. Its borders extend to approximately 1645 km²; however Johannesburg is the most advanced commercial city in Africa and the hub of the South African and regional economy. It is a City with a unique, African character, world-class infrastructure in the fields of telecommunications, transportation, water and power, and with globally-competitive health care and educational facilities. However, the city is also one of contrasts as it is home to both wealthy and poor residents and refugees, global corporations and emerging enterprises.

Statistics South Africa data indicates that Gauteng Province has the highest population in South Africa, whereby Johannesburg contributing an estimated 5.05 million people to the total population of the province. The influx of migration has resulted to Johannesburg's population growth rate averaging 3% over the past 10 years. Over the last decade the City has been growing. A key contributor is that the city continues to attract people from other provinces and internationally, who are looking for better economic opportunities and quality of life. The population pyramid indicates that the City's population is predominantly youth.

It is predicted that Johannesburg's population could be 5.3 million by 2021. Johannesburg is South Africa's largest metropolitan municipality in terms of population and economy (City of Johannesburg (CoJ) Integrated Development Plan (IDP), 2019). The main Economic Sectors: Finance and business services, community services, manufacturing, trade (collectively 82%).

The City is separated into 7 regions, namely: A- the northern area, B- north- western, C- western with boundary of Mogale City, D- Greater Soweto, E- Sandton and Alexandra, F- Inner city up to Ekurhuleni boundary, G- Deep Southern region, as illustrated in Figure 1 below. Some of the Cities/Towns are: Alexandra, Diepkloof, Diepsloot, Ennerdale, Johannesburg, Johannesburg South, Lawley, Lenasia, Lenasia South, Meadowlands East, Meadowlands West, Midrand, Orange Farm, Pimville, Randburg, Roodepoort, Sandton, and Soweto. The neighboring municipalities are City of Tshwane, City of Ekurhuleni and Mogale City (CoJ Disaster Management (DM) Framework, 2006). The City's challenges in the City range from unemployment, safety and infrastructure backlogs, which are exacerbated by a continual influx of people. Moreover, Johannesburg struggles with high levels of poverty and inequality, social exclusion and sub-standard levels of human development. These issues are aggravated by unequal development, long and costly commutes (CoJ IDP, 2019). The City must therefore have adequate plans to deal with the challenges of an increasing City population.

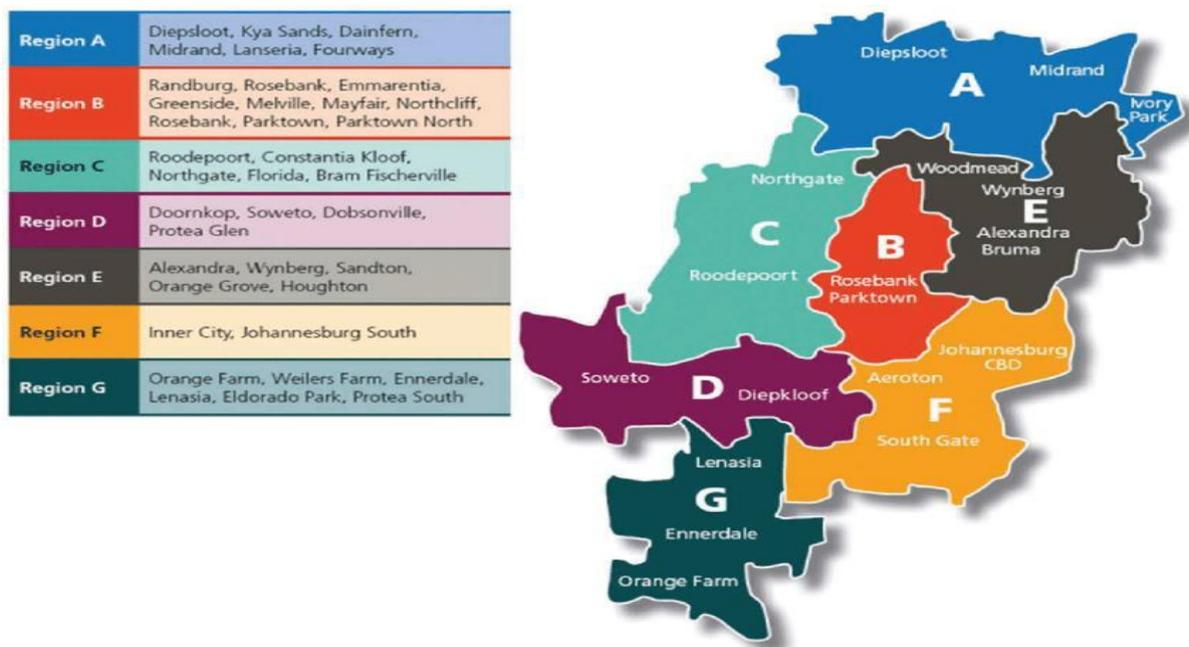


Figure 1: City of Johannesburg Regions

1.3.1. Disaster Management

The types of risks that affect South Africa daily range from health risks, environmental risks, financial risks and security risks (Nation DM Framework, 2005). According to the CoJ DM Framework of 2006, the Municipality is prone to natural, technological and environmental hazards. It is increasingly exposed to the devastating effects of a range of severe hydro meteorological events such as severe storms; floods; tornadoes; drought and fires. The frequency of epidemic diseases of biological origin affecting humans has also shown an

increase in recent years (CoJ DM Framework, 2006). City of Johannesburg is vulnerable to many hazards with flooding, dolomite/acid mine drainage, fires, railways/aviation accidents high jacked buildings, and being amongst the top five hazards on the metropolitan risk profile. Most of the communities in City of Johannesburg live in vulnerability and more often than not are unable to cope with the impact of hazards.

In addressing the challenges faced by communities in the country, the South African Government developed a Disaster Management Act which provides for an integrated and coordinated disaster risk management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, preparedness, rapid and effective response to disaster and post disaster recovery; the establishment of national, provincial and municipal disaster management centres; disaster management volunteers and matters relating to these issues as per the Disaster Management Act; Act 57 of 2002.

The effective implementation of the disaster management legislation requires City of Johannesburg Disaster Management to develop and implement a strategy which must put into action all the relevant disaster management strategies and policies and develop implementation procedures, programs and a budget. It must be done in line with the Integrated Development Plan (IDP) of the Municipality.

1.3.2. Climate Change Adaptation and Disaster Risk Reduction

Climate change, although a natural phenomenon is exacerbated by human activities. Changes in climate affect both average and extreme temperatures, consequently increasing the likelihood of weather-related natural disasters such as flooding, droughts and increased intensity of storms. Reducing vulnerability is a key aspect of reducing climate change risk which requires a new approach to climate change risk and a change in institutional structures and relationships. Disaster policy response to climate change is dependent on a number of factors, entailing readiness to accept the reality of climate change, institutions and capacity, as well as willingness to embed continuous climate change risk assessment and management in development strategies.

Climate change adaptation and Disaster Risk Reduction (DRR) have very similar aims in terms of seeking to build resilience in the face of hazards. They both focus on reducing people's vulnerability to hazards by improving methods to anticipate, resist, cope with and recover from their impact by putting structural and non-structural plans in place. Building resilience is key in efforts towards both the reduction of disaster risks and climate change adaptation. The

emphasis should be on determining existing capacity so as to anticipate, resist, cope with and recover from the impact of disaster related incidents.

The City of Johannesburg Disaster Management programmes must lead to an improved understanding of climate variability, document good practices and implement pilot initiatives in vulnerable communities. It needs to promote community-based adaptation principles and develop, adapt and test tools and techniques for adaptation such as; for example tools to measure physical (in terms of physical measures of risk reduction); social (institution building, gender, inclusion, networking, etc.), educational (school and higher education, non-formal education, education for field practitioners, teachers, etc.) and economic (livelihood resilience and options, micro-finance, etc.). It should also promote policy advocacy, education, and awareness around insurance for a work programme on loss and damage associated with climate change.

2. LEGISLATIVE MANDATE

The following legislations and frameworks were taken into consideration when compiling the COVID-19 Operational Plan:

- Constitution of the Republic of South Africa Act, Act 108 of 1996
- Disaster Management Amendment Act, Act 57 of 2002, as amended, Act 16 of 2015
- Disaster Management Framework of 2005
- City of Johannesburg Disaster Management Framework of 2006
- 2019/20 City of Johannesburg Integrated Development
- National Health Act, Act 61 of 2003
- Occupational Health and Safety Act, Act 85 of 1993
- Municipal Finance Management Act, Act 56 of 2003
- Public Finance Management Act, Act 1 of 1999
- Gatherings Act, Act 205 of 1993
- Safety at Sports and Recreational Events Act, Act 2 of 2010
- Fire Brigade Services Act, Act 99 of 1987
- Municipal Systems Act, Act 32 of 2000
- National Building Regulation and Building Standards Act, Act 103 of 1977
- National Key Point Act, Act 102 of 1980
- National Environmental Act, 107 of 1998
- Higher Education Amendment Act 9 of 2016

- Basic Education Laws Amendment Act, 2015
- Housing Act, Act 107 of 1997
- Fundraising Act, Act 107 of 1978
- Municipal Structures Act, Act 117 of 1998, as amended in 1999 and 2000
- Municipal Demarcation Act, Act 27 of 1998

3. INTEGRATED INSTITUTIONAL CAPACITY FOR DISASTER RISK MANAGEMENT (KPA1)

The objective of KPA1 is:

- To establish procedures for the development, approval and implementation of integrated disaster risk management policy,
- To establish integrated institutional capacity within the City of Johannesburg (CoJ) to enable the effective implementation of the disaster risk management policy and disaster management legislation within CoJ,
- To establish mechanisms this will provide clear direction and allocate responsibilities for the implementation of the Disaster Management Act; Act 57 of 2002 and thus National Disaster Management Policy Framework of 2005.

Section 43 of the Disaster Management Act 57 of 2002 requires the establishment of a metropolitan disaster management centre (MDMC) responsible for promoting an integrated and coordinated disaster risk management policy. The Act explicitly emphasises the significance of cooperative governance through the involvement of relevant stakeholders in order to minimise the probability and severity of hazardous impacts on conditions of vulnerability and leading to disasters. The KPA further indicates the interaction between the CoJ and other spheres of government towards disaster risk reduction.

3.1. Arrangements for the development and adoption of integrated disaster risk management policies and regulations

The relevant stakeholders and role-players will submit recommendations on matters relating to disaster management policies and regulations to the CoJ Metropolitan Municipality Disaster Management Centre for consideration. Thereafter, submitted to the Municipal Disaster Management Advisory Forum (MDMAF) as well as the Management Committee and Political structures within the municipality.

The MDMC must ensure that the financial, constitutional, human resource and interdepartmental implications of the recommendations are submitted and presented to the

MDMAF and the relevant committees. In view of the multi-sectoral nature of disaster risk management matters, the MDMC must submit all memoranda containing policy proposals related to disaster risk management legislation and implementation to the relevant portfolio committee for assessment and further recommendations before sending them to the Management Committee and thereafter the Executive Council. Figure 2 illustrates the disaster risk management policy making process. It should be noted that in all cases the normal political decision-making process should be followed with feedback to the disaster risk management structures as required.

