DEPARTMENT OF CO-OPERATIVE GOVERNANCE

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NATIONAL DISASTER MANAGEMENT CENTRE · SOUTH AFRICA ·

Deliverable 3.3

EFFECIENCY & GAP ANALYSIS OF NDMC FRAMEWORK (2005)

BID Nr: CoGTA (T) 13/2019

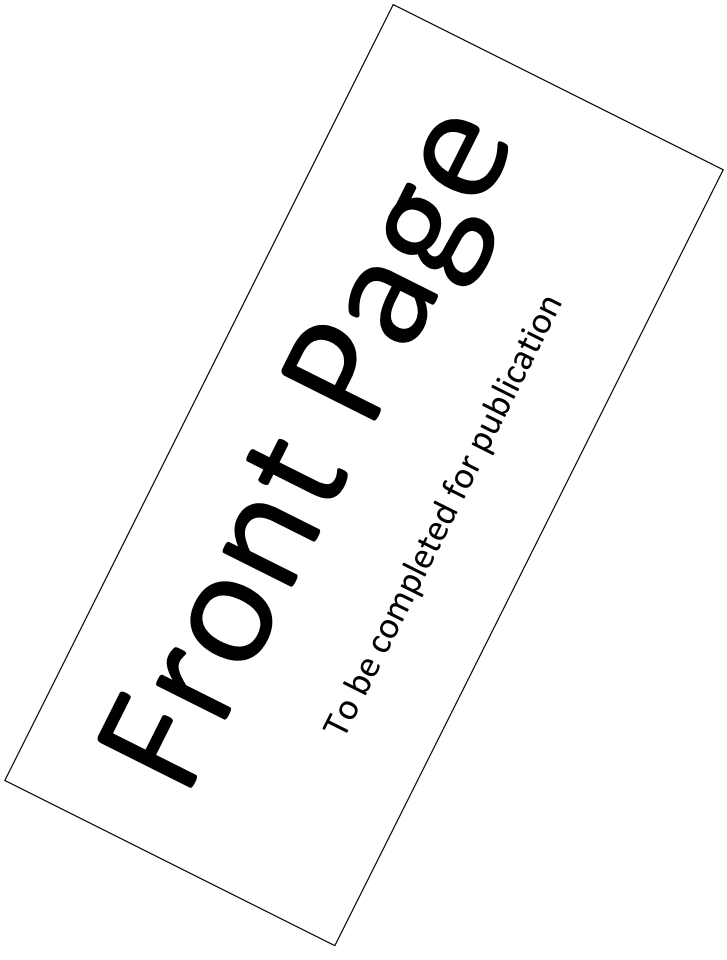
APPOINTMENT OF A SERVICE PROVIDER TO CONDUCT AN EFFECIENCY & GAP ANALYSIS OF NATIONAL DISASTER RISK MANAGEMENT FRAMEWORK, 2005 FOR A PERIOD OF 3 YEARS

March 2023

On behalf of Resilience Globale: _____

General Notice

National Disaster Management Framework 2023 –
Reviewed copy 1



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South Africa's Disaster risk management Context

South Africa faces increasing levels of disaster risk, mainly due to extreme weather events, population growth, urbanisation, land degradation, infrastructure deterioration, civil unrest and socio-economic challenges, which exacerbate the vulnerability of society and the environment. As a result, South Africa is exposed to a wide range of hazards, including weather related, with the most significant droughts and floods, fires, pandemics, animal diseases and technological threats, and social unrest, which trigger widespread hardship and devastation. In addition, South Africa's extensive coastline and proximity to shipping routes present numerous marine and coastal threats. Similarly, our shared borders with six southern African neighbours show both natural and human-induced cross-boundary risks and humanitarian assistance obligations in times of emergency. In addition to these natural and human-induced threats and despite ongoing progress to extend essential services to poor urban and rural communities, many people still live in conditions of chronic vulnerability. This is because they live in underserved, ecologically fragile or marginal areas and face recurrent natural and other threats ranging from drought to repeated informal settlement fires.

The promulgation of the Disaster Management Act (Act 56 of 2002) and the first disaster management framework published in 2005 set the tone for a new chapter in disaster risk management in South Africa. South Africa is a signatory to international agreements such as the Hyogo Framework for Action (2005) and the Sendai Framework for Disaster Risk Reduction (2015), yet, the Act and 2005 framework were not satisfactory implemented since its promulgation. The 2015 - 2019 multi-year drought that affected the whole country with a day zero threat for water supply in Cape Town (2015) and again in Nelson Mandela Bay (2022), the COVID-19 pandemic and the 2022 floods in KwaZulu-Natal exposed the vulnerability of society, and the challenge to fully implement the Act and the framework for increased resilience.

The Act provides for:

i. Integrated and coordinated disaster risk management policy that focuses on preventing or reducing disasters risks, mitigating the severity of disasters, preparedness, rapid and effective response to disasters, and post-disaster recovery.
ii. The establishment of national, provincial and municipal disaster management centres.
iii. Disaster risk management volunteers.
iv. Matters relating to these issues.

The Act recognises the wide-ranging opportunities in South Africa to avoid and reduce disaster losses through the concerted energies and efforts of all spheres of

government, civil society and the private sector. However, it also acknowledges the crucial need for uniformity in such diverse role players and partners.

SFDRR main objective

SFDRR 24(b),(d),(f),(n).

South Africa, as a signatory to the Sendai Framework for Disaster Risk Reduction (SFDRR), acknowledges and promotes the SFDRR main objective, as follows; *"Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience." Furthermore, this framework supports the SFDRR outcome as stated as follows; "The expected outcome is the substantial reduction of disaster risk and losses in lives, livelihoods and health and the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries."*

The national disaster risk management framework is the legal instrument specified by the Act to address such needs for consistency across multiple interest groups by providing a coherent, transparent and inclusive policy on disaster risk management appropriate for South Africa (section 7(1)). In this context, the national disaster management framework recognises a diversity of risks and disasters in southern Africa. Accordingly, it prioritises developmental measures that reduce the vulnerability of disaster-prone areas, communities and households. Also, in keeping with international best practices and the SFDRR objectives, the national disaster management framework emphasises the disaster risk reduction concepts of disaster prevention and mitigation as the core principles to guide disaster risk management in South Africa.

The national disaster management framework also informs the subsequent development of provincial and municipal disaster management frameworks and plans, which are required to guide action in all spheres of government.

Structure of the National Disaster risk management Framework Document

The national disaster risk management framework comprises four key performance areas (KPAs) and three supportive enablers required to achieve the objectives in the KPAs. As required by the Act, the KPAs and enablers are informed by specified goals and key performance indicators (KPIs) to guide and monitor progress. In addition, each KPA and enabler concludes with guidelines that the NDMC disseminates (or will disseminate) to support the implementation of the framework in all three spheres of government.

Key performance area 1 focuses on establishing the necessary institutional arrangements for implementing disaster risk management within the national, provincial and municipal spheres of government. It specifically addresses the principle of cooperative governance for disaster risk management. It also emphasises the involvement of all stakeholders in strengthening the capabilities of national, provincial and municipal organs of state to reduce the likelihood and severity of disasters. KPA 1 describes processes and mechanisms for establishing

cooperative arrangements with international role players and countries within southern Africa.

Key performance area 2 addresses the need for risk monitoring and disaster risk assessment to set priorities, provide early warnings, guide risk reduction action and monitor the efficiency of efforts. Disaster risk refers explicitly to the likelihood of harm or loss due to the impact of hazards or other external threats on vulnerable structures, services, areas, communities and households. KPA 2 outlines the requirements for implementing risk monitoring and disaster risk analysis and assessment by state organs within all government spheres.

Key performance area 3 introduces disaster risk reduction planning and implementation to inform developmentally-oriented approaches, plans, programmes and projects that reduce disaster risks. KPA 3 addresses requirements for aligning disaster risk management frameworks and planning within all spheres of government. It also gives particular attention to the planning for and integrating the core risk reduction principles of prevention and mitigation into ongoing programmes and initiatives.

Key performance area 4 presents implementing priorities concerning preparedness, disaster response, recovery, and rehabilitation. KPA 4 addresses requirements in the Act for an integrated and coordinated policy that focuses on preparedness and rapid and efficient response to disasters and post-disaster recovery. When a significant event or disaster occurs or is threatening, it is imperative that there is no confusion as to roles and responsibilities and the necessary procedures to be followed. KPA 4 describes measures to develop contingency plans to ensure effective disaster response, recovery and rehabilitation.

Enabler 1 focuses on priorities for establishing integrated and comprehensive information management and communication system for disaster risk management. More specifically, it addresses the information and communication requirements of each KPA and Enablers 2 and 3. In addition, it emphasises the need to establish integrated communication links with all disaster risk management role players in national, provincial and municipal spheres of government.

Enabler 2 addresses disaster risk management priorities in education, training, public awareness and research. This enabler describes mechanisms for developing education and training programmes for disaster risk management and associated professions and incorporating relevant aspects of disaster risk management in primary and secondary school curricula. In addition, it addresses requirements to promote and support a broad-based culture of risk avoidance through strengthened public awareness and responsibility. It also discusses priorities and mechanisms for supporting and developing a coherent and collaborative disaster risk research agenda.

Enabler 3 sets out the mechanisms for funding disaster risk management in South Africa.

1 Key Performance Area 1: Integrated Institutional Capacity for Disaster risk management

Objective

Establish integrated institutional capacity within the national sphere to enable the effective implementation of disaster risk management policy and legislation.

Introduction

SFDRR s6

"*Moreover, it is necessary to continue strengthening good governance in disaster risk reduction at the national, regional and global levels and improving preparedness and national coordination for disaster response, rehabilitation and reconstruction, and to use post-disaster recovery and reconstruction to "Build Back Better" supported by strengthened modalities of international cooperation'*.

The Disaster Management Act, 2002 (Act No. 57 of 2002), hereafter referred to as 'the Act', requires the establishment of a national disaster management centre (NDMC) responsible for promoting integrated and coordinated national disaster risk management policy. The Act gives explicit priority to the application of the principle of co-operative governance for the purpose of disaster risk management and emphasises the involvement of all stakeholders in strengthening the capabilities of national, provincial and municipal organs of state to reduce the likelihood and severity of disasters. The Act also calls for the establishment of arrangements for cooperation with international role players and countries in the region. This KPA focuses on the mechanisms that need to be established to give effect to these requirements.

Outline

i. Section 1.1: The establishment of effective arrangements for the development and adoption of integrated disaster risk management policy in South Africa.
ii. Section 1.2: Arrangements for the integrated direction and implementation of disaster risk management policy.
iii. Section 1.3: Arrangements required for stakeholder participation and the engagement of technical advice in disaster risk management planning and operations.
iv. Section 1.4: Arrangements for national, regional and international co-operation for disaster risk management.
v. The structure of KPA1 is shown in Figure 1.1

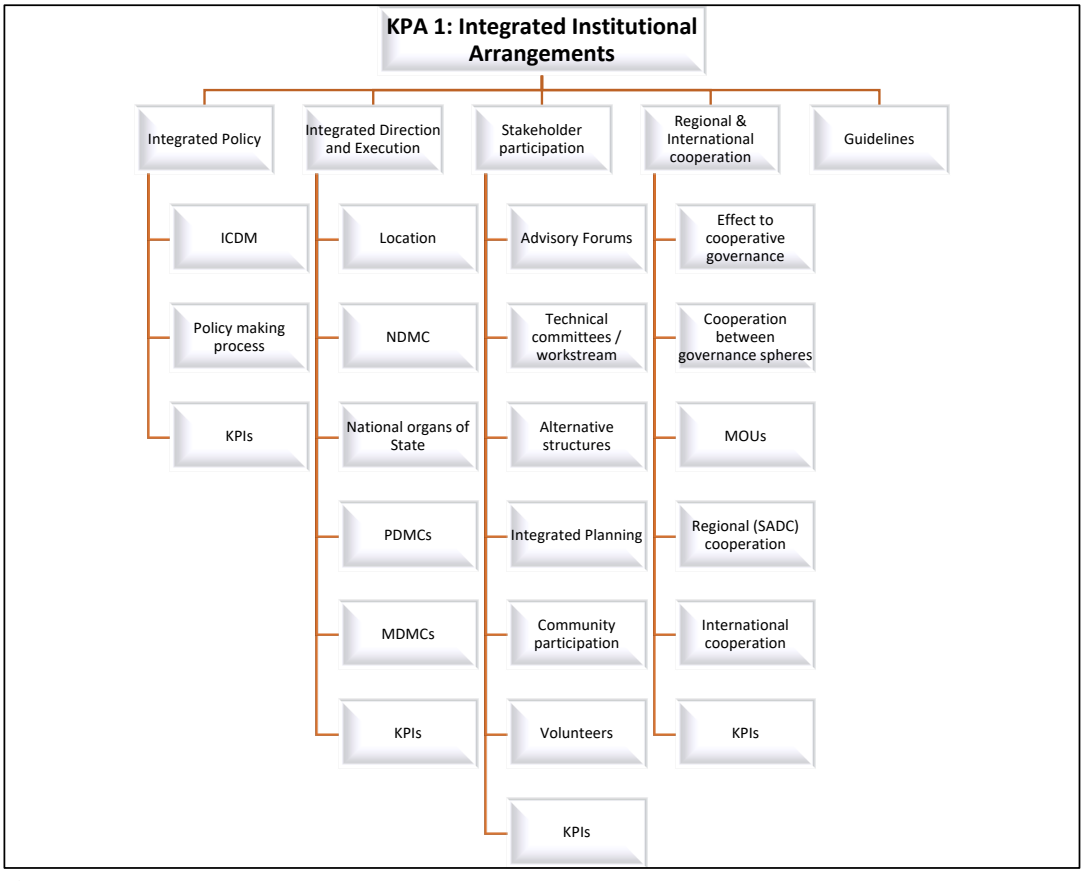


Fig 1.1: KPA1 structure

1.1.