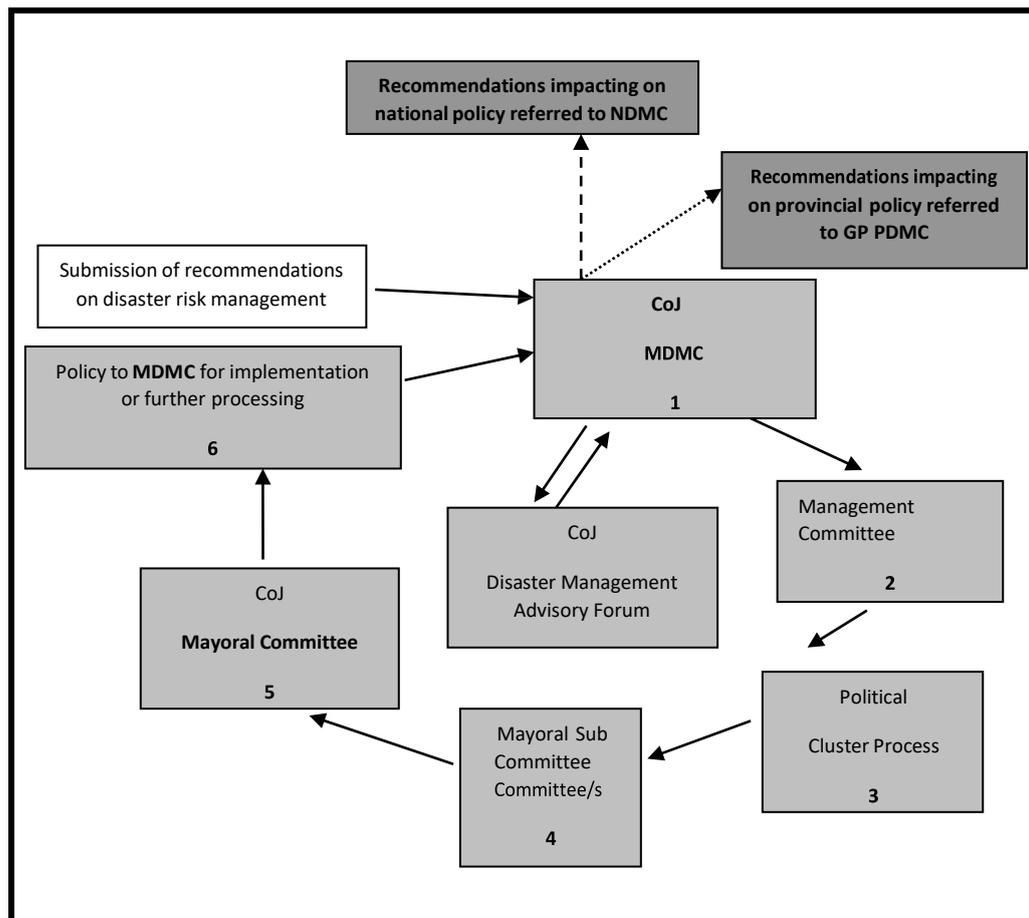


Figure 2: The Disaster Management policy-making process

3.2. Arrangement for the direction and implementation of disaster management policy

Section 43(1) of the DM Act stipulates that each municipal disaster management centre must establish a disaster management centre to achieve the objective of promoting an integrated and co-ordinated system of disaster management.

3.3. The Disaster Management Advisory Forum

The CoJ DM Centre must establish a Municipal Disaster Management Advisory Forum (MDRMAF). The DM Act stipulates that the MDRMAF is a consultative forum on matters relating to disaster management in the municipality. It is to ensure integration of stakeholder

participation and harness technical advice on matters relating to disaster Management in the Municipality. Moreover, is to adopt the holistic and organised approach to the implementation of relevant policies and regulations. The forum comprises of the internal departments, municipal entities, relevant stakeholders and role-players including NGOs and CBOs; individuals or groups with special technical expertise, traditional leaders (Izinduna), traditional healers, and volunteers. The relevant role-players and stakeholders in disaster management in the municipal area to coordinate their actions on matters relating to disaster management as prescribed in Section 44 of the DM Act.

The CoJ Disaster Management Advisory Forum meets on a quarterly basis but is not precluded from meeting when there are prevailing circumstances. The forum:

- *Must make recommendations to Council concerning the municipal disaster management framework for the CoJ including:*
 - *Give advice and make recommendations on disaster-related issues and disaster management;*
 - *Contribute to disaster management planning and co-ordination;*
 - *Establish joint standards of practice;*
 - *Implement response management systems;*
 - *Gather critical information about the municipality's capacity to assist in disasters and to access resources; and*
 - *Assist with public awareness, training and capacity building.*
- Must contribute to ensuring community awareness of disaster risk management arrangements and the importance of taking into cognisance issued early warnings;
- Must support and contribute to the development and implementation of an information management system for the CoJ;
- May advise any organ of state, statutory functionary, non-governmental organisation, community or the private sector on any matter relating to disaster management; and
- May make recommendations regarding disaster management policy to the MDMC.

The MDRMAF must consist of the following members:

- *The head of the CoJ MDMC who is also the chairperson;*
- *A senior representative of each function within the municipality as identified by the SED and designated by the executive mayor;*
- *Representatives of other disaster management role-players in the CoJ designated by the executive mayor, which may include:*
 - *Organised business in the municipality;*

- *Organized labour in the municipality;*
- *Relevant community-based organisations;*
- *The insurance industry in the municipality;*
- *Representatives of the agricultural sector in the municipality;*
- *Religious and welfare organisations in the municipality;*
- *Medical, paramedical and hospital organisations in the municipality;*
- *Institutions of higher learning;*
- *Institutions that can provide scientific and technological advice or support to disaster risk management;*
- *Other relevant non-governmental organisations and relief agencies in the CoJ;*
- *Experts in disaster management designated by the executive mayor; and*
- *Persons co-opted by the forum in question for a specific period or specific discussion.*

The Head of the MDMC may convene ad hoc meetings for planning groups, task teams and key personnel from line departments for the purpose of establishing disaster management sub-advisory forums for integrated and co-ordinated planning, as well as operations.

3.3.1. Disaster Management Advisory Forum Sub-Committees

In order to facilitate disaster management activities necessary for the implementation of the policy, the MDRMAF can establish sub-committees (e.g. the NGO, sub-committee). Such committees should develop clear terms of reference and timeframes.

Planning for disasters and disaster management is a participative process involving a multitude of role-players and stakeholders from across government sectors, disciplines and spheres, the private sector, NGOs, CBOs and communities. It would therefore be necessary to cluster stakeholders into planning groups relevant to the various activities associated with disasters and disaster risk management, for example, development of disaster risk reduction strategies, hazard-specific contingency plans and operational plans, and guidelines for disaster response and recovery activities.

3.4. The CoJ Disaster Management Centre

The MDMC is the primary functional unit for disaster risk management in CoJ MDMC is located as a division within the Public Safety Department; as Disaster Management Directorate. It must provide direction for the implementation of disaster risk management policy and legislation and the integration and coordination of municipal disaster risk management activities and priorities in order to ensure that national and provincial objectives are achieved. In addition, a key function of the MDMC is to provide support to the Gauteng PDMC and the NDMC.

In the event of a disaster occurring or threatening to occur, the MDMC must provide support and guidance to the relevant divisions and sub-structures. Furthermore, it must mobilise municipal infrastructure and all other available resources to support local disaster risk management resources. Effective coordination demands that the MDMC be granted the necessary authority to give effect to the disaster risk management framework of the CoJ and to ensure that all disaster risk management-related activities are aligned with government policy.

3.4.1. Powers and duties of the Disaster Management Centre

The infrastructural arrangements of MDMC must be conducted in accordance with national guidelines for the minimum infrastructural requirements for disaster management centres developed by the NDMC. The responsibilities of the MDMC are stipulated in Section 44(1)(a)-(l).

3.5. Operation capacity of the CoJ Disaster Management Centre

Arrangements must be made for establishing the operational capacity of the metropolitan disaster management centre to enable the implementation of the Act in the municipality. These arrangements must be consistent with those of the NDMC and the GP PDMC.

Section 45(1) of the DM Act prescribes that the Municipal Council must, subject to the applicable provision of the Local Government: Municipal Systems Act, appoint a head of centre. Section 45(2)(a)(b) DM Act further indicates that the head of centre must exercise powers and perform its duties and takes all decisions in accordance with the directions of the council. The Head must perform the functions of the office subject to Section 44(3) of the DM Act. All municipal departments within CoJ must identify appropriately qualified staff in their employ to serve as their disaster risk management focal or nodal points. Disaster management responsibilities must be included in the job descriptions/score cards of all key personnel identified in this framework.

3.6. Community participation

The community is at the coalface of disaster risk management. It is from the conditions of risk that exist in communities that all other disaster risk management activities evolve. It is in the community where all the operational activities related to disaster risk management take place. All disaster risk reduction planning, the development of projects and programmes and the allocation of responsibilities must be founded on the needs and priorities of communities. Disaster risk reduction is a community-driven process.

The CoJ MDMC must involve local communities in the development of disaster risk profiles, facilitate understanding of the concepts and values of disaster risk reduction in communities; prioritise projects aimed at risk reduction in their IDPs; and facilitate community participation in training, preparedness planning and awareness programmes. In the case of specific disaster risk reduction projects, project teams must include community representation.

Indigenous knowledge and input from community leaders must be included in all of the activities associated with ensuring informed, alert and self-reliant communities. Capacity building, education, training and research are therefore fundamental to this end.

When disasters occur or are threatening to occur, the initial response to the event comes from those directly affected by it. It is only thereafter that their actions are supported by the various response and resource agencies responsible for dealing with the disaster. In this regard, broad community participation in disaster risk management, as well as the enrolment of individuals as volunteers, must be actively promoted and encouraged, particularly in communities at risk. The establishment of ward disaster risk management committees (volunteers) or forums are thus critical.

3.7. Disaster Management Volunteers

The MDMC should strive towards the establishment of disaster risk management volunteers, in consultation with local councillors, ward committee members and community leaders. In order to maintain an inclusive approach to the participation of volunteers in disaster risk management, volunteers should be classified into three categories: unit of volunteers, general and spontaneous.

3.7.1. Classification of volunteers

In order to maintain an inclusive approach to the participation of volunteers in disaster risk management, volunteers are classified into three categories. These categories are:

- Units of volunteers
- General volunteers
- Spontaneous volunteers

Unit of volunteers

This category provides for the participation and registration of individuals (or groups) who wish to become more actively involved in an organised structure for disaster risk management volunteers in the municipality. It includes individuals, groups or organisations that already have

specialised skills, as well as those who undertake to be trained in specific skills in order to participate in this category.

General volunteers

This category provides a general pool of volunteers who can be drawn on by the municipality to perform a variety of functions that may or may not require specialised skills. Volunteers in this category must be registered and must meet minimum criteria set down in accordance with the national standard guidelines.