SFDRR s3, s6, s17, s27 (e,g), s46 DMA s4

1.1 Arrangements for the Development and Adoption of Integrated Disaster risk management Policy

SFDRR s14

"Against this background, and in order to reduce disaster risk, there is a need to address existing challenges and prepare for future ones by focusing on: monitoring, assessing and understanding disaster risk and sharing such information and how it is created; strengthening disaster risk governance and coordination across relevant institutions and sectors and the full and meaningful participation of relevant stakeholders at appropriate levels"

1.1.1 Intergovernmental Committee on Disaster risk management

1.1.1

The NDMC is responsible for establishing effective institutional arrangements for the development and approval of integrated disaster risk management policy. One way of achieving this is through intergovernmental structures. In this regard, the Act calls for the establishment of an Intergovernmental Committee on Disaster Management (ICDM). The ICDM must be established by the President and include

SFDRR s28(d), s30(f), s34(b), 36(b), s46, s49 s 1(a–b), s 4(1)(a), s4(2)

representatives from all three spheres of government. It must be chaired by the Cabinet member designated by the President to administer the Act.

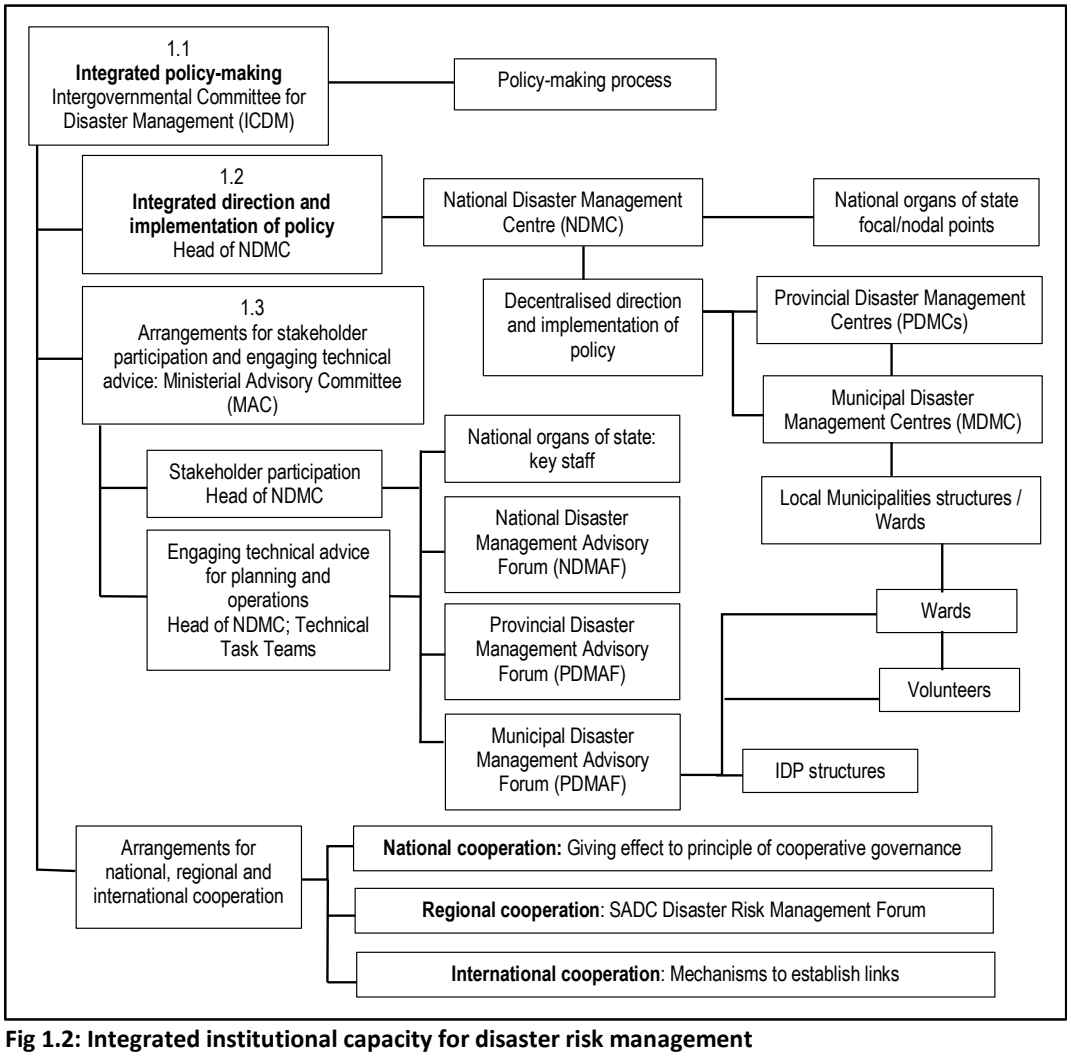


Fig 1.2: Integrated institutional capacity for disaster risk management

The ICDM must consist of Cabinet members involved in the management of disaster risk and response and the administration of other national legislation aimed at dealing with an occurrence defined as a disaster in terms of section 1 of the Act. It must include Cabinet members holding the following portfolios:

i. Agriculture, Rural Development and Land Affairs
ii. Defense
iii. Education
iv. Environmental, Fisheries and Forestry
v. Foreign Affairs
vi. Health
vii. Home Affairs
viii. Human Settlements, Water and Sanitation
ix. Minerals and Energy
x. National Treasury
xi. Provincial and Local Government

xii. Public Works
xiii. Safety and Security
xiv. Social Development
xv. The Presidency
xvi. Tourism
xvii. Transport

4(1)(b) Each province must be represented on the ICDM by the Member of the Executive Council (MEC) involved in disaster risk management or the administration of other national legislation aimed at dealing with an occurrence defined as a disaster in terms of section 1 of the Act and a representative of the House of Traditional Leaders. The MEC must be selected by the Premier of the province concerned.

Organised local government must be represented on the ICDM by members of municipal councils selected by the South African Local Government Association (SALGA).

s 4(1)(c)

The ICDM is accountable to Cabinet for:

s 4(3)(a) i. Ensuring that appropriate mechanisms and institutional arrangements are in place to give effect to co-operative governance.
s 4(3)(b) ii. Coordinating disaster risk management by establishing joint standards of practice between the spheres of government as well as between a particular sphere of government and relevant role players.

The ICDM must advise and make recommendations to Cabinet on issues relating to disaster risk management and the updating of the national disaster management framework.

s 4(3)(c)(ii) The ICDM should meet at least four times a year, and regularly if required for example during a national state of disaster. Circumstances prevailing at the time may determine whether the Minister:

i. Convenes a full meeting of the ICDM.
ii. Convenes a meeting of only those members directly involved with or affected by the business in hand.
iii. Refers the matter to the relevant Cabinet cluster committee/s.
iv. Opens the ICDM to Ministers who carry other relevant portfolios, such as Public Service and Administration, the National Intelligence Agency, the Independent Communications Authority of South Africa and Statistics South Africa.

s 7(2)(d) Apart from addressing disaster risk management issues in meetings of the ICDM, the Minister may also choose to raise disaster risk management issues in the Ministers and Members of the Executive Council (MinMEC) forum.

1.1.2 Policy Making Process

1.1.2 Recommendations on issues relating to disaster risk management policy must be sub- mitted to the NDMC for consideration before being submitted to the National Disaster Management Advisory Forum (NDMAF) (see subsection 1.3.1.1 below) and, thereafter, the ICDM.

s 5(3)(b)(i)
SFDRR s28(d), s30(f), s34(b), s36(b), s46, s49

To allow due consideration to be given to such recommendations, the NDMC must ensure that the financial, constitutional, human resource and interdepartmental implications of the recommendations are included in the documentation submitted to the NDMAF, the relevant Cabinet cluster committee/s (where necessary), and the ICDM.

In view of the multisectoral nature of disaster risk management matters, the NDMC must submit all memoranda containing policy proposals related to disaster risk management legislation and implementation to the relevant Cabinet cluster committee/s for assessment and further recommendations before sending them to the ICDM and thereafter Cabinet. Figure 1.2 illustrates the process for the submission of policy recommendations for disaster risk management.

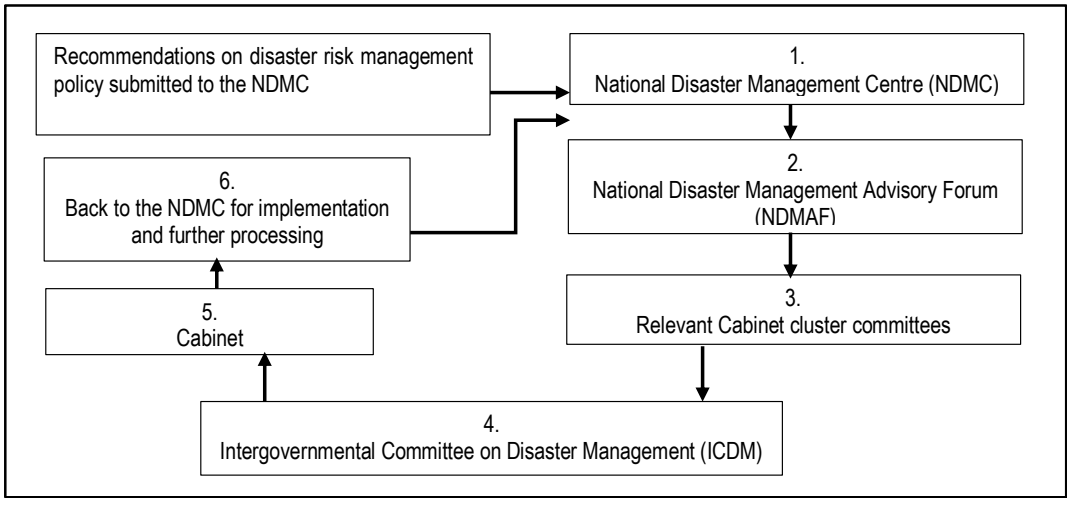


Fig 1.3: Policy-making process

1.1.3 Key Performance Indicators

i. The ICDM has been established and meet at least quarterly.
ii. The ICDM provides efficient strategic direction for Disaster Risk Reduction and Response.
iii. Mechanisms for developing and adopting disaster risk management policy have been established and put into operation.

1.2 Arrangements for Integrated Direction and Implementation of Disaster risk management Policy

The Act calls for the establishment of a national disaster management centre to achieve the objective of promoting an integrated and coordinated system of disaster risk management. The Act also requires the establishment of a disaster management centre in each province and metropolitan and district municipality.

1.2.1 District Development Model (DDM)

For the State to function and perform optimally and effectively, every State Organ has to perform its core functions well and work harmoniously with other State Organs and civil society. However, the "*pattern of operating in silos"* is a challenge which has led *"to lack of coherence in planning and implementation and has made monitoring and oversight of government's programme difficult".* The consequence has been poor delivery of services and diminished development impact on the triple challenges of poverty, inequality and employment.