Spontaneous volunteers

The Act recognises that people will always respond spontaneously in emergencies and disasters. Such humanitarian responses should not be discouraged. However, the CoJ must take cognisance of the problems and complications, including the possibility of injury and damage to property that may result from the spontaneous, uncontrolled and uncoordinated actions of volunteers. The CoJ MDMC must take this matter into consideration and must make provision for it in its planning.

3.8. Cooperation with national and provincial spheres

Issues that are fundamental to interdependence and intergovernmental relations between the three spheres of government include:

- Information sharing;
- Establishment of standards to ensure that the technology required for an integrated information management and communication system is compatible across the spheres;
- Compilation and sharing of directories of institutional role-players across the spheres; and
- Submission of disaster risk management plans and annual reports to other spheres and neighbouring centres.

3.9. Inter-municipal cooperation

Inter-municipal cooperation is crucial considering the risk profile of the CoJ. For this means the CoJ MDMC must strive towards interaction and engaging the following districts and metropolitan municipalities in relation to disaster risk management:

- Ekurhuleni Metropolitan Municipality;
- Tshwane Metropolitan Municipality;
- West-Rand District Municipality.

- Sedibeng District Municipality

It is recommended that representatives for the DMCs from the above listed municipalities be invited to the CoJ MDRMAF should circumstances so dictate.

3.9.1. Mutual assistance agreements

In accordance with the Act, municipalities must establish their level of capacity to deal with disaster risk reduction, response and recovery. Where necessary, and to strengthen this capacity, they must enter into mutual assistance agreements with their neighbours, the private sector, other organs of state and communities.

4. DISASTER RISK ASSESSMENT (KPA 2)

The objective of Disaster Risk Assessment KPA is to establish a uniform approach to assessing and monitoring disaster risks that will inform disaster risk management planning and disaster risk reduction undertaken by CoJ DMC in collaboration with relevant organs of state and role-players within the City.

The Disaster Management Act requirements for priority setting with respect to disasters likely to affect municipality are set out in section 47. The section emphasises the importance of disaster risk assessment to guide municipal disaster risk reduction efforts, including disaster risk management planning and monitoring. Furthermore, the outcomes of disaster risk assessment directly inform the development of disaster risk management plans.

4.1. Disaster risk assessment and risk reduction planning

Disaster risk assessment is the first step in planning an effective disaster risk reduction programme. It examines the likelihood and outcomes of expected disaster events. This would include examining related hazards and conditions of vulnerability that intensify the impact of disaster incidents. The disaster risk equation using four components; risk, hazard, vulnerability and capacity:

$$\text{Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity/ Manageability}}$$

Disaster risk assessment planning entails identification and consultation with key stakeholders, about the design, implementation and the interpretation of the findings. Disaster risk assessments, supported with good monitoring systems, are essential for:

- *Effective disaster risk management and risk reduction planning;*

- *Sustainable development planning;*
- *Identifying potential threats that can undermine a development's success and sustainability, making it possible for appropriate disaster risk reduction measures to be incorporated into the project design prior to implementation;*
- *Shaping focused disaster risk reduction programmes for specific threats;*
- *Identifying high-risk periods and conditions; and*
- *Activating preparedness and response actions.*

Relevant municipal departments and entities must execute systematic disaster risk assessments in the following instances:

- *Prior to the implementation of any municipal disaster risk reduction, preparedness or recovery programme;*
- *As an integral component of the planning phase for large-scale housing, infrastructure or commercial/industrial developments;*
- *As an integral component of the planning phase for significant initiatives that affect the natural environment; and*
- *When social, economic, infrastructural, environmental, climatic or other indicators suggest changing patterns of risk that increase the likelihood of significant disaster impacts.*

All municipal departments and entities must carry out disaster risk assessments to identify priority disaster risks relevant to their functional areas. Where possible, these should be undertaken interdepartmentally to avoid duplication of efforts and to ensure uniformity of findings.

All proposed disaster risk assessments and related studies planned by municipal departments and entities must be reviewed by the MDMC prior to implementation to ensure consistency in approach.

4.2. Maximising vulnerability reduction outcomes

With respect to the implementation of the Act, a disaster risk assessment must be undertaken when one or more of the vulnerability reduction criteria listed in Table 1 below are considered priorities in any nationally initiated project or programme.

Table 1: Situations requiring disaster risk assessments

Key vulnerability criteria To achieve:	Examples of where disaster risk assessments must be done
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Increased sustainability of a development project or programme to support vulnerable households.	As part of the planning for an infrastructural development, for example, assessing the likelihood of weather, flooding, subsidence and other threats damaging the structure, so that these can be factored into the construction specifications.
Reduction of potential harmful consequences associated with industrial, commercial or other developments.	As part of environmental impact assessments for large-scale developments, including industrial, commercial and other enterprises that may increase disaster risk.
Increased understanding of a rapidly changing risk for improved disaster risk management planning.	In a sinkhole prone area that has recently experienced considerable population growth and is facing increased instability.
Increased robustness of development initiatives in poor communities and areas.	In an informal settlement characterised by recurrent small and medium-size disaster losses that undermine assets and livelihoods.
Management of high-risk periods and conditions to ensure service and/or business continuity.	Electricity transmission lines and rail infrastructure, as well as health and emergency services, to ensure these essential services do not ‘fail’ under expected high-risk conditions.
Provision of appropriate support for at-risk activities, services, areas, communities and households following an ‘alert’.	Following a drought warning or cholera alert in rural areas, to identify communities and households most at risk and to focus or target preparedness and response actions.

4.3. The disaster risk assessment model

Disaster risk assessment is a process that determines the level of risk by:

- Identifying and analysing potential hazards and/or threats;
- Assessing the conditions of vulnerability causing: death and injuries to human, damage to infrastructural, agricultural, environmental, disruption to communities due to economic loss.
- Determining the level of risk for different situations and conditions; and
- Assisting to set priorities for action.

4.3.1. Undertaking a disaster risk assessment

There are different methods for conducting disaster risk assessments. They differ depending on the type of risk being assessed, the characteristics of the population- at-risk, as well as the

area, infrastructure, services and businesses. Methods used are also determined by the urgency for the assessment and the availability of information on hazard and vulnerability, experts on the field and other resources to undertake it.

The MDMC must through consultation develop a municipal standard for conducting comprehensive disaster risk assessments, including guidelines for the application of a uniform disaster risk assessment methodology and the standardisation of reporting formats for disaster risk assessments.

The general process for disaster risk assessment entails the following stages:

- **Stage 1:** The first stage involves identifying the specific disaster risk to be assessed.
- **Stage 2:** The second stage involves analysing the identified disaster risks.
- **Stage 3:** The third stage requires an evaluation and prioritization of the disaster risks being assessed. It involves undertaking much more comprehensive assessments of specific threats and establishes priorities for action.
- **Stage 4:** The fourth stage is required to inform on-going disaster risk assessment and planning. It involves monitoring disaster risks and the effectiveness of risk reduction initiatives. It also involves updating disaster risk assessment information and disseminating the information to relevant role-players and stakeholders.

The table 2 below indicates the hazards experienced annually in the COJ. The probability of a hazard occurring in a given month is indicated as high, medium or low. This aspect is also colour coded:

Table 2: Hazard severity colours

Probability	Abbreviation	Colour
High	H	Red
Medium	M	Orange
Low	L	Green

In addition the normal severity in a given month is indicated with a score on the following five-point scale, Table 3:

Table 3: Hazard severity scale

Score	Severity
5	Catastrophic
4	Major
3	Moderate
2	Minor
1	Insignificant

The table 4 below indicates a host of annual hazards. From these, those with the highest probability seem to be structural fires and dolomite as they present a year round threat within COJ. High probability and high impact seasonal events were also identified. In this regard flooding, severe weather events and extreme temperatures could cause major disruptions in summer months. Industrial accidents and hazardous material also present a notable threat to COJ due to the concentration of industries, mines and major transport networks. Building collapse and Mission critical systems Failure (MCFS) are also ever present dangers due to the urban nature of the municipality.

Table 4: Seasonal hazard calendar for the COJ

Priority risk	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Flooding	H5	H5	H5	M2	L1	L1	L1	L1	M2	H5	H5	H5
Structural Fires (formal)	L1											
Structural Fires (informal)	H5											
Major Car Accidents	L4											

Rail Accidents and derailments	L4											
Hazardous Materials spills	M4											
Dolomite/ Sinkholes	H5											
Mine Tremors	M2											
Epidemic	M4											
Pandemic	H5											
Mass community events	M2											
Severe Weather events	H3	H3	H3	M2	L1	L1	L1	L1	M2	H3	H3	H3
Extreme temperatures	H3	H3	H3	M2	H3	H3						
Industrial accidents	M4											
Building Collapse	M3											
Mission critical systems Failure (MCFS)	M5											

4.4. Hazard Seasonality and Severity

The following table, Table 5 indicates hazards experienced approximately every year, two, three five, ten, twenty and fifty years. The estimated impact of these events are also coded to indicate severity, Low (green), Medium (Orange), High (Red).

From the table annual hazards that affect COJ include, flooding, structural fires (formal and informal), transport accidents, sinkholes, mine tremors mass community events (ex. service delivery protest) and severe weather events. Of these annual risks structural fire and floods present a severe risk that COJ has to note. On a 5 yearly basis, floods, transport accidents, hazardous material spills, sinkholes, severe weather and high temperatures can have highly severe impacts on vulnerable communities in COJ. Significant flooding, informal structure fires, major car and rail accidents, hazardous material spills and industrial accidents themselves as significant 1 in 10 year events. Rare events such as epidemics (1/20 year events or 1/50 year events), mission critical systems failure (1/20 year events or 1/50 year events), building collapse (1/20 year events/or 1/50 year events) and significant industrial accidents (1/20 year events or 1/50 year events) constitute “blind spots” (because of their timeline) that COJ has to consider in their long term disaster risk planning.

Table 5: Frequency and intensity of hazard events for the COJ (yearly indicators)

Priority Risk	1:1	1:2	1:3	1:5	1:10	1:20	1:50
Flooding	x	x		x	x		
Structural Fires (formal)	X	x	x				
Structural Fires (informal)	x	x	x		x		
Major Car Accidents	x	x		x	x		
Rail Accidents and derailments					x		
Hazardous Materials spills			x	x	x		
Dolomite/ Sinkholes	x	x	x	x			
Mine Tremors	x			x			
Pandemic/Epidemic						x	x
Mass community events	x	x		x			
Severe Weather events	x	x		x			
Extreme temperatures		x		x			
Industrial accidents					x	x	x
Building Collapse						X	X

Priority Risk	1:1	1:2	1:3	1:5	1:10	1:20	1:50
Mission critical systems Failure (MCFS)					X	X	

The above risks impact on local communities in various ways. Severe weather events have an adverse effect on infrastructure such as houses. This is exacerbated by poor building standards in places. Severe weather events may also lead to the displacement of people, psychological trauma, injuries and increases in crime, as people lose their homes and means of income. Severe weather events lead to negative publicity. Areas may be labelled as “disaster prone”. This in turn might spark population growth in other areas. In extreme cases severe weather events might spark political unrest, as authorities are blamed for the situation.

4.5. Community-based disaster risk assessment

In order to increase local capacity to minimise the risk and impact of disasters; disaster risk assessment efforts must actively involve the participation of vulnerable households and communities including physically challenged and child -headed households. The information collected using more relevant technological methods by experts in the field enhanced with local and indigenous knowledge relating to disaster risk management. In addition, the active engagement of special needs groups, such as women, children and the elderly information improves the quality of the disaster risk assessment findings and increases the likelihood of community ownership in any disaster risk reduction interventions that may follow. When appointing service provider to conduct the following terms of reference should apply.

4.6. Selecting disaster risk assessment methods and approaches

There is a wide range of disaster risk assessment methods. These differ according to the hazards being considered, the size and character of the area being assessed, the time frame under consideration and the resources available (including financial resources, risk-related data/information and access to appropriate expertise).

4.7. Monitoring, updating and disseminating disaster risk information

Disaster risk information has to be monitored, updated and disseminated:

4.7.1. Monitoring disaster risk

Disaster risks are not static; they change seasonally and over time. To recognise such changes, and to strategically adjust programmes accordingly, all municipal departments must have monitoring systems in place that are relevant to their specific functional responsibilities.

These systems form the basis for sounding timely warnings of, or alerts for, impending significant events or disasters. They are also essential for monitoring the effectiveness of on-going disaster risk reduction efforts. Risk monitoring systems involve:

- Hazard tracking
- Vulnerability monitoring
- Disaster event tracking

Hazard tracking

Hazard tracking systems monitor the occurrences that can trigger disaster events. They include systems that provide early warning information on adverse weather conditions.

Vulnerability monitoring

The qualitative and quantitative vulnerability monitoring systems track the ability of households, communities, areas, critical facilities and natural environments to withstand external threats. Censuses, regular poverty surveys, nutritional surveys and information collected from health clinics, World Health Organisation (WHO), Research and Government Institutions provide insights into changing social vulnerability patterns in at-risk communities.

Disaster event tracking

Disaster event tracking systems monitor changing patterns in disaster risks. It is also signals a call for urgent measures to avert the impending disaster. Information on small and medium 'undeclared' events can be found in many different sources, including local newspapers, fire and disaster risk management reports, and records of the relevant Department of Social Development and the South African Red Cross Society. Such information must be sourced and included into the disaster risk management information system of the CoJ.

4.7.2. Updating a comprehensive disaster risk assessment

Disaster risk is driven by a combination of hazard and vulnerability processes, including changing patterns of land use, infrastructure development/maintenance, urban growth and settlement densification. Similarly, household size and composition, health status and level of livelihood security affect household potential for loss. Some risks, particularly those triggered by climate processes, must be reviewed seasonally.

Municipal departments and entities with responsibilities for reducing and managing specific risks must review the Municipal Indicative Disaster Risk Profile for their functional areas

annually, to determine if risk conditions have changed detrimentally. If physical, atmospheric, environmental, health or socio-economic conditions have worsened considerably, or if there are increasing disaster losses reported from small and medium-size events, the assessment and profile must be updated.

Responsibility for updating and monitoring disaster risk information

Municipal departments and entities and other specialist role-players with responsibilities for reducing and managing disaster risks in the CoJ must have clear mechanisms for:

- Accessing and updating relevant hazard and vulnerability information on disaster risks specific to their functional areas;
- Making this information available to the MDMC.

In addition the MDMC must:

- Establish clear mechanisms for accessing, consolidating and updating relevant information on hazards, vulnerability and disaster occurrence from specialist government and non-governmental partners responsible for monitoring specific disaster risks, including fire, drought and epidemics;
- Develop and implement clear mechanisms for disseminating disaster risk assessment and monitoring information for on-going planning, as well as for managing conditions of heightened risk;
- Establish clear procedures for accessing, interpreting and disseminating timely weather information, particularly when this is associated with potentially endangering rapid-onset storm, hot, dry temperatures, strong winds, heavy rainfalls or hale, ice or fog conditions;
- Ensure that the disaster risk information management systems implemented by the MDMC are managed by skilled individuals with both information technology capabilities and disaster risk analytic skills.

4.8. Conducting quality control

Disaster risk assessments must be comprehensive and reliable in order to inform disaster risk reduction planning.

4.8.1. Measures to establish the accuracy of disaster risk assessments

The following two mechanisms must be used to ensure the accuracy of the disaster risk assessment undertaken to inform municipal area planning:

- Establishment of a technical advisory committee; and

- External validation or external peer review of methods and findings.

4.8.2. Technical advisory committee

The relevant municipal departments and entities that commission the disaster risk assessment must appoint a technical advisory committee comprising nationally recognised specialists in the hazards, vulnerabilities and disaster risks being assessed. A technical advisory committee is particularly necessary when complex disaster risk assessments are being carried out. The role of the committee is the development of terms of reference, the monitoring of progress, and the validation and/or interpretation of the findings.

4.8.3. External validation process for methods and findings

External validation of the findings should be undertaken with the input of recognised specialists who may be drawn from specialist departments or ministries, research institutions, NGOs or the private sector.

The external validation process should be undertaken before any programmes are implemented or before any maps and reports for planning purposes are published or disseminated. At a minimum, all assessments carried out in the CoJ should be externally validated in relation to the methodology used and findings generated.

5. DISASTER RISK REDUCTION (KPA 3)

KPA3 aims to ensure all disaster management stakeholders develop and implement integrated disaster risk management plans and risk reduction programmes in accordance with approved disaster risk management frameworks. The successful implementation of the Disaster Management Act critically depends on the preparation and alignment of disaster management frameworks and plans for all spheres of government; as stipulated in section 52 of the DM Act. The KPA addresses requirement for disaster management planning and integration of the core disaster risk reduction principles of prevention, mitigation and preparedness into on-going programmes and initiatives within the CoJ.

5.1. Disaster management planning

The MDMC must ensure that coherent and relevant disaster risk management planning is undertaken by relevant institutional role-players, municipal departments and entities.

5.1.1. Disaster Management Plans

All municipal departments and entities, municipal entities and other institutional partners identified as key role-players in disaster management are each required to prepare and

complete disaster risk management plans. Although the Act specifies clear requirements for completed disaster risk management plans, it is also recognised that:

- There can be gaps in disaster management planning capacity and experience; and
- Municipal departments and entities engaging seriously with disaster risk management for the first time will need to consult with CoJ DMC before developing a comprehensive disaster risk management plan.

5.1.2. Levels of Disaster Risk Management Plan

There are three progressive levels of Disaster Management Plan. The completion of each level will indicate information about common vulnerabilities in households, communities and areas. The information should be incorporated into Integrated Development Planning (IDP) processes and projects.

Level 1 Disaster Management Plan

Level 1 Disaster Risk Management Plan primarily focuses on establishing foundation institutional arrangements for disaster risk management, putting in place contingency plans for responding to known priority threats as identified in the initial stages of the disaster risk assessment, identifying key role-players and stakeholders, as well developing the capability to generate a Level 2 Disaster Risk Management Plan.

Level 2 Disaster Management Plan

A Level 2 Disaster Management Plan applies to building the essential supportive capabilities needed to carry out comprehensive disaster management activities. It includes establishing processes for a comprehensive disaster risk assessment, identifying and establishing formal consultative mechanisms for development of disaster reduction projects and introducing a supportive information management and communication system capabilities.

Level 3 Disaster Management Plan

A Level 3 Disaster Risk Management Plan must specify clear institutional arrangements for coordinating and aligning with other governmental initiatives and strategies of institutional role-players. It must also show evidence of informed disaster risk assessment and on-going disaster risk monitoring capabilities, as well as relevant developmental measures that reduce the vulnerability of disaster-prone households, communities and areas. The disaster risk management plans developed by municipal departments and entities must thus be incorporated into the CoJ IDP for funding and implementation processes.

5.2. Strategic Integration Role

The CoJ MDMC plays an important strategic role in integrating disaster risk management plans and actions across sectors and other role-players within the municipality.

The MDMC must:

- Consult the MDRMAF with regard to the development of disaster risk management plans as well as guidelines.
- Ensure that the municipal disaster management plan is consistent with the national and the provincial disaster management plans, as well as the priorities, strategies and objectives specified in the CoJ's IDP.

5.3. Identifying most critical infrastructure

The CoJ DMC must strive towards the protection of the most critical infrastructure. The MDMC must have a database of critical infrastructure; indicating the disaster risks, possible prevention, mitigation and contingency measures.

5.4. Priorities for focusing disaster risk protection efforts

For disaster risk management planning purposes; the DMC must provide guidance to institutions; municipal departments and entities to prioritise risks that might result in devastating impact; focusing on the following:

- Critical economic, communication, infrastructure, commercial, agricultural and industrial zones or sites whose damage or disruption would have serious and widespread consequences;
- Fragile natural ecosystems and environmental assets that offer protective environmental services and which, if damaged in a disaster event, would result in serious natural and economic losses;
- Communities in areas exposed to extreme weather and/or other natural and technological hazards and which are therefore likely to sustain serious human and property losses in the event of a disaster;
- Poor and underserved rural and urban communities, including informal settlements, especially those located in fragile ecological areas, that sustain repeated losses from recurrent small, medium, and large disaster incidents, and that do not afford insurance to facilitate recovery; and
- Highly vulnerable households in at-risk areas with limited capacity to resist or recovering from external shocks, particularly child-headed households or those headed by elderly or households affected by chronic illness.

5.5. Strategic planning for disaster risk reduction

Act emphasises on disaster risk reduction activities and the benchmarking of international best practices. In this regard, strategic planning must focus efforts on the identification of strategies and measures that lessen the probability of harmful losses by reducing vulnerability to ensure community resilience.

5.5.1. Core disaster risk reduction principles of disaster prevention and mitigation

Disaster risk management plans must give explicit priority to the core principles of disaster prevention, mitigation and preparedness. In this way, prevention, mitigation and preparedness are central to achieving the goal of disaster risk reduction, in which vulnerabilities and disaster risks are reduced and sustainable development opportunities strengthened.

It is often difficult to decide whether an intervention can be prevented or mitigated. For this reason, it is more practical to refer to them jointly as disaster risk reduction measures, because both minimise the risk of disasters.

Disaster prevention

Disaster prevention refers to actions that provide 'outright avoidance' of the adverse impact of hazards and related environmental, technological and biological disasters. Many disasters can be prevented through effective land-use planning, basic public works and effective municipal services that factor in the frequency and severity of natural or other hazards as well as human actions. Examples include: Replanting indigenous grasses or trees, cutting of dry grass and construction of fire breaks in the dry season and careful positioning of storm-water drainage and its on-going maintenance. Unfortunately, many small, medium and large disaster events cannot completely be prevented. Their severity can be reduced, however, through on-going disaster mitigation efforts.

Disaster mitigation

Disaster mitigation can be structural and non-structural measures that are undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards on vulnerable areas, communities and households. Structural mitigation requires infrastructure or engineering measures to keep the hazard away from those at risk. Disaster mitigation efforts can also target people who are at risk, by reducing their vulnerability to a specific threat (for instance, promoting community responsibility for controlling fire risk in an informal settlement). Non-structural mitigation promotes risk-avoidance behaviours and attitudes.