The DDM consists of a process by which joint and collaborative planning is undertaken at local, district and metropolitan by all three spheres of governance, resulting in a single strategically focused "*One Plan*" for each of the 44 districts and eight metropolitan geographic areas in the country, wherein the district is seen as the "*landing strip".*

The DDM builds on the White Paper on Local Government (1998), which seeks to ensure that *"local government is capacitated and transformed to play a developmental role".* The White Paper says*, "developmental local government is a local government committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs and improve the quality of their lives".*

Developmental local government has four interrelated characteristics: *"maximising social development and economic growth; integrating and coordinating; democratising development; and leading and learning".* For local government to advance this, the Constitution calls on *"national and provincial governments [to] support and strengthen the capacity of municipalities to manage their affairs".*

Therefore, the model is a practical Intergovernmental Relations (IGR) mechanism to enable all three spheres of government to work together, with communities and stakeholders, to plan, budget and implement in unison.

In so doing, state organs, especially at the municipal level, should improve service delivery and turn it into development opportunities and disaster risk reduction through localised procurement and job creation which *"promotes and supports local businesses, and that involves communities.*" This will also require national and provincial departments to provide implementation plans and budgets which address local challenges and developmental opportunities whilst aligning with national, regional, continental and global goals and objectives.

1.2.1.1 Objectives of the District Development Model

The main objectives of the DDM are to:

i. Coordinate a government response to challenges of poverty, unemployment and inequality, particularly amongst women, youth and people living with disabilities.
ii. Ensure inclusivity by gender budgeting based on the needs and aspirations of our people and communities at a local level.
iii. Narrow the distance between people and government by strengthening the coordination role and capacities at the District and City levels.

iv. Foster a practical intergovernmental relations mechanism to plan, budget, and implement jointly to provide a coherent government for the people in South Africa;
v. To solve the silo approach, duplication and fragmentation, to maximise impact and align plans and resources at our disposal through the development of "One District, One Plan and One Budget".
vi. Build government capacity to support municipalities.
vii. Strengthen monitoring and evaluation at district and local levels.
viii. Implement a balanced approach towards development between urban and rural areas.
ix. Exercise oversight over budgets and projects in an accountable and transparent manner.

1.2.1.2 District Development Model structure and institutional linkages

The DDM, at the national level, places the NDMC at the centre of the disaster management value chain and depicts the role each structure and organisation plays in meeting the delivery needs in terms of disaster risk management.

The national operating model also places the PDMCs in the centre of the disaster management value chain and depicts the role each structure and organisation plays in meeting the delivery needs of disaster risk management at the provincial level. The national and provincial operating model interface indicates how to achieve coordination in the vertical and horizontal parts of the disaster management value chain.

The DDM also places the MDMCs in the centre of the disaster management value chain and depicts the role each structure and organisation plays in meeting the delivery needs of disaster risk management at the municipal level. The provincial and municipal operating model interface indicates how to coordinate the vertical and horizontal linkages of the disaster management value chain.

The DDM and its institutional linkages are illustrated in Figure 1

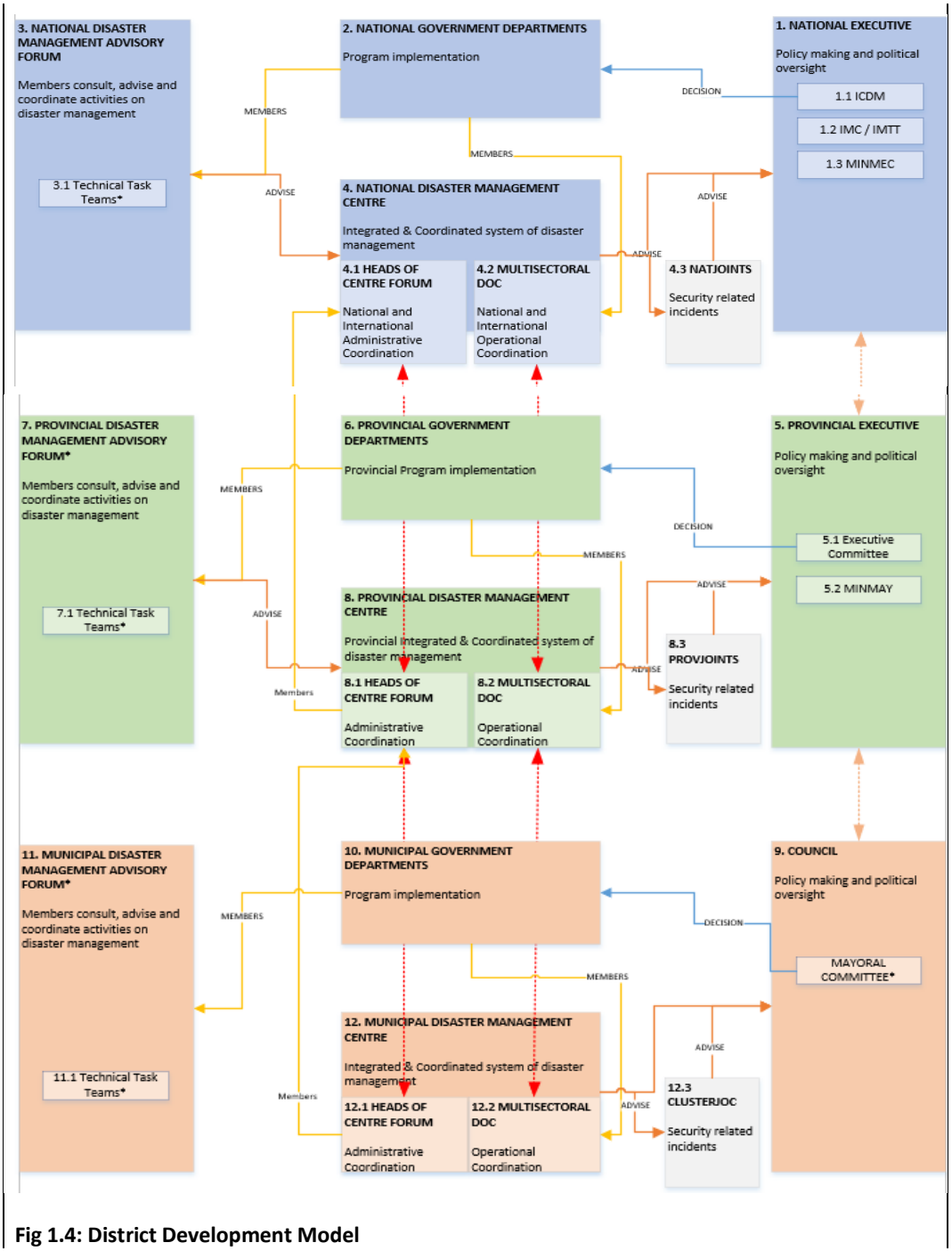


Fig 1.4: District Development Model

1.2.2

1.2.2 Location of the Disaster risk management Function and Planning

s7(2)(m),s 21

Coordinating the disaster risk management function through the government departments at national and provincial levels, within municipal administrations, and through integrated planning and programming requires an unbiased overview. Disaster Management Centres at all governance levels should be able to coordinate and effect their respective disaster management frameworks and align disaster risk management-related activities with government policy. Accordingly, this implies a centralised placing for the disaster management function, namely the Office of the President at the national level, the Office of the Premier at the Provincial level and the Office of the Municipal manager at the municipal level.

s 15(1)(b),s 18, s 25(3)(a–b),s 60

Disaster management centres must at all times maintain an unbiased overview and must have the authority, backed by political will, to fulfil their objectives and responsibilities concerning the improvement of disaster risk planning, preparedness, response and recovery across the various organs of state and sectoral role players with individual responsibilities for disaster risk management. The

s 3

efficiency with which a disaster management centre can perform these functions will depend on its ability to fast-track decision-making and minimise red tape.

The Act gives the NDMC and provincial and municipal disaster management centres the necessary legislative authority to compel organs of State and other role players to make relevant information available. However, exercising such authority could

s 3,s 4(1)

prove highly problematic from within a national, provincial or municipal line function department, which has a sectoral bias.

Suppose the NDMC and provincial and municipal disaster management centres are to achieve their objectives. In that case, they must be granted the necessary stature and be able to operate in robust and seamless environments. Such an environment might be achieved by establishing a South African disaster risk management authority or similar entity. However, as an alternative, the disaster management function should be placed at the highest authority in the different spheres of government.

Until such authority or entity is established, an interim measure would be to locate the NDMC at the highest authority in the different spheres of government. Given that the coordination of the functions of government departments and administrations falls within the ambit of the President's executive authority (Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)), a suitable location for the NDMC would be in the Presidency. This will demonstrate the level of the government's commitment to disaster risk reduction and the integration of disaster risk reduction into developmental initiatives and facilitate the fast-tracking

S9;s15

of decision-making and improved disaster risk management planning and implementation.

In the provincial sphere, provincial disaster management centres (PDMCs) must be located closest to the highest decision-making level in their respective provinces. They should have the authority to coordinate departments with individual responsibilities for disaster risk management. An interim measure in anticipation of

establishing a South African disaster risk management authority or similar entity is to locate the PDMC in the Office of the Premier of the relevant province.

The location of the disaster risk management function in the municipal sphere must be given careful consideration. Contrary to popular thinking in the past, disaster risk management is neither a line function nor an emergency service. Rather, it must be seen as a management and coordinating function within the municipal arena. Suppose municipal disaster management centres (MDMCs) are to fulfil their responsibilities. In that case, they need to be located closest to the highest level of decision-making and should be able to coordinate across departments involved with disaster risk management. Until a South African disaster risk management agency or entity is established, it is strongly recommended that the MDMC be located in the Office of the Municipal Manager.

1.2.3 National Disaster Management Centre

1.2.3

s12(2),s 15(3)(a–d)

The NDMC is nationally the principal functional unit for disaster risk management. In essence, the NDMC is responsible for guiding and developing frameworks for the government's disaster risk management policy and legislation, facilitating and monitoring their implementation, and facilitating and guiding cross-functional and multidisciplinary disaster risk management activities among the various organs of State.

The NDMC must exercise its powers and perform its duties:

s(10)(i),s 12(1)(a–b), s15

i. Within the national disaster management framework.
ii. Subject to the direction of the Minister responsible for the administration of the Act.
iii. Following the instructions of the Director-General of the department responsible for administering the Act.

s11

The President or Minister responsible for disaster risk management appoints the Head of the NDMC. The Head is responsible for ensuring that the NDMC exercises its powers, performs its duties as described in section 15 of the Act, and takes all decisions regarding the centre. The Head of the NDMC may delegate or assign the office functions to another official in the event that he or she is absent or otherwise unable to perform the office functions. The delegation or assignment of powers and duties to another official should be effected by the Director-General of the department responsible for administering the Act.

s 15(1)(d)

The NDMC acts in an advisory capacity to the ICDM and provides secretarial support for the ICDM and the NDMAF (see subsection 1.3.1.1 below).

1.2.3.1 Key responsibilities of the NDMC

The Act, supported by the SFDRR require the NDMC to:

1.2.3.1

s15(1–4),s21

i. Establish and maintain institutional arrangements that will enable implementation of the provisions of the Act.
ii. Implement measures to develop progressive disaster risk profiles to inform the planning and implementation of disaster risk reduction strategies.

iii. Implement and coordinate an integrated hazard and vulnerability monitoring and analysis system.
iv. Provides integrated early hazard warning supported with impact analysis.
v. Monitor progress with preparing and updating disaster risk management plans and strategies by organs of State involved in disaster risk management.
vi. Ensure the development, implementation and maintenance of disaster risk reduction strategies, which will result in resilient areas, communities, households and individuals.
vii. Monitor the integration of disaster risk reduction initiatives with development plans.
viii. Facilitate the development of response and recovery plans to ensure rapid and efficient response to disasters that are occurring or are threatening to occur and to mitigate the effects of those disasters that could not have been prevented or predicted.
ix. Provide efficient disaster response coordination.
x. Provide support to provincial and municipal disaster management centres to implement awareness programmes for disaster risk reduction in communities exposed to specific hazards.
xi. Assist with establishing mechanisms for creating public awareness to inculcate a culture of risk avoidance.
xii. Guide the development of a comprehensive information management and communication system.
xiii. Make provision for a national education, training and research strategy.
xiv. Develop, implement and maintain dynamic disaster risk management monitoring, evaluation and improvement programmes.
xv. Measure performance to evaluate the effectiveness of disaster risk management and risk reduction initiatives.
xvi. Monitor compliance with the Act, particularly sections 21, 56 and 57, and the key performance indicators outlined in the national disaster management framework.
xvii. Make recommendations on funding disaster risk management and initiate and facilitate efforts to make such funding available.
xviii. Lead and coordinate the development of pre-approved contingency plans for organs of State.
xix. Provide guidance on specific DRR and response and recovery responsibilities of organs of the State.
xx. Act as the national focal point for international organisations such as SFDRR, UNOCHA, UN-SPIDER and the International Charter, and other international organisations linked to disaster management.
xxi. Act as the regional focal point for SADC DRR and response activities.

1.2.3.2 Direction and operational capacity of the NDMC

The minimum criteria for the establishment and optimal performance of the NDMC are outlined below.

1.2.3.2

1.2.3.2.1 Head of the NDMC

The performance of the duties of the NDMC and the responsibilities of the Head of the NDMC will require excellent judgement, problem-solving and strategic decision-making skills, and sound managerial and financial acumen. Inevitably, independent decisions will have to be made under extremely stressful conditions when a disaster occurs or is threatening to occur. Critical decisions, made out of necessity in the spur of the moment, could have far-reaching effects on the economy, the lives of people, critical national infrastructure and property, and the environment.

1.2.3.2.1

s12, s15(1)(b),

s23 The diverse and complex nature of the disaster risk management function involves comprehensive consultation and cooperation - not only within the spheres of government but also nationally, regionally and internationally - requiring good communication skills and diplomacy.

Accordingly, the qualifications and experience of the incumbent must be commensurate with the requirements of the post. In addition, the Head of the NDMC must have suitably qualified experience and disaster risk management qualifications and be registered as a disaster management professional at DMISA.

1.2.3.2.2 Staffing

The NDMC must have suitably qualified disaster risk management and other technical staff to perform the duties relevant to the national disaster risk management programmes' requirements. That includes, among other qualifications and expertise, disaster risk reduction specialists, disaster response coordination specialists, incident commanders, disaster risk scientist planners and information management scientists. The NDMC should have the flexibility and capacity to accommodate experts seconded from other organs of State and organisations. (Act 16 of 2015, S6 as amended from s13 of Act 57 of 2002)

1.2.3.2.2
S7
S10(2)

1.2.3.2.3 Minimum infrastructural requirements

S13 The minimum infrastructural requirements necessary to enable the NDMC (and provincial and municipal disaster management centres) to operate optimally are:

1.2.3.2.3

i. A functional disaster operation centre (DOC) for facilitating disaster risk management planning and operations and multidisciplinary strategic management and coordination of disaster operations.
ii. An integrated information management and communication system (see Enabler 1).
iii. A central communications centre, including the establishment and maintenance of a central 24-hour communications facility for reporting purposes as well as for managing the dissemination of early warnings and coordinating activation and response to significant events and disasters.
iv. A media and public information service that makes provision for two-way communication within communities and among individuals by providing information on disaster risk reduction strategies, preparedness, response, recovery and all other aspects of disaster risk management, as well as providing communities with the mechanisms for obtaining access to assistance in the event of an emergency and for reporting crucial local information to the relevant disaster management centre
v. An education, training and research facility.
vi. Adequate office accommodation and facilities for operational personnel.
vii. Facilities for virtual engagements.

s 19, s 20, s 21, s 23, s 25, s 26, s 27
s 17, s 18, s 19
s 16, s 17, s 20, s 22
s 16, s 17, s 22, s 23,
s 26, s 27

s 15(1)(h), s 20, s 22
s 13 Infrastructure must be established in accordance with national guidelines developed by the NDMC.

1.2.3.2.4 Technology

Technology is an essential element as part of the 4IR. The following are the minimum technological requirements for disaster management centres.

1.2.3.2.4

i. High-speed, reliable internet connection
ii. Direct technological linkages to partner organisations such as SAWS, SASA, DHSWS, DARDLR, CSIR and relevant partner organisations
iii. Well equipped virtual conference facilities
iv. GIS and other software required for analysis, mapping etc.
v. Inter-operable communication system and linkages to partner stakeholders

1.2.4 Roles and Responsibilities of National Organs of State

1.2.4 National departments must assess any national legislation applicable to their function in terms of section 2 of the Act and advise the NDMC on the State of such legislation.

s 2, s 7(2)(a), s 7(2)(e), s 19(b), s 19(d), s 25(1)(a–b) s 2(1)(b), s 7(2)(d), s 7(2)(f)

Based on the principle of auxiliary (using existing structures and resources), disaster risk management responsibilities must be integrated into the routine activities of the various sectors and disciplines within the relevant organs of State and their substructures. These responsibilities must be reflected in the job descriptions of the relevant role players, and appropriate key performance indicators must be provided.

s 19, s 20, s 21, s 25, s 56

In terms of the Act, each national organ of State must determine its role and responsibilities concerning disaster risk management in coordination with the NDMC and assess its capacity to adhere to the requirements of the Act, particularly regarding priorities for disaster risk reduction initiatives (see section 3.2 below) and for response and recovery. Such capacity must be supplemented, where necessary, by collateral support and the sharing of resources among organs of State, and by harnessing the capacity of the private sector and non-governmental organisations (NGOs). The parameters of such assistance must be clearly defined in memoranda of understanding.

s 7(2)(m), s 25(1)(a)(iv)

s 7(2)(f)(iii)

National organs of State shall participate and implement pre-approved contingency plans for different hazard scenarios in collaboration with the NDMC and other stakeholders. Pre-approved contingency plans should have the support of national and relevant departmental treasuries and decision-makers.

s 7(2)(d)(ii)

Key disaster risk and response stakeholders at the national level should institute a section focusing on DRR and, if applicable, disaster response and recovery. Key stakeholders are DOH, DHSWS, DOARDLR, DEFF, DSD, SANDF and SAPS. Within these sections, each organ of State should appoint an individual as a focal person for disaster risk management. Such an individual should have the necessary authority to decide on disaster-related issues and attend the DDMF meetings.

i. Each national organ of State must appoint an individual who will act as its focal or nodal point for disaster risk management and who will also be its representative on the NDMAF. This individual will be responsible for:
ii. Facilitating and coordinating the relevant department's disaster risk management arrangements and planning for disaster risk reduction, response and recovery.

iii. Ensuring that such arrangements and plans are consistent with the national disaster management framework.
iv. Facilitating the alignment of the arrangements and plans with those of other organs of State and other institutional role players.

S18

v. Integrating disaster risk management planning processes with national and provincial initiatives and Integrated Development Plans (IDPs) (see subsection 3.4 below).
vi. Regularly reviewing and updating disaster risk management plans.
vii. Ensuring that requests for information from the NDMC are responded to in terms of section 18 of the Act.

These responsibilities must be included in the job description of the relevant appointee, and appropriate key performance indicators must be included.

1.2.5 Provincial Disaster Management Centres

The Premier of each province must establish institutional capacity for disaster risk management in the province. Such arrangements must be consistent with national arrangements. In addition, they must provide the appropriate mechanisms to allow for the application of cooperative governance to facilitate intergovernmental and provincial interdepartmental relations for disaster risk management.

1.2.5

The PDMC is each province's primary functional unit for disaster risk management. A key responsibility of the PDMC is supporting the NDMC and the province's metropolitan and district disaster management centres. In addition, it must provide the link between national objectives and provincial and municipal disaster risk management activities and priorities.

The PDMC is responsible for coordinating and monitoring DRR programs in the province.

In the event of a hazard threat that leads to a disaster, the PDMC must coordinate and provide support and guidance to the relevant stakeholders, including MDMCs. In addition, it must mobilise provincial infrastructure and resources to support municipal disaster risk management resources.

1.2.5.1 Key responsibilities of the PDMC

The PDMC must maintain a strategic overview of disaster risk management projects and programmes in the province. Key responsibilities in this regard are described below.

1.2.5.1.1 Disaster risk reduction

The PDMC must:

1.2.5.1

i. Submit a disaster risk assessment for the province and disaster risk reduction plans to the NDMC.

s 33(1), 38(4)

ii. Identify provincial priorities for disaster risk reduction.

s 39(2)(b–c)

iii. Facilitate the development and preparation of provincial plans for disaster risk reduction.

s 33(1)

s 34(a)(i)

iv. Monitor progress with the preparation and regular updating of disaster risk reduction plans and strategies by provincial and municipal organs of State involved in disaster risk management in the province.

v. Institute joint standards of practice for disaster risk reduction in the province that are consistent with national standards.

s 28(1)

vi. Establish mechanisms to monitor and manage cross-boundary disaster risks within a province (between districts and between districts and metropolitan areas), as well as between a province and neighbouring provinces and countries, and enter into mutual.

vii. Assistance agreements for the purpose of disaster risk reduction management.

viii. Submit copies of its disaster risk management plans to the NDMC, neighbouring PDMCs and, where applicable, disaster risk management entities in neighbouring countries.

1.2.5.1.2 Disaster preparedness, response and recovery

s 33(4)

The PDMC must:

i. Develop a functional DOC able to coordinate provincial disasters.

ii. Coordinate provincial disaster responses.

iii. Provide support to MDMCs for response and recovery of local disasters.

iv. Facilitate the development and preparation of provincial plans for disaster response and recovery.

1.2.5.1.2

v. Develop provincial contingency plans for potential hazard threats.

vi. Submit copies of its disaster response contingency plans to the NDMC, neighbouring PDMCs and, where applicable, disaster response entities in neighbouring countries.

vii. Institute joint standards of practice for disaster preparedness, response and recovery management in the province that are consistent with national standards.

viii. Monitor and analyse hazard threats and vulnerable conditions in the province.

ix. Support national early warning systems.

x. Monitor and report to the NDMC provincial disaster impacts according to SFDRR targets.

1.2.5.1.3 Integrated development planning

The PDMC is responsible for:

i. Monitoring the inclusion of disaster risk management plans in IDP processes (see sub-section 3.4 below).

ii. Ensuring that IDP budgets make provision for disaster risk management.

1.2.5.1.3

Given these functions, it is imperative that the Head of the PDMC serves on the relevant provincial development planning structures and makes inputs into all development projects undertaken by the province.

s 34(a)(ii)

1.2.5.1.4 Capacity building, education, training and research

The PDMC must initiate and coordinate disaster risk management capacity building, education, training and research in the province, placing particular emphasis on developing community awareness programmes and promoting the incorporation of such programmes into school curricula.

1.2.5.1.5 Information management and communication

s 33(1)(c–d)

The PDMC must:

1.2.5.1.4

i. Establish an integrated information management and communication system that is consistent with arrangements established by the NDMC.

s 30(1)(h), s 30(1)(j), s 33(1)(iii)

ii. Ensure the establishment of a strategic inter-operable provincial emergency communication system compatible with emergency communication systems used nationally to enable communication between essential and emergency services for incident command and the management of joint operations.

iii. Establish a system (including emergency communication mechanisms) for receiving, reporting, evaluating and disseminating various forms of early warnings on a 24-hour basis to ensure that threatened communities can respond appropriately and take risk-avoidance measures when a disaster occurs or is threatening to occur in their areas.

1.2.5.1.5

iv. Develop the capacity and monitor and analyse hazard threats in the province.

v. Support municipalities with developing systems to monitor hazard threats at the municipal level.

s 32(1–2), s 34(a)(i–ii)

vi. Monitor vulnerable situations in the province with the support of MDMCs

s 16, s 32(1)(a)

vii. Act as a provincial reporting centre.

1.2.5.1.6 Monitoring and evaluation

The PDMC must establish mechanisms to monitor, measure and evaluate:

i. Disaster risks in the province

ii. Disaster risk management plans and activities by provincial and municipal organs of State.

s 16, s 32(1)(a)

iii. Copies of review and evaluation reports must be submitted to the NDMC.

iv. Monitor and report to the NDMC disaster impacts as per SFDRR

v. The PDMC must also monitor compliance in the province with the key performance indicators outlined in the disaster management framework.

1.2.5.1.6

1.2.5.1.7 Operational capacity of the PDMC

s 34

Arrangements must be made to establish the operational capacity of PDMCs to enable the Act's implementation in the provincial sphere. These arrangements must be consistent with those of the NDMC. Operational capacity includes:

i. Appointment of qualified and experienced staff

ii. Infrastructure and technology for daily functionalities

iii. Well-equipped and operational DOC

iv. Access to technology and IT systems

v. Fast internet connections

vi. Inter-operable communication facility

1.2.5.1.7

vii. Standardised information management system as per NDMC guidelines

s 34(a)(ii)

1.2.5.2 Head of the PDMC

The performance of the duties of the PDMC and the responsibilities of the Head of the PDMC will require excellent judgement, problem-solving and strategic decision-making skills, and sound managerial and financial acumen. Inevitably, when a provincial disaster occurs or is threatening to occur, independent decisions will have to be made under extremely stressful conditions. Critical decisions, which of necessity would have to be made on the spur of the moment, could have far-

reaching effects on the provincial economy, the lives of people, critical infrastructure and property, and the environment.

1.2.5.2 The diverse and complex nature of the disaster risk management function involves wide consultation and cooperation - not only within the spheres of government but also nationally, regionally and internationally - requiring good communication skills and diplomacy.