These actions are key components of the contingency plans that should be developed for specific threats as part of the CoJ municipal disaster risk management plan.

5.6. Inclusion of disaster risk reduction efforts in other structures and processes

5.6.1. Integration of disaster risk reduction with spatial development planning

Disaster risk is driven by both hazard and vulnerability factors reflected in spatial development frameworks. In addition, disaster risk assessment findings, along with on-going monitoring information on disaster occurrence, are directly applicable to spatial development planning.

For this reason, the CoJ DMC must establish mechanisms in association with spatial planners to ensure that relevant spatial information informs disaster risk reduction planning. They must also ensure that verified risk information is incorporated into spatial development plans and maps.

5.6.2. Incorporation of disaster risk reduction planning into IDP

As disaster risk reduction efforts are medium-to long-term multi-sectoral efforts focused on vulnerability reduction and intensify community resilience. They must be incorporated into on-going IDP projects, processes, programmes and structures. Effective and adaptive disaster risk reduction interventions in the municipal sphere are best-planned and implemented as development initiatives through IDP mechanisms and phases. In addition municipal departments and entities must also test and evaluate specific disaster risk reduction initiatives before these are undertaken and implemented.

6. DISASTER PREPAREDNESS PLANNING

Disaster management plans must also incorporate elements of preparedness appropriate to the respective functional areas of different municipal departments and entities. Therefore CoJ DMC should have preparedness measures in place to ensure effective response to the impact of hazards, including timely and effective early warnings, Standard Operating Procedures (SOP) and clear guidelines for temporal evacuation of people and livelihood from threatened locations.

Preparedness actions include:

- Planning for seasonal threats, such as heavy rainfall, flooding, strong winds, veld or informal settlement fires, and communicable disease outbreaks;
- Anticipating and planning for the potential dangers associated with large concentrations of people at sporting, entertainment or other events;

- Establishing clear information dissemination processes to alert at-risk communities of an impending seasonal threat, such as a potential outbreak of cholera during the rainy season;
- Specifying evacuation procedures, routes and sites in advance of expected emergencies, including the evacuation of schools in areas exposed to flash-floods;
- Defining in advance clear communication processes and protocols for different emergency situations, including the dissemination of an early warning for an impending extreme weather threat to isolated or remote communities.

7. RESPONSE (KPA 4)

The objectives of KPA4 are 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, environments and government services;
- Implementing immediate integrated and appropriate response and relief measures when significant events or disasters occur or are threatening to occur; and
- Implementing all rehabilitation and reconstruction strategies following a disaster in an integrated and developmental manner.

The Act requires that the CoJ DMC have an integrated and coordinated policy that focuses on rapid and effective response to disasters and post-disaster recovery and rehabilitation. When a significant event or disaster occurs or is threatening to occur, it is imperative that there should be no confusion as to roles and responsibilities and the procedures to be followed by the different municipal role-players. This section addresses key requirements that will ensure that planning for disaster response and recovery as well as for rehabilitation and reconstruction achieve these objectives.

7.1. Early warnings

As part of the disaster risk management information system, the CoJ DMC must ensure a robust multi-hazard, integrated early warning system as per Enabler 1. The CoJ MC must prepare and issue hazard warnings of municipal significance in a timely and effective manner (taking into account early warnings from the NDMC and GP PDMC) and ensure that the warnings are disseminated to those communities known to be most at risk, including those in isolated and/or remote areas. Warnings of impending or imminent significant events and/or

disasters must include information and guidance that will enable those at risk to take risk-avoidance measures to reduce losses.

The CoJ DMC must identify and establish strategic inter-sectoral, multidisciplinary and multi-agency communication mechanisms, including emergency communication mechanisms accessible to communities at risk, for the purposes of disseminating early warnings. The CoJ DMC must also identify communication links and mechanisms for the dissemination of early warnings through the media (television, radio, electronic and printed media).

7.2. Disaster Response and Recovery Process

Figure 3 below indicates the different components of disaster response and recovery which the CoJ DMC must take into consideration.

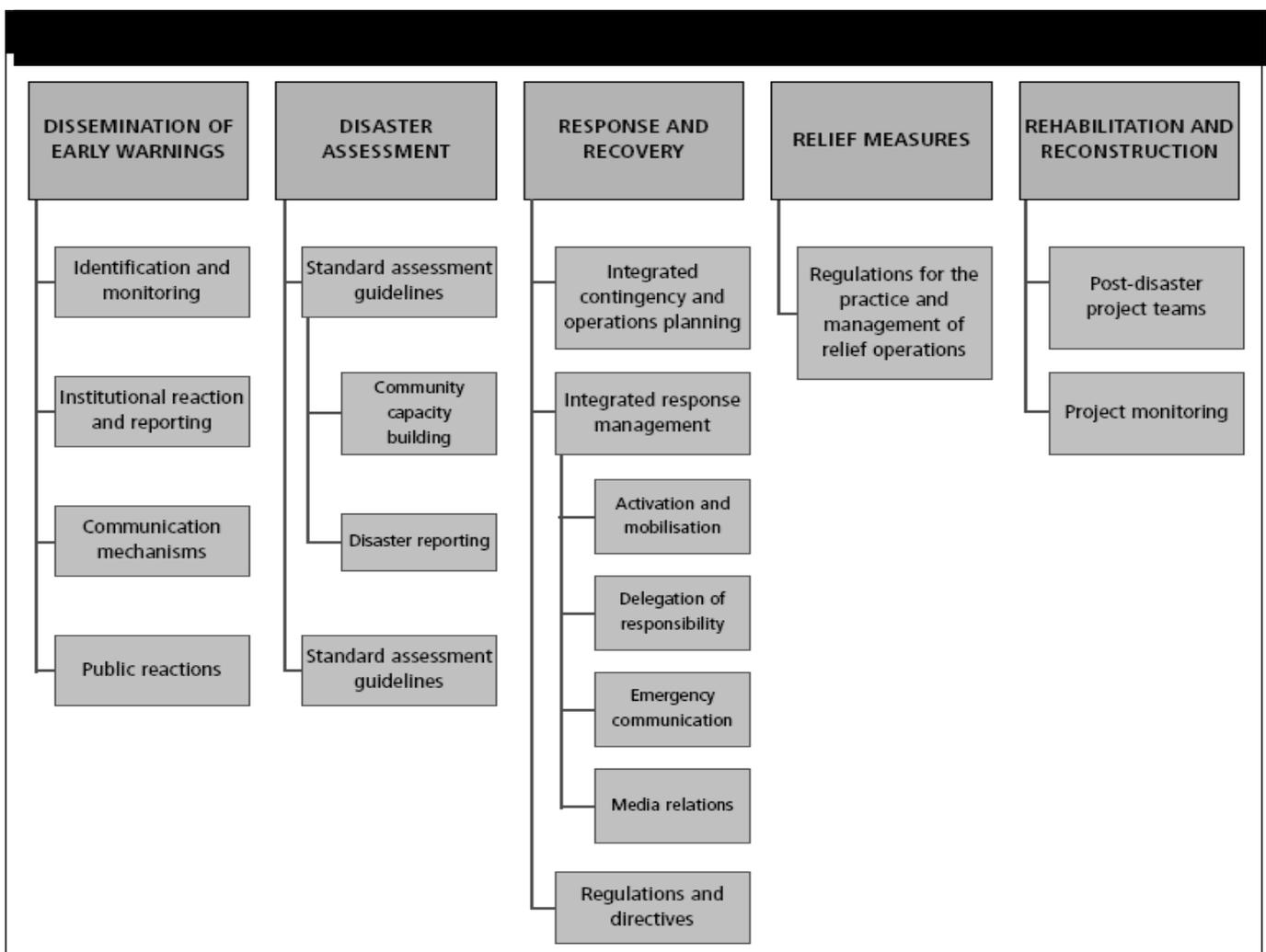


Figure 3: Disaster Response and Recovery Process

7.3. Assessment, classification, declaration and review of a disaster

To ensure immediate and appropriate response and relief actions when significant events or disasters occur, or are threatening to occur, clear guidelines for the measures that have to be taken need to be established, as shown in Table 6 below.

Table 6: Roles and responsibilities of stakeholders

Stakeholder	Roles and Responsibilities
CoJ Office of the City Manager and Head of Department: Public Safety	Provision of strategic and administrative support and services to delegated functions in the execution of the Disaster Management Amendment Act, Act 16 of 2015 in response to disaster incidents.
CoJ Disaster Management Centre	<ul style="list-style-type: none"> • Ensuring that disaster management operational plans from relevant City departments and MOEs are developed and implemented in a uniform and integrated manner. • Develop the database of stakeholders/ role players • Compile required reports to relevant internal and external level stakeholders • Verifying availability of resources from relevant stakeholders and supply systems in health and other sectors and capacity thereof • Monitoring the situation, determine if supply of resources in designated facilities and identified areas are adequate • Ensuring that dissemination of information is accurate and updated constantly • Mapping and plotting • Be on standby to respond to secondary or other disaster incidents • Conduct damage and needs assessments of the effects when there are disaster incidents • Provide emergency relief to victims • Coordinate response actions • To coordinate accommodation venues for emergency (e.g. halls, community church etc.)
CoJ Public Safety	<ul style="list-style-type: none"> • Establishment of Joint Operations Command (JOC) structure for the City of Johannesburg.

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Ensure integrated stakeholder/resource coordination, mobilization and response in relations to: <ul style="list-style-type: none"> • Identifying high risk areas and vulnerable populations • Outreach and dissemination of information to build capacity of local entities and communities • Provision of emergency relief assistance where required (Homeless people, evacuees, etc) in collaboration with Social Development. • Enforcement of disaster management regulations in high risk areas (Malls/ shopping centres, transport hubs, critical facilities, informal settlements, SASSA pay points, recreational facilities) • Provision of security services and crowd management • Emergency medical assistance and response • Compliance to fire safety and building standards • Evacuation, emergency assistance, search and rescue, setting up of emergency evacuation centres
Provincial Disaster Management Centre	<ul style="list-style-type: none"> • Primarily responsible for ensuring that disaster risk management plans and response plans are developed and implemented in a uniform and integrated manner. • Provide emergency resources, when the Municipality cannot cope when using its own resources. • Liaise with National Disaster Management Centre on matters relating to CoJ Disaster Management Centre
Civil Relations and Urban Management (CRUM)	<p>Coordination of regional departmental response actions in relation to:</p> <ul style="list-style-type: none"> • Identifying shortcomings in service delivery and project execution and advice the line function to take the necessary management action to rectify such shortcomings. • Managing all aspects of service delivery within the regions and ensuring compliance with service delivery improvement plan. • Facilitate and establish short- and medium-term needs and priorities of wards and communities within the regions.