Accordingly, the qualifications and experience of the incumbent must be commensurate with the requirements of the post. In addition, the Head of the PDMC must have suitably qualified disaster risk management qualifications and be registered as a disaster manager professional with DMISA.

1.2.5.3 Staff

Technical staff in support of the PDMC should include, among other expertise, disaster risk reduction specialists, disaster response coordination specialists qualified as incident commanders, disaster risk scientist planners and information management scientists. Their core responsibility is to perform the duties relevant to the provincial disaster risk management objectives and programmes' requirements.

1.2.5.3 The PDMC should have the flexibility and capacity to accommodate experts seconded from other organs of State and organisations. (Act 16 of 2015, S6 as amended from s13 of Act 57 of 2002)

1.2.5.4 Infrastructural requirements

The infrastructural arrangements of PDMCs must accord with national guidelines for the minimum infrastructural requirements for disaster management centres developed by the NDMC (see subsection 1.4.2.2 above).

1.2.5.5 Technological requirements

Considering the important role of technology in the modern era, PDMCs should adhere to the following:

1.2.5.4

i. Reliable, fast internet connectivity.
ii. Capacity for virtual meetings and training.
iii. Direct connectivity to disaster risk and response stakeholders at the provincial level, such as regional offices of DHSWS, SAWS, SASA (national), provincial stakeholders and MDMCs.

29(1), s 30

iv. Required hardware and software provisions for both GIS and other specialised programs to enable disaster impact monitoring in line with guidelines from the NDMC.

1.2.5.5

s 29(1), s 30

1.2.6

1.2.6 Municipal Disaster Management Centres

s44; s48

The Council of each metropolitan and district municipality must establish institutional capacity for disaster risk management in its area. Such arrangements must be consistent with national and provincial arrangements. In addition, they must provide the appropriate mechanisms for applying cooperative governance to facilitate intergovernmental and municipal interdepartmental relations and community participation in disaster risk management.

The MDMC is the primary functional unit for disaster risk management in metropolitan and district municipalities. It must provide direction for implementing disaster risk and response policy and legislation and integrating and coordinating municipal disaster risk management activities and priorities to ensure that national and provincial objectives are achieved. In addition, a key function of the MDMC is to provide support to the NDMC and the relevant PDMC.

In the event of a disaster occurring or threatening to occur, the MDMC must provide support and guidance to the relevant sub-administrative units in the case of metropolitan municipalities and local municipalities in the case of district municipalities. Furthermore, it must mobilise and coordinate municipal infrastructure and other resources to support local disaster risk management resources.

Institutional arrangements for disaster risk management in metropolitan and district municipalities must be consistent with the national disaster management framework and the applicable provincial disaster management frameworks.

1.2.6.1 Key responsibilities of the MDMC

1.2.6.1

The MDMC must:

i. Establish and maintain institutional arrangements that will enable the implementation of the Act.
ii. Implement measures to develop progressive risk profiles to inform municipalities' IDP processes for disaster risk reduction and to determine the effectiveness of specific disaster risk reduction programmes and projects undertaken.
iii. Facilitate and regularly update disaster risk assessments within the municipal area
iv. Supply the relevant PDMC with risk assessment results.
v. Facilitate the development, implementation and maintenance of disaster risk reduction strategies that will result in resilient areas, communities, households and individuals.
vi. Monitor the integration of disaster risk reduction initiatives with development plans.
vii. Develop and implement a comprehensive information management and communication system consistent with arrangements established by the NDMC and PDMCs.
viii. Facilitate the development of response and recovery plans to ensure a rapid and effective response to disasters that are occurring or are threatening to occur and to mitigate the effects of those disasters that could not have been prevented or predicted.
ix. Establish a functional DOC with the capacity to coordinate disaster response and recovery by applying the principles of incident command.
x. Leading coordination of disaster response actions.

xi. Facilitate and coordinate the development of integrated contingency plans for disaster response and recovery.

xii. Submit copies of its disaster risk management plans to the NDMC, the PDMC, neighbouring disaster management centres and, where applicable, disaster risk management entities in neighbouring countries.

xiii. Develop and implement mechanisms for creating public awareness to inculcate a culture of risk avoidance.

xiv. Facilitate and promote disaster risk management education, training and research in the municipality.

xv. Implement and maintain dynamic disaster risk management monitoring, evaluation and improvement programmes.

xvi. Measure performance to evaluate the effectiveness of disaster risk management and risk reduction initiatives and submit copies of evaluation reports to the NDMC and the PDMC.

xvii. Monitor compliance in the municipal area with the key performance indicators outlined in the disaster management framework.

xviii. Make recommendations regarding funding disaster risk management in the municipal area and the initiation and facilitation of efforts to make such funding available.

xix. Monitor and report disaster impacts according to SFDRR targets to the relevant PDMC.

1.2.6.2

1.2.6.2 Integrated development and spatial planning

SFDRR s30(d)

"Promote the mainstreaming of disaster risk assessment, mapping and management into rural development planning and management of, among other things, mountains, rivers, coastal flood plain areas, drylands, wetlands and all other areas prone to droughts and flooding, including through the identification of areas that are safe for human settlement and at the same time preserving ecosystem functions that help reduce risks".

s7(2)(d),s7(2)(f) s7(2)(d), s7(2)(f)s7(2)(d,f) s 7(2)(d), s 7(2)(f) s 47(1)(c–d)

Given the inextricable relationship between disaster and development, the heads of MDMCs and those individuals assigned responsibility for disaster risk management in local municipalities must serve on the relevant IDP structures. The heads of MDMCs roles are to sensitise the planners about potential disaster risks based on geographical hazards and ensure principles of DRR build into IDPs.

1.2.6.3

1.2.6.3 Operational capacity of the municipal disaster management centre

Arrangements must be made to establish the operational capacity of metropolitan and district disaster management centres to implement the Act in the municipal sphere. These arrangements must be consistent with those of the NDMC and PDMCs (see subsections 1.3.1 and 1.4.1 above).

All departments within metropolitan and district municipalities and all local municipalities must identify appropriately qualified staff to serve as their disaster risk management focal or nodal points (see subsection 1.4.3 above).

Disaster risk management responsibilities must be included in the job descriptions of all key personnel identified in municipal disaster management frameworks.

1.2.6.4

1.2.6.4 Staff

The Head of the MDMC must have suitably qualified disaster risk management qualifications and be registered as a professional disaster manager at SAQA. Technical staff should include, among others, disaster risk reduction specialists, disaster response coordination specialists, incident commanders, disaster risk scientist planners and information management scientists. Their core responsibility is to perform the duties relevant to the municipal disaster risk management objectives and programmes.

1.2.6.5

1.2.6.5 Infrastructural requirements

The infrastructural arrangements of MDMCs must adhere to national guidelines for disaster management centres developed by the NDMC (see subsection 1.2.2.2).

1.2.6.6

1.2.6.6 Technology

Considering the important role of technology in the modern era, PDMCs should adhere to the following:

i. reliable, fast internet connectivity
ii. capacity for virtual meetings and training
iii. direct connectivity to the PDMC and critical municipal level stakeholders such as emergency services, hospitals and SAPS
iv. required hardware and software programs like GIS for disaster impact monitoring in line with guidelines from the NDMC and PDMC

1.2.7

1.2.7 Key Performance Indicators

s 7(2)(m), s 21

i. The NDMC developed and implemented job descriptions and key performance indicators for the position of the Heads of centres at the national, provincial and municipal levels.
ii. The Heads of centres with the required qualifications at all three governance levels have been appointed.
iii. Centres at all three governance levels have been established and are fully operational.
iv. Each organ of State has identified disaster risk management focal/nodal points at all three governance levels, and responsibilities for disaster risk management have been assigned.
v. Roles and responsibilities of organs of state involved in disaster risk management have been identified, assigned and included in the job descriptions of key personnel and are being applied effectively.
vi. Provincial and municipal disaster risk management centres have been established and operate optimally.
vii. Disaster risk management centres at all three governance levels have fully functional DOCs.

1.3

S5;s7(2)(c)(i-iii)

1.3 Arrangements for Stakeholder Participation and the Engagement of Technical Advice in Disaster risk management Planning and Operations

1.3.1 The Act calls for the active participation of all stakeholders, including the private sector, NGOs, technical experts, communities, traditional leaders and volunteers, in disaster risk and response planning and operations. Specific arrangements must be implemented to ensure the integration of stakeholder participation, harness technical advice and adopt a holistic and organised approach to implementing policy and legislation.

1.3.1.1

1.3.1 Disaster Management Advisory Forums

s 5(3)(a–b)
s 5(1–2)

The objective of the advisory forums is to provide a mechanism at the respective governance levels for stakeholders to coordinate activities concerning disaster risk management issues.

1.3.1.1 National Disaster Management Advisory Forum

s 5(1)

The primary purpose of the NDMAF is to provide a mechanism for relevant national role players to consult one another and coordinate their activities concerning disaster risk management issues.

s 5(3)(a–b)

The President or the Minister responsible for administering the Act must establish the NDMAF. The Head of Centre NDMC should chair the NDMAF.

The NDMAF must comprise a central nucleus of senior representatives, supported by the focal persons of the relevant national departments whose Ministers serve on the ICDM; the heads of the nine provincial disaster management centres; and municipal officials selected by SALGA. In addition, technical experts and other role players in disaster risk management and appointed by the Minister should support the activities of the NDMAF. Representatives must include relevant NGOs, international relief agencies, community-based organisations (CBOs), organised labour and agriculture, higher education institutions and the private sector, as specified in the Act. The membership of the forum should remain fluid to accommodate changing needs regarding technical inputs and specific expertise requirements.

s 5(3)(a)
s 7(2)(c)(iii) s 16, s 17
s 16
s 16 s 5(3)(b)(ii)
s 5(3)

The NDMAF must make recommendations to the ICDM and act in an advisory capacity concerning disaster risk management matters. The NDMAF is also required to support the programmes of the NDMC by providing technical expertise.

The NDMAF should further play a role in:

i. Drafting disaster risk management plans.
ii. Promoting joint standards of practice.
iii. Developing the information management and communication system.
iv. Contributing critical information to the directory of institutional role players.

v. Assisting with effective communication links.
vi. Advising and making recommendations on training and public awareness.
vii. Participating in the review of programmes and policy.
viii. Provide advice for the development of hazard and vulnerability indicators and thresholds.
ix. Support the NDMC with advice and coordination during national disasters.

1.3.1.2

Forum meetings must occur quarterly unless circumstances dictate that meetings be convened more frequently.

1.3.1.2 Provincial disaster management advisory forums

The primary purpose of the PDMAF is to provide a mechanism for relevant provincial role players to consult one another and coordinate their activities concerning disaster risk management issues in the province.

s 7(2)(d–f), s 28(1–2), s 30(1)(b), s 30(3)(a), s 33(2)

The Premier of the province must establish the PDMAF, and the Head of the PDMC must chair it.

The PDMAF must comprise a central nucleus of senior representatives, supported by the focal persons of the relevant provincial departments whose MECs serve on the PCDM; the heads of the municipal disaster management centres in the province; and municipal officials selected by SALGA. Membership of the forum must be supplemented by technical experts and other role players in disaster risk management designated by the Premier. Such representation must include relevant NGOs, international relief agencies, community-based organisations (CBOs), organised labour and agriculture, institutions of higher education and the private sector, as specified in the Act. The forum membership should remain fluid to accommodate changing needs regarding technical inputs and specific expertise requirements.

s 54(1)(a–b)

The PDMAF must make recommendations to the PCDM and act in an advisory capacity concerning matters on disaster risk management in the province. The PDMAF is also required to support the programmes of the PDMC by providing technical expertise.

s 7(2)(d–f), s 42(1–3), s 44(1)(b), s 44(3)(a–b), s 47(2)

The PDMAF should further play a role in:

i. Drafting provincial disaster risk management plans.
ii. Promoting joint standards of practice.
iii. Developing the provincial information management and communication system.
iv. Contributing critical information to the directory of institutional role players.
v. Assisting with effective communication links.
vi. Advising and making recommendations on training and public awareness.
vii. Participating in the review of provincial programmes and policy.
viii. Support the PDMC with advice and coordination during provincial and local disasters.
ix. Provide support with hazard and vulnerability monitoring in the province.
x. Provide support with provincial disaster risk assessments.

1.3.1.3

Forum meetings must take place at least quarterly, unless circumstances dictate that meetings be convened more frequently.

s 54(1)(a–b)

1.3.1.3 Municipal disaster management advisory forums

The primary purpose of the MDMAF is to provide a mechanism for relevant municipal role players to consult one another and coordinate their activities concerning disaster risk management issues in the municipality.

s 7(2)(d–f), s 42(1–3), s 44(1)(b), s 44(3)(a–b), s 47(2)

The Council should establish the MDMAF, and the Head of the MDMC should chair the MDMAF.

The MDMAF must comprise the Municipal Managers of local municipalities, and a central nucleus of senior representatives, supported by the focal persons of the relevant municipal departments and representatives from national and provincial organisations such as SAPS, DHSWS, Agriculture, Social Development; Membership of the forum must be supplemented by technical experts and other role players in disaster risk management designated by the Council. Such representation must include relevant NGOs, international relief agencies, community-based organisations (CBOs), traditional authorities, organised labour and agriculture, institutions of higher education and the private sector, as specified in the Act. The forum membership should remain fluid to accommodate changing needs regarding technical inputs and specific expertise requirements.

The MDMAF must make recommendations to the MDMC and act in an advisory capacity concerning disaster risk management in the municipality. The MDMAF is also required to support the programmes of the PDMC by providing technical and local-level expertise.

The MDMAF should further play a role in:

i. Drafting municipal disaster risk management plans.
ii. Advise and make recommendations on disaster-related issues and disaster risk management in the municipality.
iii. Establish and promote common standards of practice.
iv. Assist with specifications and attending to the procurement process for disaster relief funds.
v. Support the development and operation of the municipal information management and communication system.
vi. Contributing critical information to the directory of institutional role players.
vii. Assisting with effective communication links.
viii. Advising and making recommendations on training and public awareness.
ix. Participating in the review of municipal programmes and policy.
x. Implement response management systems (see subsection 4.3.2 below).
xi. Gather critical information about the municipality's capacity to assist in disasters and to access resources.
xii. Provide support with hazard and vulnerability monitoring in the municipal area.
xiii. Provide support with municipal risk assessments.
xiv. Support the PDMC with advice and coordination during provincial and local disasters.
xv. Assist with public awareness, training and capacity building.

1.3.1.4 Forum meetings must occur quarterly unless circumstances dictate that meetings be convened more frequently.

1.3.1.4 Local municipal coordinating structures

Although the Act makes provision for the establishment of disaster management centres in metropolitan and district municipalities, from a practical point of view, local municipalities and traditional authorities should develop and implement the capacity to plan and execute disaster risk reduction strategies and plans and develop the capacity to respond and coordinate local disasters. Local municipalities, in most cases, are land owners of rural land. Therefore, they also have responsibilities attached to rural land owners, such as participating as members of the local Fire Protection Association (FPA) and preventing land degradation on its property. Local municipalities should establish decentralised or satellite disaster risk management units, offices or centres in support of the district disaster management centre.

1.3.2

1.3.2 Disaster risk management Technical Committees or Workstreams

s 7(2)(d), s 7(2)(f)(ii)

All metropolitan and district municipalities should establish inter-departmental disaster risk management committees. In addition, local municipalities should establish their disaster risk management committees and ensure the establishment of disaster risk management committees or forums in all municipal wards. Potential technical committees or clusters might be the following, depending on the (hazard), task and requirement:

i. Administrative and Financial
ii. Agriculture and food supply
iii. Communications
iv. Economy, business, tourism
v. Education
vi. Health and emergency services
vii. Infrastructure and public works
viii. Transport
ix. Safety and Security
x. Social Services
xi. Water and Sanitation
xii. Essential and critical services
xiii. Energy fuel
xiv. Food security
xv. Legal
xvi. Human settlement and temp housing
xvii. Agriculture

1.3.3

s 7(2)(f)

1.3.3 Alternative Structures

If a municipality elects not to establish the arrangements mentioned above, it must identify appropriate alternative existing structures to ensure that the principles of cooperative governance and community participation are applied within the context of the Act and in accordance with the national disaster management framework.

1.3.4

1.3.4 Disaster risk management Planning

S19; s25

The Head of the NDMC is primarily responsible for ensuring that disaster risk management plans are developed and implemented uniformly. However, the Act places explicit responsibility on organs of State (including provincial organs of State

and municipalities) and other institutional role players involved in disaster risk management for the development and implementation of disaster risk management plans (see KPA 3 and KPA 4).

s 5(3)(a), s 7(1), s 7(2)(a–b), s 7(2)(c)(iii), s 7(2)(d–f)

Planning for disaster risk management is a participative process involving many role players and stakeholders from across government sectors, disciplines and spheres, the private sector (e.g. business, mining, agriculture, industry, tourism) NGOs, CBOs and communities. It is, therefore, necessary to cluster stakeholders into planning groups relevant to the various activities associated with disasters and disaster risk management. Examples are the development of disaster risk reduction strategies, hazard-specific, pre-approved contingency and operational plans, and guidelines for disaster response and recovery activities.

s 7(2)(e), s 26(1)

At the start of the planning process, primary responsibility must be allocated to an entity (primary entity) for each of the abovementioned activities. In addition, responsibilities must also be allocated to those entities (support entities) that play a supportive role in the various activities identified in the planning process.

s 7(2)(e)

The primary entity is the custodian of the relevant disaster risk management plans. It is responsible for coordinating the development of such plans and submitting them to the NDMC. This entity is also responsible for ensuring that plans remain relevant and aligned with changes and new developments. The following are responsible entities linked to the priority disaster risks and impacts:

Table 1.1: Responsibilities for hazard threat planning and response

Hazard threat	Primary responsibility for plans (National)	Responsibility for response	Coordination
Disease outbreaks; Animals	DARDLR	DARDLR & Prov Dept Agric	NDMC; PDMC; MDMC
Disease outbreaks Plants (agricultural)	DARDLR	DARDLR & Prov Dept Agric	NDMC; PDMC; MDMC
Disease outbreaks Plants (not agricultural)	DEFF	DEFF	NDMC; PDMC; MDMC
Drought Agricultural	DARDLR	DARDLR & Prov Dept Agric	NDMC; PDMC; MDMC
Drought Hydrological	DHSWS	DHSWS	NDMC; PDMC; MDMC
Drought Integration of plans	NDMC	NDMC, DHSWS; DARDLR	NDMC; PDMC; MDMC
Fires Wild	DARDLR	DARDLR & Prov Dept Agric	NDMC; PDMC; MDMC
Fires Forest	DEFF	DEFF	NDMC; PDMC; MDMC
Fires Structural	DARDLR	Municipality / Metro	NDMC; PDMC; MDMC
Floods (major rivers)	DHSWS	DHSWS	NDMC; PDMC; MDMC
Floods (urban)	Municipalities	Municipality / Metro	NDMC; PDMC; MDMC
Pandemics, Epidemics	DoH	DoH	NDMC; PDMC; MDMC
Civil strife and violence	SAPS	SAPS	NatJOINTS / ProvJOINTS

1.3.4.1 Ad hoc meetings

The Head of the NDMC may convene ad hoc meetings of planning groups, task teams and key personnel from line departments for integrated and coordinated planning.

1.3.5 Community Participation

1.3.5 "*Governments should engage with relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, volunteers, the community of practitioners and older persons in designing and*

SFDRR s7

implementing policies, plans and standards. In addition, there is a need for the public and private sectors and civil society organisations, as well as academia and scientific and research institutions, to work more closely together, create collaboration opportunities, and for businesses to integrate disaster risk into their management practices'.

s 7(2)(f)(i–ii)

The community is at the coalface of disaster risk management. All other disaster risk management activities evolve from the conditions of risk that exist in communities. It is in the community where all the operational activities related to disaster risk management occur. 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.

Municipalities must involve local communities in:

i. the development of disaster risk profiles,
ii. facilitate understanding of the concepts and values of disaster risk reduction in communities,
iii. prioritise projects aimed at risk reduction in their IDPs,
iv. facilitate community participation in training, preparedness planning and awareness programmes, and
v. assist communities with the development of contingency plans.

In the case of specific disaster risk reduction projects, project teams must include community representation. In addition, indigenous knowledge and contributions from traditional leaders must be considered to ensure informed, alert and self-reliant communities. Capacity building, education, training and research are fundamental to this end.

When disasters occur or are threatening, the initial response to the event comes from those directly affected. Only after that are their actions supported by the various response and resource agencies responsible for dealing with the disaster. In this regard, broad community participation in disaster risk management and the enrolment of individuals as volunteers must be actively promoted and encouraged, particularly in communities at risk.

Establishing ward disaster risk management committees or forums is also critical. These forums must provide leadership, ensure community ownership of and participation in disaster risk management and awareness programmes, and facilitate preparedness in the local sphere. Should a municipality elect not to establish such ward structures, appropriate existing structures must be identified and tasked with disaster risk management responsibilities. Municipalities should support and utilise existing community organisations such as burial societies, stokvels, farmer's associations, community safety and security forums, church organisations and other organisations to support its DRR and response activities.

s 44(1)(g), s 58

Every effort should be made to establish units of volunteers trained in special skills in communities at risk, in accordance with the national regulations for establishing such units. Municipalities should establish a roster of volunteers consisting of general co-workers, responders, specialists, and professional persons. Volunteers

for response with specialised skills and equipment might include persons with private planes, own fire-fighting equipment, transport and other resources.

1.3.6 Participation of Volunteers in Disaster risk management

1.3.6

Volunteers are classified into six categories to maintain an inclusive approach for the participation of volunteers in disaster risk management. These categories are:

i. units of volunteers
ii. general volunteers
iii. spontaneous volunteers
iv. specialised volunteers
v. professional volunteers
vi. volunteers with specialised equipment
vii. NGOs

Organs of State should adhere to international guidelines and standards on deploying volunteers.

1.3.6.1

1.3.6.1 Units of volunteers

s 15(1)(g), s 58

In addition to the general provisions in the Act for the recruitment, training and participation of volunteers in disaster risk management in all three spheres of government, Chapter 7 of the Act provides a metropolitan and district municipality with the option of establishing a unit of volunteers to participate in disaster risk

s 58

management in the municipality.

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 to participate in this category.

1.3.6.2

1.3.6.2 General volunteers

In addition to the provisions relating to the option in Chapter 7 of the Act for municipalities to establish a unit of volunteers, sections 15(1)(g), 30(1)(g), and 44(1)(g) require disaster management centres at all governance levels to promote

s 15(1)(g), s 30(1)(g), s 44(1)(g)

the recruitment, training and participation of volunteers in disaster risk management. The Act allows municipalities, provinces and the NDMC to establish units of volunteers or to recruit individuals (or groups of individuals) who are prepared to assist in the event of a disaster but do not want to participate in an organised structure such as a unit described in subsection 1.3.3.1 above, or serve as active volunteers on an ongoing basis. This category provides an available pool of volunteers who the respective disaster management centres can draw on to perform various functions that may or may not require specialised skills. Volunteers in this category must be registered and meet the minimum criteria set down by the national standard guideline.

1.3.6.3

1.3.6.3 Spontaneous volunteers

s 58(6) The Act recognises that people will always respond spontaneously in emergencies. A spontaneous humanitarian response should not be discouraged. However, the organs of State must take cognisance of the problems and complications, including the possibility of injury and property damage resulting from the spontaneous, uncontrolled and uncoordinated actions of volunteers. Organs of State must consider this matter and make provisions for it in their planning.

1.3.6.4 ***1.3.6.4 Specialised volunteers***

This group of volunteers is usually not involved in disaster risk management. Still, they can support the disaster risk and response function in an informal way. Examples are nurses, experts with experience in incident command, radio amateurs, retired experts, academics and others. Municipalities should develop and maintain a list and contact details of such individuals.

1.3.6.5 ***1.3.6.5 Professional volunteers***

This group of volunteers consists of professionals registered as professionals at a professional body. Examples are medical doctors, engineers, environmentalists, economists, social scientists and others. State organs should develop and maintain a contact list of professional people willing and able to advise and support disaster risk and response activities.

1.3.6.6 ***1.3.6.6 Volunteers with specialised equipment and facilities***

Volunteers with specialised equipment and facilities can serve as multipliers, especially in emergency response activities. Examples are:

i. pilots with private planes,
ii. owners of transport trucks and busses,
iii. persons with their own fire-fighting equipment such as land owners and farmers with capacity to manage wild fires,
iv. persons or companies with storage space or accommodation and
v. other facilities identified during the risk assessment. Organs of State should arrange and sign memorandums of understanding with such organisations or persons as part of preparedness planning.