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Monitoring maintenance within the wards and shortcomings in the standards of service delivery. • Ensure departments deliver services as per agreed plan of action. • Provide a focal point for information between the CoJ Disaster Management JOC and community during disaster response. • Support the implementation of Disaster Management Operational Plan.
CoJ Department of Health	<p>Interrupt human-to-human transmission including reducing secondary infections among close contacts and health care workers, preventing transmission amplification events, and preventing further international spread. Achieved through a combination of public health measures, such as:</p> <ul style="list-style-type: none"> • Identification of public and private health facilities. • Rapid identification, diagnosis and management of the cases • Identification and follow up of the contacts, • Participate in preparing isolation facilities to manage sick passengers and transport them to designated health facilities. • Infection prevention and control in health care settings, implementation of health measures for travelers • Raise awareness to communities • Strengthen capacity to undertake surveillance • Establishment of teams for contact tracing and collection of samples: Training to increase capacity for testing • Training of Community Health Worker (CHW) to assist with education and contact tracing, CHW teams focusing on high density and high-risk areas • Identification of sites for quarantine and self-isolation for people who cannot self-isolate at home • Infection control measures being instituted at all health facilities • Identify facilities to set up temporary isolation / quarantine sites
South African National Defence Force	<ul style="list-style-type: none"> • Release its personnel to a national Organ of State for rendering of emergency services.

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Assist with the movement of persons and goods to and from or within the disaster stricken or threatened area(s). • Deployed in various capacities in order to execute a broad plan of urban and rural operations by assisting with resources. • Provide medical assistance • Work with other health practitioners in various fields • Support the South African Police Service (SAPS) • Assist with the search and rescue
<ul style="list-style-type: none"> • CoJ Group Communication and Marketing • Print and Electronic Media Houses 	<ul style="list-style-type: none"> • Use two-way channels for public information sharing such as hotlines and social media • Responsive, empathic, transparent and consistent messaging in local languages through reliable sources of information. • Provide electronic and print media platform for the dissemination of regularly updated information and early warning signals through central communication/ group communication, using community-based networks and influential individuals.
CoJ Emergency Management Services	<ul style="list-style-type: none"> • Establish dedicated and equipped teams and ambulances to transport suspected and confirmed cases. • General Rescue • Order evacuation of area if necessary • Provides search and rescue services • Provides medical and first aid services • Provides ambulance transportation for the infected patients • Fire fighting • Hazmat Services • EMS USAR TEAM- search and rescue • PIER - Public Awareness, Education and Training • Fire Safety: conduct inspections to ensure compliance with EMS by-laws and enforce National Building Regulations
Johannesburg Metropolitan Police Department (JMPD)	<ul style="list-style-type: none"> • Provides safety and security • Traffic control management • Provide escort services • Enforce municipal by-laws

Stakeholder	Roles and Responsibilities
CoJ Department of Community Development	<ul style="list-style-type: none"> • Ensure up-to-date information is available on departmental resources that could be utilized for disaster management purposes (i.e. capacity and facilities at venues/sites for temporary shelters). • Provision of council facilities for temporary emergency shelter (Community halls and recreational facilities)
CoJ Department of Economic Development	<ul style="list-style-type: none"> • Enhance collaboration with public and private sector stakeholders. • Ensure business regulation, compliance and enforcement of the informal trade sector. • Facilitate the creation of an enabling environment that attracts investment
CoJ Development Planning	<ul style="list-style-type: none"> • Ensure efficient building control • Building Law enforcement • Establish and maintain building plan records and document management
CoJ Group Corporate & Shared Services	<p>Finance:</p> <ul style="list-style-type: none"> • Review supply chain control and management system for medical and other essential supplies. • Review procurement processes for medical and other essential supplies and encourage local sourcing to ensure sustainability. • Assist Directorates in processing applications for additional disaster management funding needed due to unforeseen circumstances. • Monitor regular reporting on emergency disaster management expenditure authorized for any of the directorates. • Monitor funds approved in the budget, to be used for disaster management purposes within the department's directorates. <p>Human Resources:</p> <ul style="list-style-type: none"> • Process, manage and keep updated essential records on any recruited disaster management volunteers for the various directorates of the department. • Coordinate disaster management training of departmental staff.

Stakeholder	Roles and Responsibilities
	<p>Administration</p> <ul style="list-style-type: none"> • Provide additional administrative support during proactive and reactive disaster management operations involving any of the directorates. • Process any legal matters following disaster management actions taken or projects implemented <p>Project Management</p> <ul style="list-style-type: none"> • Monitor disaster management projects being implemented by any of the directorates and report thereon to the Disaster Management Centre, at predetermined intervals. • Provide the disaster management communication link between the department and other municipal services.
<p>CoJ Environmental Health Department</p>	<ul style="list-style-type: none"> • Identification, evaluation, monitoring and prevention of water pollution • Coordinate the monitoring of vector control • Coordinate the actual and potential outbreak of epidemics due to environmental health hazards. • Coordinate the implementation of projects aimed at greater awareness and preparedness of communities on environmental health risk issues. • Coordinate the hygienic preparation of emergency food supplies and monitor the quality of stocks used • Monitor and ensure that the emergency water supply is available and potable. • In conjunction with Waste Management, monitor and address waste collection and disposal that could pose health risk. • Advice and monitor sanitation measures during and after a disaster (i.e. toilets, washing and laundry facilities). • Monitor the collection and preparation of bodies and facilities used for mass disposal.
<p>CoJ Department of Housing</p>	<ul style="list-style-type: none"> • Coordination for provision temporary shelters for the homeless • Identification and profiling of vulnerable sites/ communities (hostels, informal settlements and homes for senior citizens) • Identification of land for emergency housing

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Assist to provide secure shelters for the victims
CoJ Department of Social Development	<ul style="list-style-type: none"> • Aid with social relief • Ensure the fulfillment of basic needs of the homeless in temporary shelters • Provide counseling • Provide burial social assistance • Prepare special programs for the rehabilitation of affected communities.
CoJ Department of Transport: Rea Vaya, Metro Bus and Fleet Management Department	<ul style="list-style-type: none"> • Transportation of homeless persons to temporary emergency shelters • Ensure provision of transport solution to essential service workers • Transportation of resources to various required areas.
CoJ Occupational Health and Safety	<ul style="list-style-type: none"> • Ensure overall health and safety of all employees • Ensure provision of PPE • Develop and provide procedures for employees
Joburg Property Company (JPC)	<ul style="list-style-type: none"> • Leasing and maintaining of Council owned properties and sites • Development of properties • Letting (including outdoor advertising) • Disposal and acquisition of properties • Servitudes, encroachments and access rights • Provides financial and accounting services
CoJ Johannesburg Road Agency (JRA)	<ul style="list-style-type: none"> • Grading and gravelling the road • Road resurfacing • Bridge management • Storm water management • Desludging of drainage system • Maintenance and closure of roads • Road markings and signs
Joburg Social Housing Company (JOSHCO)	<ul style="list-style-type: none"> • Refurbishment, upgrade and management of hostels • Purchasing and rehabilitating buildings • Development of social rental housing • Refurbishment, housing management • Create different market segment

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Development and management of student accommodation
CoJ Johannesburg Water	<ul style="list-style-type: none"> • Be the primary agency responsible for water provision. • Provision of water tankers and tanks in regions where there is water shortage • Provision of chemical toilets in most vulnerable areas where sanitation challenges have been identified.
<ul style="list-style-type: none"> • CoJ City Power • ESKOM 	<ul style="list-style-type: none"> • Repair and maintenance of electricity network. • Electricity supply • Electrification • Conduct risk assessments • Conduct awareness campaigns • Provide bulk electricity
CoJ Corporate GIS	<ul style="list-style-type: none"> • Capturing, updating and processing information • Developing maps • Plotting • Conduct disaster risk assessment on climate change
CoJ Legal Services	<ul style="list-style-type: none"> • Advise on legal matters. • Represent the City when there are litigations
Pikitup: CoJ Municipal Waste Management Entity	<ul style="list-style-type: none"> • Coordinate waste management services during disaster including the waste removal from temporary shelters. • Identification of suitable temporary refuse collection points for communities to use during a crisis. • Compile contingency plans to accommodate unforeseen large quantities of waste to be disposed of at existing landfill sites • Provide bulk containers at predetermined collection points during major disruptions of service. • Prepare and distribute community awareness information on safe storage and disposal of refuse during disaster incidents. • In conjunction with Environmental Health, monitor and institute remedial action necessary at illegal dumping areas that could pose a (major) health risk or to prevent the health risk from emerging. • Coordinate hazardous waste removal (safe storage and disposal)
City Parks and Zoo	<ul style="list-style-type: none"> • Allocation of gravesites

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Coordinate and prepare sites for the mass burial of deceased. • Identification and provision of open municipal spaces and parks should suitable venues be required for emergency housing/shelter.
South African Weather Service (SAWS)	<ul style="list-style-type: none"> • Share weather forecasts as part of ongoing monitoring weather conditions • Issuing of advisories, watches and warnings in relation to floods and other related incidents • Issuing of Flash Flood and Fire Danger Index (FDI) warnings
Department of Roads and Transport	<ul style="list-style-type: none"> • Back-up for transportation, in case the City cannot cope using its resources • Notifies relevant service providers along the route of incidents • Implementation of road safety procedures
Telecommunication companies	<ul style="list-style-type: none"> • Maintain and repair of communications services
Gauteng House of Traditional Leaders and <i>Izinduna</i>	<ul style="list-style-type: none"> • Imparting of indigenous knowledge to deal with the disaster. • Disseminating information to the community members through <i>Izinduna</i>.
Department of Agriculture and Environmental Affairs	<ul style="list-style-type: none"> • Arrange for vaccination and treatment of livestock and poultry. • Ensure availability of adequate supply of seeds, seedlings, fertilizers and pesticides. • Arrange for disposal of dead bodies of animals.
Department of Social Development/South African Social Security Agency (SASSA)	<ul style="list-style-type: none"> • Provide necessary help and assistance for social relief and socio-economic rehabilitation. • Ensure the fulfillment of basic needs. • Provide counseling to the victims. • Prepare special programs for the rehabilitation of affected Communities.
Department of Education	<ul style="list-style-type: none"> • Provide online resources for parents, caregivers and learners to support learning at home. • Provide school resources to be used as isolation and quarantine sites.
Department of Transport	<ul style="list-style-type: none"> • Provide road traffic management during disaster related incidents.

Stakeholder	Roles and Responsibilities
	<ul style="list-style-type: none"> • Identify safer/alternate routes • Rehabilitation of roads
Department of Home Affairs	<ul style="list-style-type: none"> • Controlling various ports of entry • Control issuing and revoking of VISAS • Screening and deportation of undocumented immigrants
South African Police Services (SAPS)	<ul style="list-style-type: none"> • Be the primary agency responsible for security, evacuation, emergency assistance, search and rescue, law and order, communication, setting up of emergency evacuation centers and shifting of people to relief camps.
ICASA	<ul style="list-style-type: none"> • Two-way radio applications and monitoring frequencies
Non-Governmental Organizations and Community-based organizations	<ul style="list-style-type: none"> • In collaboration with CoJ Disaster Management conduct awareness and capacity building programs, preparedness activities at community level • Assist with relief, reconstruction and rehabilitation measures
SA Council of Churches and Faith-based Organisations	<ul style="list-style-type: none"> • Provide counseling • Provide chaplaincy
South African National Roads Agency Limited(SANRAL)	<ul style="list-style-type: none"> • Finance, improve, manage, and maintain the national road network.