1.3.7

s 7(2)(m), s 21

1.3.7 Key Performance Indicators

i. The NDMAF has been formally constituted and operates effectively.
ii. Provincial and municipal disaster management forums or similar representative consultative forums have been established and operate effectively.
iii. Mechanisms for stakeholder participation in disaster risk management planning and operations have been established and are operating effectively.
iv. Primary responsibility for facilitating and coordinating disaster risk management planning and implementation has been assigned.
v. Entities playing a supportive role in facilitating and coordinating disaster risk management planning and implementation have been identified and assigned secondary responsibilities.
s 7(2)(d) vi. Heads of disaster management centres fully participate in integrated development planning processes and structures.

vii. Ward and community structures have been identified and are responsible for disaster risk management.
viii. A current register of disaster risk management stakeholders and volunteers has been established and is maintained.
ix. Memorandums of understanding are developed and signed by organs of State and volunteer and NGO sources.

1.4

1.4 Arrangements for National, Regional and International Cooperation for Disaster risk management

1.4.1

1.4.1 Giving Effect to the Principle of Cooperative Governance

s 7(2)(d)

Constitutionally, the government bears primary responsibility for disaster risk management (Schedule 4, Part A, Constitution of the Republic of South Africa, Act No. 108 of 1996). However, political commitment, legal imperatives and institutional processes are not always enough to ensure success. An efficient and comprehensive disaster risk management strategy cannot be achieved without participative decision-making involving a wide range of role players. Strong policy direction is crucial, as is legitimacy, but it is ultimately the commitment of resources to those individuals, households and communities most at risk that will ensure success.

s 7(2)(d–f)

Disaster risk management is a shared responsibility which must be fostered through partnerships between the various stakeholders and cooperative relationships between the different spheres of government, the private sector and civil society. Furthermore, disaster risk management is an intergovernmental process, with each sphere of government playing a unique role and performing a specific set of responsibilities in the process. However, the process requires collateral support to enable the sharing of resources fundamental to disaster risk reduction and all facets of preparedness, response and recovery. In turn, this interdependence also implies that weakness or ineffectiveness in one sphere will result in the failure of the entire system.

s 7(2)(i), s 15(1)(b)

In creating institutional arrangements for cooperative governance and coordination, the emphasis must be on facilitating cooperation and coordination among existing structures, organisations and institutions wherever possible and on harnessing existing skills and expertise. Disaster risk management functions usually performed by the various sectors and disciplines in the national, provincial and municipal spheres should not be duplicated. The institutional arrangements must also facilitate inclusivity, and their primary focus must be on capacitating and building resilience in at-risk communities.

Disaster risk management should not be construed as a line function. Instead, it is a management function whose purpose is to coordinate and create an enabling environment for the promotion and implementation of integrated disaster risk reduction measures and the development of an institutional capacity to provide improved preparedness and response and recovery services.

1.4.2

1.4.2 Cooperation between National, Provincial and Municipal Spheres

s 4, s 32, s 44(4), s 46

The ICDM provides the political mechanism for applying the principle of cooperative governance by bringing political representatives from the three spheres of government together.

s 7(2)(d)

The NDMAF provides a further mechanism for cooperative governance by providing a forum for input, including technological and specialist input, by a wide range of stakeholders from, among others, civil society and the private sector. Meetings of the NDMAF must be preceded by a meeting between the Head of the NDMC, the Heads of provincial disaster management centres and a representative of the SALGA disaster risk management working group to streamline coordination.

s 4, s 7(2)(c)(iii), s 30(1)(c), s 39, s 18, s 19, s 21, s 24, s 25, s 36, s 38, s 39, s 50, s 52, s 53

Provincial and municipal centres must establish mechanisms to enable the sharing of expertise. They should develop disaster assistance response teams (DARTs) and other specialist teams composed of professional and technical experts to assist each other in disaster response and recovery activities.

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

i. information sharing
ii. establishment of standards to ensure that the technology required for an integrated information management and communication system is compatible across the spheres
iii. compilation and sharing of directories of institutional role players across the spheres
iv. submission of disaster risk management plans and annual reports to other spheres and neighbouring centres

1.4.3 Mutual Assistance Agreements

1.4.3

s 7(2)(f)(iii)

In accordance with the Act, national departments, provinces, and municipalities must establish their 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, and other organs of state and communities.

At the provincial and municipal level, cooperation and coordination efforts must be supported by cross-boundary mutual assistance agreements (that is, between provinces, between provinces and municipalities and between municipalities) and by creating partnerships within each sphere with the private sector and NGOs through memoranda of understanding.

Mutual assistance agreements and memoranda of understanding are legal documents. Therefore, their parameters must be clearly defined, including details of financial arrangements, reimbursements and liability. They must also comply with the national standard guideline on mutual assistance agreements developed by the NDMC.

1.4.4 Regional Cooperation

1.4.4

s 7(2)(c)(ii)

The White Paper on Disaster Management (published in 1999) states that national boundaries do not constrain disastrous events. Therefore, measures taken in South Africa can potentially increase or reduce risk in neighbouring countries. Similarly, threats in countries beyond South Africa's borders can potentially increase or mitigate disaster risk in the country.

As specified in the Act, regional cooperation for disaster risk management is essential, with the support of appropriate mechanisms and forums to ensure continuous cooperation. South Africa, through the NDMC, should support and participate in activities of the SADC Secretariat, which includes the Disaster Risk Reduction Unit and the SADC Climate Services Centre. Furthermore, disaster management in South Africa should support and incorporate the principles of the SADC strategy into its strategy. The SADC principles are the following:

SADC founding principles: The strategy shall be subject to and consistent with the relevant founding principles of SADC of sovereign equality of all Member States; solidarity, peace and security; human rights, democracy and the rule of law; equity, balance and mutual benefit; and peaceful settlement of disputes;

i. **The primary responsibility of Member States:** Member States shall take the primary role and responsibility to protect and assist affected populations within their territories through disaster preparedness and response policies and other measures at the local, national, and through regional, transboundary and bilateral cooperation;
ii. **Humanitarian Principles:** Shall subscribe to the principles enshrined in the Humanitarian Charter of humanity, impartiality, independence and neutrality to ensure those affected by disaster have a right to life with dignity and, a right to assistance and that all possible steps should be taken to alleviate human suffering arising out of disaster or conflict;
iii. **Compliance:** Member States and humanitarian actors commit to adhere to established international norms and standards, including Guidelines and Codes of Conduct recognised by the African Union;
iv. **Non-indifference:** conformity with the relevant provisions contained in the Constitutive Act of the African Union;
v. **Solidarity:** Customary African extension of hospitality/egalitarianism and solidarity with peoples in need and distress, is institutionalised as an integral part of humanitarian response;
vi. **Accountability:** Transparency and accountability must apply to all humanitarian assistance;
vii. **Do no harm:** participation, ownership and inclusion of disaster-affected populations, including children, elderly, women, and those living with disabilities, and chronic diseases, in the planning and decision-making process for humanitarian assistance lies at the heart of this strategy;
viii. **Subsidiarity and Complementarity:** between African Union Commission, other Organs of the African Union, Regional Economic Communities, member states, the United Nations and other actors and stakeholders;
ix. **Gender mainstreaming:** All activities must consider the gender dimensions of humanitarian assistance;
x. **Non-Violability of Humanitarian workers:** Humanitarian workers are to operate in a safe and secure environment, free of threat, harm and intimidation; and
xi. **Resilience-building principles:** Activities should align with the Regional Resilience Framework and should incorporate the resilience-building principles through:

a. Overview bridging the emergency response and development approaches;
b. increasing multi-stakeholder, multi-sectoral synergies and approaching disaster risk reduction holistically; and
c. implementing risk-informed, multi-year programming that incorporates joint analysis and community participation.

The NDMC is the focal point for the SADC disaster risk management forum and will serve on a rotational basis as Chair of the SADC forum with other SADC country offices for disaster management. The objectives of the SADC forum are:

s 7(2)(c)(iii)

i. Sharing information on disasters and important disaster risk reduction issues.
ii. Creating opportunities for conducting research.
iii. Developing and monitoring early warning systems for the region and issuing advisories so that precautionary measures can be taken timeously in the event of threats due to natural hazards, technological accidents or environmental degradation.
iv. Establishing strategic communication links and emergency telecommunication procedures and protocols.
v. Concluding bilateral and multilateral agreements with clearly defined protocols to provide for shared disaster risk reduction interventions, preparedness and cross-border disaster response and recovery operations.
vi. Sharing expertise in disaster response and recovery and establishing DARTs and other relevant specialist teams to assist in response and recovery efforts.
vii. Ensuring a clear definition of responsibilities between the various regional and international role players in cross-border disaster response.
viii. Promoting and facilitating the establishment of joint standards of practice across the region by:
    a. developing standards for disaster risk reduction
    b. developing standards for disaster risk assessment
    c. developing standards for response management systems and the establishment of regional disaster operations centres to ensure the effective coordination of disaster response and recovery management
    d. ensuring uniformity in standards for humanitarian assistance and mitigation interventions
ix. Formulating accredited curricula for disaster risk management education and training.
x. Establishing uniform protocols and clearly defined responsibilities, which differentiate between responsibilities in the event of persons crossing borders in search of humanitarian assistance only and those seeking (political) asylum in terms of the Refugees Act, 1998 (Act No. 130 of 1998).

In addition to establishing the above arrangements and international protocols for cooperation between the national government and other governments in the region, similar arrangements for cooperation must be made between the governments of the following provinces and neighbouring countries:

i. Eastern Cape and Free State and Lesotho
ii. Northern Cape and Namibia, and Botswana
iii. KwaZulu-Natal and Mpumalanga and Swaziland and Mozambique
iv. Limpopo and Mozambique, Zimbabwe and Botswana
v. North West Province and Botswana.

1.4.5 International Cooperation

1.4.5

s 7(2)(c)(i)

Increasingly, disasters such as environmental degradation, droughts, floods, pandemics, technological and a combination of both (NaTech) disasters are becoming global problems, requiring global strategies and solutions. Therefore, the global perspective must inform disaster risk management in South Africa. South Africa must support and actively participate in the strategies and efforts of the international community to reduce disaster risk and build back better. South Africa should learn from international best practices and be in a position to contribute to global thinking on disaster risk management. South Africa should associate itself with international development protocols, agendas and commitments, for example the Sendai Framework for Disaster Risk Reduction (SFDRR), the Paris Agreement on Climate Change (COP21), Sustainable Development Goals and the Millennium Development Goals outlined in the United Nations (UN) Millennium Declaration adopted at the UN Millennium Summit in September 2000 (A/RES/55/2) (UNISDR2015; UNFCC, 2015; UNDP, 2015, SFDRR, 2015).

A further aspect of South Africa's involvement in the international disaster risk management arena is that of humanitarian assistance. There is a plethora of international relief donor agencies and groups that operate in the wake of disasters. In a world that is becoming increasingly interdependent, there is a pressing need for South Africa to strengthen its engagement with these international organisations. The fundamental objective of effective disaster response and recovery management is to collect and channel resources optimally. South Africa must tap into the extensive expertise and resources of these agencies. At the same time, and as a matter of priority, it must adhere to established protocols and, in the absence of sufficient agreements, establish appropriate protocols to clarify procedures for requesting external assistance and to discourage ad hoc and unsolicited appeals for relief. South Africa should acknowledge and apply the Humanitarian Charter and SPHERE principles in all disaster response activities.

A final aspect of South Africa's activities in the international community is its capacity to assist in humanitarian aid. Currently, because of the country's limited resources, this capacity is focused on the SADC region. Nevertheless, appeals for assistance from outside the region will be considered in the context of the circumstances prevailing at the time. All appeals for assistance must be directed to the NDMC. The NDMC will mobilise and coordinate resources in response to such requests.

s 7(2)(c)(iii), s 16(3)

The Department of Foreign Affairs is the lead national department responsible for promoting and facilitating South Africa's role in international cooperation in disaster risk management. It must, in liaison with the NDMC and the relevant organs of state, forge links with national agencies that render relief assistance internationally, as well as with international agencies, organisations and institutions involved in disaster risk management, including the:

i. African Regional Disaster Risk Reduction Strategy
ii. Food and Agriculture Organization (United Nations) (FAO)
iii. International Committee of the Red Cross (ICRC)
iv. Intergovernmental Panel on Climate Change (IPCC)
v. International Federation of Red Cross and Red Crescent Societies (IFRCS)
vi. International Organization on Migration (IOM)
vii. Joint United Nations Programme on HIV/AIDS (UNAIDS)

viii. NEPAD structures
ix. Office for the Coordinator of Humanitarian Affairs (OCHA)
x. United Nations Children's Fund (UNICEF)
xi. United Nations Development Programme (UNDP)
xii. United Nations Disaster Management Training Programme (UNDMTP)
xiii. United Nations Educational, Scientific and Cultural Organization (UNESCO)
xiv. United Nations Environment Programme (UNEP)
xv. United Nations High Commissioner for Refugees (UNHCR)
xvi. United Nations International Strategy for Disaster Risk Reduction (UNISDR)
xvii. United Nations Office for Outer Space Affairs (UNOOSA)
xviii. United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER)
xix. United Nations Convention to Combat Desertification (UNCCD)
xx. World Food Programme (WFP)
xxi. World Health Organization (WHO)
s 16(3) xxii. World Meteorological Organization (WMO)

To keep abreast with international developments, the NDMC must seek membership of international bodies and professional institutes and must establish links with disaster management centres and appropriate professionals performing similar tasks in other countries.