7.3.1. Assessment of a disaster

Uniform methods and guidelines for conducting rapid damage and needs impact assessment when significant events or disasters occur or are threatening to occur are critical tools for informed decision making. Typically; rapid damage and needs impact assessment would include 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.

Agencies tasked with primary responsibilities for coordinating specific activities associated with disaster response and relief efforts, such as emergency medical care, search and rescue, evacuation, shelter and humanitarian relief, must prepare operational guidelines for initial assessments of the immediate needs of those affected.

7.3.2. Classification of a disaster and the declaration of a state of disaster

With the exception of a security-related event, the responsibility for strategic co-ordination in responding to a local disaster or significant event which occurs or is threatening to occur rests with the Head of the CoJ DMC. The Head of the MDMC must then make recommendations to the Executive Mayor on whether a local state of disaster should be declared in terms of section 55 of the Disaster Management Act. The CoJ DMC must implement mechanisms and guidelines from the CoJ DMC to facilitate the rapid and effective processing of disaster classifications and declarations.

7.4. Disaster reviews and reports

Comprehensive reviews must be conducted routinely after all significant events and events classified as disasters. The findings will directly influence the review and updating of disaster risk management plans and will also serve as valuable training aids. The CoJ DMC is responsible for providing guidance on the review process. When conducting a review, the appointed review team must take into account local conditions, disaster risk management plans implemented prior to the significant event or disaster, and existing disaster risk management plans.

7.5. Regulation of relief measures

Relief operations following significant events and/or events classified as disasters must be coordinated, and relief assistance and donations equitably distributed. The CoJ DMC must adhere to the regulations to standardise and regulate the practice and management of relief operations as developed by the NDMC.

8. RECOVERY

The Sendai Framework; 2015 emphasizes that recovery, rehabilitation and reconstruction is a critical opportunity to integrate disaster resilience into development measures by building back better. In order to ensure a holistic approach to rehabilitation and reconstruction projects in the aftermath of a significant event or disaster, the municipal departments and entities tasked with primary responsibility for a known hazard must facilitate the establishment of project teams for this purpose. There must be measures to ensure that projects and programmes maintain a developmental focus. Project teams established must determine their terms of reference and key performance indicators and must report on progress to the CoJ DMC.

9. INFORMATION MANAGEMENT AND COMMUNICATION (ENABLER 1)

The objective of Enabler 1 is to guide the development of a comprehensive information management and communication system for the CoJ and establish integrated communication links with all disaster management role-players throughout the municipality. Integrated disaster risk management depends on access to reliable hazard and disaster risk information as well as effective information management and communication systems to enable the receipt, dissemination and exchange of information.

The systems and processes should:

- *Provide an institutional resource database, including a reporting and performance measurement facility;*
- *Facilitate information exchange between primary interest groups;*
- *Facilitate risk analysis, disaster risk assessment, mapping, monitoring and tracking;*
- *Guide and inform focused risk management and development planning and decision making;*
- *Facilitate timely dissemination of early warnings, public awareness and preparedness, especially for at-risk people, households, communities, areas and developments;*
- *Enable timely and appropriate 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 information;*
- *Facilitate education, training and research in disaster risk management; and*
- *Facilitate funding and financial management for the purpose of disaster risk management.*

The system must have the capabilities to acquire, sort, store and analyse data for the purpose of targeting information for primary interest groups. In addition, it must include GIS mapping and information display applications and standardised multimedia communication capabilities. The information management and communication system must include the establishment of communication links, which will enable the receipt, transmission and dissemination of information between those likely to be affected by disaster risks as well as other role-players and stakeholders involved in disaster management. In this regard, 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. The CoJ disaster management system must be compatible with the provincial and national system and must conform to the requirements of the NDMC, as shown in Figure 4.

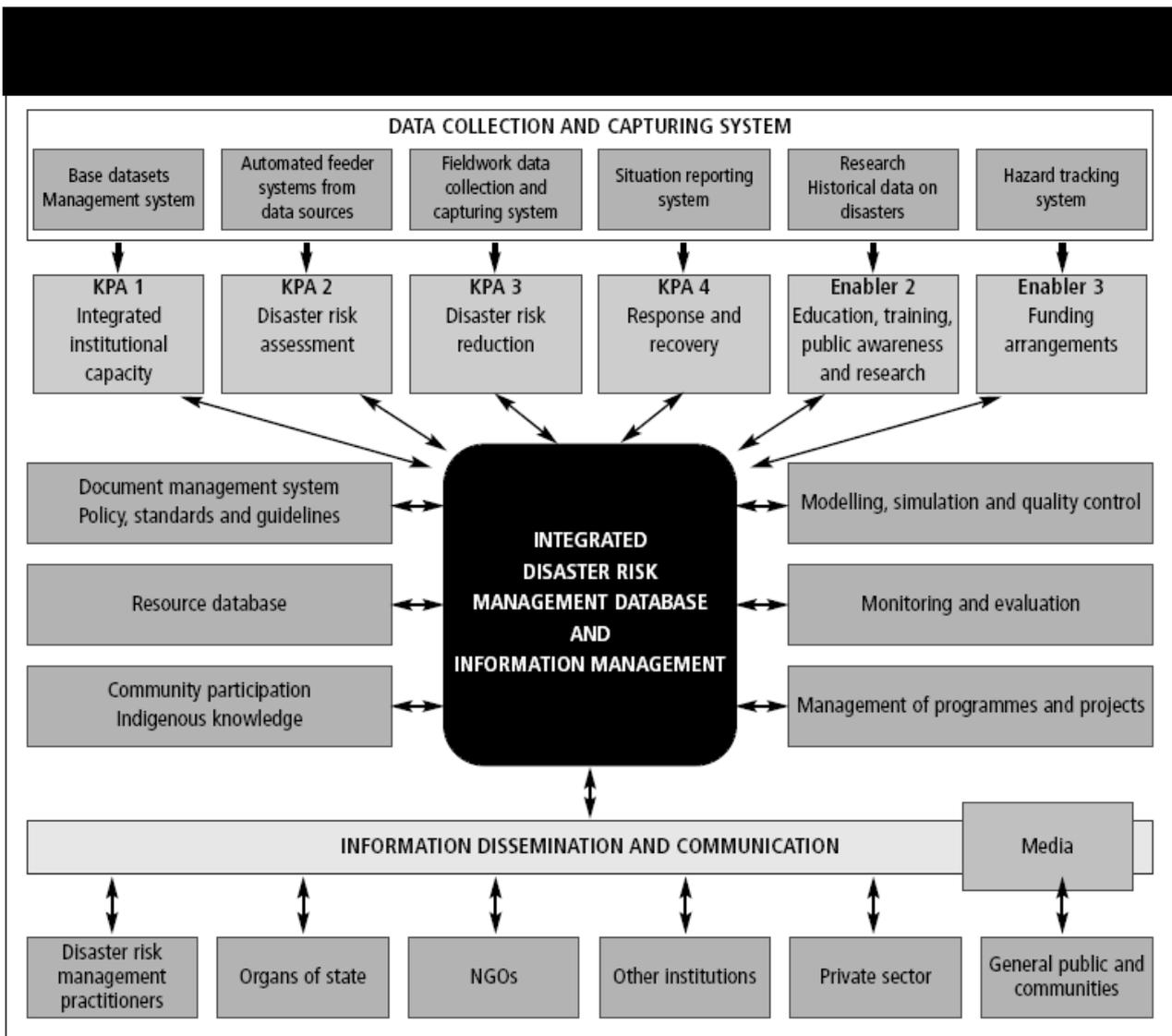


Figure 4: Model of an integrated disaster risk management information management and communication system

9.1. Quality management system (QMS)

A quality management system (QMS), which will form an integral part of the disaster risk management database, must be established. The purpose of the QMS is to ensure the quality of management and operational processes conducted by municipal departments and entities involved in disaster risk management. It will ensure the integrity and effectiveness of the information management and communication system on an on-going basis and in a planned and systematic manner.

The QMS must conform to the requirements of ISO 9001 – the standard for quality management systems set by the International Organisation for Standardisation (ISO). The

MDMC must establish, document, implement and maintain a QMS and continually improve its effectiveness in accordance with the requirements of ISO 9001.

A designated person within the MDMC must be assigned responsibility for performing the quality management function and must report directly to the Head of the Centre. All municipal departments and entities involved in planning and implementing disaster risk management projects, either as primary agencies or as members of project teams, must use the system to record and update their project plans.

9.2. Information dissemination and display system

To ensure accessibility and widespread use of disaster management data and information, effective information dissemination and display system needs to be developed and implemented by the NDMC in consultation with PDMCs and MDMCs. The identification and definition of the information needs of all role-players as well as the identification of the most appropriate channels of communication are an integral part of this process.

The CoJ MDMC must develop, implement and maintain an interactive website to provide controlled access to the information management system based on defined information needs. The public information system must make provision for two-way communication within communities by providing information on disaster risk reduction, preparedness, response, recovery and all other aspects of disaster risk management, is required. The public information and communication system must also provide communities and the media with the mechanisms for obtaining access to assistance when there is a disaster incident and for reporting important local information to the disaster management centre.

10. EDUCATION, TRAINING, PUBLIC AWARENESS AND RESEARCH (ENABLER 2)

The objective of Enabler 2 is 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. The enabler addresses the requirements for the adherence to the national education, training and research needs and resources analysis and a national disaster risk management education and training framework, the development of an integrated public awareness strategy, including effective use of the media, the development of education and training for disaster risk management and associated professions, and the inclusion of disaster risk management in school curricula. It also outlines mechanisms for the development of a disaster risk research agenda.

10.1. Municipal education, training and research needs and resource analysis and adherence to the national disaster risk management education and training framework

The education, training and research needs and resources analysis must be conducted to determine the needs of those involved in disaster risk management across sectors, levels and disciplines. The needs and resources analysis must include an audit of existing resources. The design of the analysis must be based on scientifically acceptable research principles and methods and not on perceived needs. The CoJ disaster risk management education programmes must be designed as part of the formal education system and must be in line with the national education, training and research needs and resources analysis (NETaRNRA), the national education and training framework and SAQA and NQF requirements.

10.2. Integration of disaster risk reduction education in primary and secondary school curricula (NQF levels 1–4)

Disaster risk reduction education must be integrated in primary and secondary school curricula. Schools should be regarded as focal points for raising awareness about disaster risk management and disaster risk reduction. The risk reduction component of disaster management education should be linked to broader education programmes on development and the environment.

10.3. Types of training to be offered by CoJ DMC

Training outside of the formal primary, secondary and tertiary education systems has a pertinent role to play in the drive to transfer skills and to capacitate disaster management stakeholders and other interested persons. Such training programmes may include accredited interventions and non-accredited programmes.

Training interventions may include:

- Modular courses;
- Short courses;
- Workshops;
- Conferences;
- Seminars;
- Mentorships;
- In-service training;
- Learnerships;

- Self-teaching, experiential training;
- Mass communication;
- Indigenous knowledge; and
- Drills, exercises and rehearsals.

The CoJ MDMC must make effort to utilise only registered training programmes, such as short courses and workshops with SETAs so that they can count as credits towards formal qualifications.

Training for officials and policy makers

Training programmes for government officials and policy makers by CoJ DMC must cover disaster risk reduction and other relevant areas, which may include development planning, hazard identification and assessment, communicable diseases, agriculture, participatory rural appraisal, applied climate science and GIS. Such training programmes must embrace disaster risk reduction and should be informed by the relevant indicative risk profile. The training of municipal councillors and officials should take place within the context of the national education and training guidelines provided by the Skills Development Act, 1998 (Act No. 97 of 1998), the Skills Development Levies Act, 1999 (Act No. 9 of 1999) and the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995). The provisions contained in these Acts will have a direct impact on the qualifications and career paths of officials involved in disaster risk management.

Training for communities

Training programmes for communities must focus on disaster risk awareness, disaster risk reduction, volunteerism and preparedness. Local indigenous knowledge, practices and values, need to be incorporated into training programmes aimed at local communities. Indigenous knowledge must also be harnessed and incorporated into needs analyses and course development processes.

Training of volunteers

Special training programmes must be developed for persons interested in volunteering their services in CoJ DMC. These programmes should address issues such as disaster risk assessment and reduction, greater awareness of risks and hazards and general preparedness and response. There should be training of community trainers in order for them to serve as 'force multipliers', subsequently, training others. In this regard, special consideration must be given to the costs of training, provision of protective clothing, travel expenses, insurance and

incentives. The MDMC must maintain an updated record of all volunteers trained in such programmes for submission to the NDMC for inclusion in the national database.

Training of trainers and facilitators

The CoJ DMC training programmes must facilitate the development of accredited trainers and facilitators in the field of disaster risk management so that they can transfer skills and knowledge to relevant organisations and or communities at risk. Such programmes must be in line with the education and training framework and informed by the NETaRNRA.

Learnership programmes

Disaster risk management learnerships programmes must be developed and promoted within the CoJ. These should include mentorship programmes that involve the transfer of skills from experienced officials to inexperienced learners. Such learnerships must be in line with SAQA and NQF requirements. Existing learnership programmes covering aspects of disaster risk management should also be explored, both for training purposes and to enhance disaster risk management learnerships.

10.4. Creating awareness, promoting a culture of risk avoidance and establishing good media relations

10.4.1. Integrated public awareness strategy

An integrated public awareness strategy must be developed and implemented by the CoJ to encourage risk-avoidance behaviour by all role-players, including all departments in the CoJ, and especially in schools and in communities known to be at risk. Such strategy is necessary for the promotion of an informed, alert and self-reliant society capable of playing its role in supporting and cooperating with the government in all aspects of disaster risk and vulnerability reduction. The Municipal Indicative Disaster Risk Profile and the NETaRNRA must inform the integrated awareness strategy. The awareness strategy must further support the strategic objectives of the CoJ.

The disaster management public awareness and information service will be a critical interface between the information management system, the emergency communication system, all municipal departments and entities involved in disaster risk management and the general public. This should also support the risk profile and identified critical vulnerable areas in the CoJ.

The development of a user-friendly public-access website with relevant and up-to-date information on disasters, disaster risk and key institutional role-players, is a critical component

of such an information service. The employment of qualified resource personnel to take responsibility for functions, for example, materials development, external consultation processes and liaison with the media (print, radio and television), will be necessary to ensure the success of the service.

In order to inculcate risk-avoidance behaviour by all stakeholders, public awareness campaigns aimed at raising consciousness about disaster risks, must provide information on how to reduce vulnerability and exposure to hazards. Such campaigns could include:

- *Organised and planned awareness programmes aimed at communities, officials, politicians and other stakeholders, using the media, posters, videos, publications and any other innovative means;*
- *Participation in planned conferences by the CoJ MDMC, with participation by the relevant intergovernmental relations structures;*
- *Imbizo meetings (the participation of volunteers at such meetings is recommended);*
- *Awareness campaigns conducted at least 30 days before a change of season or climate;*
- *Annual recognition and celebration of World Disaster Risk Reduction Day (the first Wednesday in October);*
- *Rewards, incentives, competitions and recognition schemes to enhance awareness of and participation in risk reduction activities;*
- *Dissemination of information to all role-players, especially those at risk, through the use of communication links and early warning systems.*

Public information should be disseminated through radio, television, print and electronic media and schools. In addition, information centres and networks should also be established.

10.4.2. Schools

The MDMC must seek to establish links with existing awareness creation programmes in schools for the purpose of disseminating information on disaster risk management and risk avoidance. The creation of programmes in schools, focusing on relevant and appropriate aspects of disaster risk management, must be encouraged. The CoJ MDMC must play an active part in engaging schools to ensure a practical approach to awareness programmes. School awareness programmes must be conducted, assessed and adapted on an annual basis.

10.4.3. Role of Media

Informed publicity about disaster management initiatives and achievements will increase public awareness and support. In order to achieve this, the CoJ MDMC must establish and manage ongoing relations with relevant local media through the Disaster Management Centre Media Liaison Officer, as well as the group communication division. Organised disaster risk reduction programmes through the media must be initiated in order to ensure public participation and support for such programmes. The objectives, benefits and major activities of disaster risk reduction programmes must be communicated to all role-players; specifically to communities that are directly affected by disaster risks.

The following has to be monitored on a regular basis:

- Positive and negative publicity;
- Effectiveness of media communications, especially in communities at risk; and
- Continuous research on the most effective method of communication within a particular community.

10.5. Research programmes, information and advisory services

The aims of a research programme, information and advisory services are to:

- Create additional applied knowledge and information on disaster risks;
- Provide access to disaster risk management and related information to relevant stakeholders and role-players; and
- Provide an organised and value-added advisory service to stakeholders.

10.5.1. Research

The Act calls for on-going research into all aspects of disaster management. The MDMC, through a process of consultation, must develop a strategic disaster risk reduction research agenda to effectively inform disaster risk management planning and implementation in the CoJ. Research initiatives should also be linked to the IDP processes of the municipality. Disaster risk reduction initiatives must be preceded by transparent research and careful planning and must provide evidence of the relevance of the planned intervention(s).

10.5.2. Information provision

In order to provide a comprehensive information service, the MDMC must undertake the following:

- Develop an information database;
- Establish a library or resource centre on disaster risk reduction; and

- Make provision for easy access to the information database.

10.6. Generation and dissemination of case studies and best-practice guides in disaster risk reduction

The promotion of a 'culture of prevention' is practically enabled by access to examples of best practice in disaster risk reduction. In addition to the adoption of measures outlined above the MDMC must develop as a component of its education, training and capacity-building strategy, and mechanisms for disseminating information on best practice in disaster risk reduction implemented globally. It includes the development of learning materials and support guides for different risk scenarios and contexts.

11. FUNDING ARRANGEMENTS FOR DISASTER RISK MANAGEMENT (ENABLER 3)

The objective of Enabler 3 is to establish mechanisms for the funding of disaster management in the CoJ. Given the provisions of the Act, funding arrangements must be designed in a manner that ensures that disaster management activities are funded adequately and in a sustainable manner.

11.1. Legislative framework for funding arrangements

The following primary legislation provides the context within which funding arrangements for disaster risk management should be designed:

- Constitution of the Republic of South Africa; Act. 108 of 1996
- Disaster Management Act; Act 57 of 2002
- Public Finance Management Act; Act 1 of 1999
- Municipal Finance Management Act; Act 53 of 2003
- Municipal Systems Act; Act 32 of 2000

11.2. Principles underpinning funding arrangements

Any funding arrangement must be consistent with the principles set out in the DMA and any other related legislation. It should be borne in mind that disaster risk management has certain unique characteristics which differ markedly from public services such as education and street lighting. Disasters are by their very nature unpredictable and require an immediate and decisive response. It is vital, therefore, that a balance is struck in the financing framework between the need for financial controls and oversight and the need to ensure that rapid response and recovery are not compromised. Section 214(2) (j) of the Constitution explicitly mentions 'the need for flexibility in responding to emergencies or other temporary needs' as

one of the criteria for the equitable division of nationally collected revenue among the three spheres of government.

11.3. Funding arrangements in the CoJ DMC

Each municipality department must include disaster risk management activities as part of their annual budget. All aspects and responsibilities described in the DM Plan must be taken into consideration when budgeting for disaster risk management. Each department and division should ensure that their budgets for disaster management are aligned with the strategic objectives of the CoJ. Such alignment must also aim towards the reduction of duplication and address the insufficient budget for disaster risk management. The funding model is described in Table 7 below.

Table 7: Funding model

Activity	Funding source	Funding model
Start-up activities (KPA1 and Enabler 1)	National and Provincial DMCs	Conditional grant for local government
Disaster risk management on-going operations (KPA 2 and 3)	National, Provincial and Local DMCs	Own departmental budget
Disaster risk reduction (KPA 2 and 3)	National, Provincial and Local DMCs	<ul style="list-style-type: none"> • Own departmental budget • Funding from PDMC and NDMC for special priority risk reduction projects
Response, recovery, rehabilitation and reconstruction efforts (KPA 4)	National, Provincial and Local DMCs	<ul style="list-style-type: none"> • Own budget for departments frequently affected by disasters • Access to central contingency fund, once threshold is exceeded • Conditional Infrastructure Grant: Municipal Infrastructure Grant (MIG)
Education, training, awareness campaign and capacity building programmes (Enabler 2)	National, Provincial and Local DMCs	<ul style="list-style-type: none"> • Own budget and reimbursement • Private sector, research foundations, NGOs and donor funding
<ul style="list-style-type: none"> • For disaster recovery and rehabilitation; Section 16 and 25 of the PFMA allow the Minister of Finance or relevant MEC to appropriate funds from their respective revenue funds for us in an emergency situation. • Similarly, Section 29 of MFMA allows the Mayor of the Municipality to authorise unforeseeable and unavoidable expenditure in an emergency. It must be ratified by the Council in an adjustment within 60 days of an expenditure incurred. 		

- Furthermore, Section 29 (2) (b) of the MFMA stipulates that unforeseeable and unavoidable expenditure may not exceed 1% of the budget. This curbs the amount of funds available to respond to emergencies.

12. TESTING AND REVIEW OF THE PLAN

There should be continuous monitoring and evaluation of the implementation of the disaster management plan; through the compliance checklist. Section 53(1)(g) stipulates that the plan must be regularly reviewed and updated.

13. CONTACT DETAILS

The contact list of relevant stakeholders has been developed and kept in a database at the Disaster Management Centre.

14. REFERENCES

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**CITY OF JOHANNESBURG
DISASTER MANAGEMENT PLAN**

This plan has been supported, adopted, approved and acknowledged by the following:

Mr W. Mazibuko
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Disaster Management Centre
Public Safety

Date: _____

SUPPORTED / NOT SUPPORTED

APPROVED/ NOT APPROVED

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Public Safety

Date: _____

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Date: _____