1.4.6 Key Performance Indicators

1.4.6
i. Primary responsibility for the facilitation and coordination of disaster risk management planning and implementation has been assigned.
s 7(2)(m), s 21 ii. Entities playing a supportive role in facilitating and coordinating disaster risk management planning and implementation have been identified and assigned secondary responsibilities.
iii. Heads of disaster management centres have full participation in integrated development planning processes and structures.
iv. Ward structures have been identified and tasked with responsibility for disaster risk management.
v. A current register of disaster risk management stakeholders and volunteers has been established and is maintained.
vi. Mechanisms have been identified and implemented to ensure the application of the principle of cooperative governance.
vii. Guidelines have been developed and disseminated for entering into partnerships and concluding mutual assistance agreements and memoranda of understanding.
viii. A disaster risk management forum established for cooperation with countries in the SADC region is operating effectively.
ix. Mechanisms have been identified and established to enable South Africa to participate internationally in disaster risk management activities.
x. Guidelines were developed and disseminated.

1.4.7 Guidelines to be Disseminated

1.4.7
i. National guidelines for the minimum infrastructural requirements for disaster management centres.
ii. Guidelines for the development of joint contingency plans.
iii. Guidelines for entering into partnerships and concluding mutual assistance agreements and memoranda of understanding.
iv. Guidelines for the operational management of Disaster Operations Centres.
v. Guidelines for Inter-Agency cooperation.
vi. National guidelines outlining the criteria for the registration of volunteers.

vii. National guidelines for mutual assistance agreements.
viii. Guidelines for activation of International Charter on Space and Major Disasters.
ix. Risk Assessment guidelines

Relevant sections of the Disaster Management Act, 2002, 2015 and the SFDRR 2015

2 Key Performance Area 2: Disaster Risk Monitoring and Assessment

Objective

s 20, s 25(1–2), s 33, s 38(1–2), s 47, s 53(1–3)

Establish a uniform approach to assessing and monitoring disaster risks that will inform disaster risk management planning and implementation undertaken by state organs and other role players.

Introduction

SFDRR s23 (Understand risk)

"Policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for pre-disaster risk assessment, prevention and mitigation and the development and implementation of appropriate preparedness and effective response to disasters".

Sections 20, 33 and 47 of the Act set out the requirements for priority setting for disasters likely to affect South Africa. These sections underscore the importance of disaster risk monitoring and assessment to guide national, provincial and municipal disaster risk reduction efforts, including disaster risk management. KPA 2 outlines the requirements for implementing disaster risk assessment and monitoring by state organs within all government spheres. Furthermore, it shows that the outcomes of disaster risk assessments directly inform the development of disaster risk management plans and early warning. Planning for disaster risk management is discussed more fully in KPA 3.

Outline

i. Section 2.1: Risk assessment methodology
ii. Section 2.2: Hazard and vulnerability monitoring
iii. Section 2.3: Products from risk assessment
iv. Section 2.4: Risk classification and prioritisation
v. Section 2.5: Early warning and communication
vi. Section 2.6: Guidelines

The detailed structure of KPA 2 is illustrated in Table 2.1

Fig 2.1: KPA 2 structure

2.1 Disaster Risk Assessment Methodology

s 17(1)(a–b), s 20(1)(a)(i–iii), s 33(1)(a), s 47(1)(a)

South Africa faces many different types of risks daily, including health, environmental, financial, and security risks. However, disaster risk refers explicitly to the likelihood of harm or loss due to the action of natural or other hazards or other external threats on vulnerable structures, services, areas, communities and households. In many cases, the impact and consequences of socio-economic incidents and emergencies, such as xenophobia, civil strife, and political instability, might become a responsibility for disaster management. For example, the security cluster deals with xenophobia and civil conflict. Still, its impact in many cases is internally displaced people, people without shelter and people and businesses

seriously affected by such incidents. Disaster management might then be involved in the response coordination to deal with such incident's impact.

There are mainly two types of disaster risk assessment. The first is the static risk assessment, updated annually if there are dramatic changes in vulnerability or hazard threats, and the second is the dynamic assessment of disaster risk, which is the day-to-day monitoring and assessment of risk.

Disaster risk assessment is the first step in planning effective disaster risk reduction and response strategies and activities. It examines the likelihood, outcomes and cascading effects of expected disaster events. This would include investigating related hazards and conditions of vulnerability that increase the chances of loss. The SFDRR stated, "*disaster risk reduction requires a multi-hazard approach and inclusive risk informed decision-making based on the open exchange and dissemination of disaggregated data*….". It further *stated "Addressing underlying disaster risk factors through risk-informed public and private investments is more cost-effective than post-disaster response and recovery, and contributes to sustainable development"*. Therefore, risk assessments should provide the basis for risk-informed decisions.

SFDRR s19(g;j)

Disaster risk assessment planning requires the identification of key stakeholders and consultation with them about the design and/or implementation of the assessment and the interpretation of the findings.

Disaster risk assessments, supported by good monitoring systems, are essential for:

s 20(1)(a–d)

i. Efficient disaster risk management planning.
ii. Sustainable development planning.
iii. 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 before implementation.
iv. Shaping focused disaster risk reduction programmes for specific threats.
v. Identifying high-risk periods and conditions.
vi. Activating preparedness and efficient response contingency plans and actions.

Relevant national organs of state must execute systematic disaster risk assessments in the following instances:

i. Before implementing any national disaster risk reduction, preparedness or recovery programme.
ii. As an integral component of the planning phase for large-scale housing, infrastructure or commercial/industrial developments of national significance.
iii. As an integral component of the planning phase for nationally significant initiatives that affect the natural environment.
iv. When social, economic, infrastructural, environmental, climatic or other indicators suggest changing patterns of risk that increase the likelihood of nationally significant disaster impacts.

All national state organs must carry out disaster risk assessments to identify priority disaster risks relevant to their functional areas (see subsection 2.1.3 below). Where possible, these should be undertaken inter-departmentally to avoid duplication of efforts and to ensure uniformity of findings.

All proposed disaster risk assessments and related studies planned by national and provincial state organs must be reviewed by the NDMC before implementation to ensure consistency in approach.

2.1.1

2.1.1 Situations Requiring a Disaster Risk Assessment

Disaster risk assessments must be undertaken to:

i. Anticipate and plan for known hazards or disasters to prevent losses and limit endangering impacts.
ii. Ensure that development initiatives maximise their vulnerability reduction outcomes.
iii. Anticipate hazard threat scenarios to prepare and activate an efficient response adequately.

2.1.1.1 Undertaking disaster risk assessments for specific known hazards or disasters

2.1.1.1

A disaster risk assessment is required at the national level to guide disaster risk reduction and response efforts for specific known hazards or disasters that:

s 7(2), s 20(1)

i. Due to their scale and magnitude are likely to affect more than one province.
ii. Are of recurrent high and medium magnitude, occur in most provinces and may require national support and/or intervention.
iii. Are of high magnitude and low frequency (for example, nuclear accidents and oil spills).
iv. Occur infrequently or seasonally (for example, veld fires and flooding), have the potential to cause severe loss, and require levels of specialist support not available at the provincial level.
v. Affect neighbouring countries and have consequences for South Africa (for example, spontaneous cross-border movements and events that require humanitarian or other relief assistance).

2.1.1.2 Maximising vulnerability reduction outcomes

2.1.1.2

Concerning the implementation of the Act, a disaster risk assessment must be undertaken when one or more of the vulnerability reduction criteria listed in Table 2.1 are considered priorities in any nationally initiated project or programme.

Table 2.2: Priority situations requiring disaster risk reduction	
Key vulnerability criteria to achieve	**Examples of where risk assessments must be done**
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 rap- idly changing risk for improved disaster risk management planning	In a flood-prone estuarine area that has recently experienced considerable population growth and is facing increased coastal erosion.
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 house- holds 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.

2.1.2

2.1.2 Steps Involved in a Disaster Risk Assessment

S19(e) Disaster risk assessment is a process that determines the level of risk by:

i. Identifying and analysing potential hazards and/or threats within a specific geographic area or sector.
ii. Assessing the conditions of vulnerability that increase the chance of loss for particular elements at risk (that is, environmental, human, infrastructural, agricultural, economic and other elements that are exposed to a hazard and are at risk of loss).
iii. Assess and identify the capacity to reduce vulnerability and increase resilience.
iv. Identify and assess exposure to the hazard.
v. determining the level of risk for different situations, conditions and cascading effects.
vi. Helping to set priorities for action.

A reliable disaster risk assessment for a specific threat should answer the following questions:

i. How frequently can one expect an incident or a disaster to happen?
ii. Which areas, communities or households are most at risk?
iii. What are the likely impacts and cascading effects?
iv. What are the vulnerability or environmental and socio-economic risk factors that increase the severity of the threat?
v. What is the strategic and direct exposure to the threat?
vi. What capabilities or resources exist to manage the risk?
vii. Is the risk becoming more serious?
viii. Is the risk undermining development progress in the areas, communities and households it affects?
ix. If so, is the management of the risk a development priority?
x. Are there any other significant risks in the areas and communities affected by the threat?

2.1.3

2.1.3 Undertaking a Disaster Risk Assessment

There are many different methods for carrying out disaster risk assessments. Risk assessment methods vary, depending on the type of risk being assessed, the specific characteristics of the population-at-risk, and those related to the area, infrastructure, service or business. The urgency also determines methods used for the assessment and the availability of relevant hazard and vulnerability information, as well as appropriate specialists and other resources to undertake it.

The NDMC must, through a process of consultation, develop a national standard for conducting comprehensive disaster risk assessments, including guidelines for the application of a uniform disaster risk assessment methodology and approach, as well as the standardisation of reporting formats for disaster risk assessments. These guidelines should include standardised indicators and indicator thresholds.

2.1.4

2.1.4 Action Steps for Disaster Risk Assessment

s 25(1–2), s38(1–2), s 53(1–3)

The general process for assessing disaster risks is as follows:

2.1.4.1 Stage 1: Identify and describe the geographic area or sector to be assessed

The boundary of the area selected for risk assessment is, in most instances, administrative boundaries such as national, provincial or municipal, or metropolitan. Unfortunately, disasters do not respect administrative boundaries, and in some cases, the area targeted for the risk assessment is aligned with ecological zones, water catchment areas or other environmental criteria. Rainfed agricultural drought, for example, should be demarcated according to catchment areas. On the other hand, urban drought should follow the total catchment area for the specific city or town, even if the catchment stretches over national or provincial boundaries.

Risk assessment can also be demarcated according to specific sectors. The health sector, agricultural sector, business sector and other categories are typical examples of demarcation required for disaster risk assessment. More detailed demarcation in the agricultural sector is rainfed crop production vs irrigated crop production or extensive livestock production and other sectors within agriculture. Hazard threats do not impact the different sectors in the same way. Each sector might have different vulnerabilities and different indicators.

2.1.4.2 Stage 2: Analyse hazard, vulnerability, capacity and exposure.

i. Identify and describe the hazard with respect to frequency, probability, magnitude, predictability, the potentially affected area, speed of onset, and duration. See the NDMC guidelines for Hazard assessment.
ii. Describe and quantify vulnerability to determine susceptibilities and capacities. This is done by describing, where possible, the vulnerability of people, infrastructure (including homes and dwellings), services, economic activities and natural resources exposed to the hazard.

iii. Analyse the capacity and resilience of affected communities, their support structures and the capacity of the private sector and NGOs to respond and prevent or mitigate potential impacts of the threat
iv. Identify relevant capacities, methods and resources available from state organs to manage the risk. Assess the effectiveness of these, as well as gaps, inconsistencies and inefficiencies in organs of state and other relevant agencies.
v. Estimate exposure and likely losses resulting from hazards on those vulnerable to evaluate potential consequences or impacts.

2.1.4.3 Stage 3: Estimate the level of disaster risk

i. Estimate the level of risk associated with a specific threat to determine whether the resulting risk is a priority or not.
ii. Estimating the level of risk is done by matching the likelihood of a hazard or disaster with its expected impact or consequences.
iii. This process allows different threats to be compared for priority setting.
iv. The risk assessment process up to stage 3 is called risk analysis, and it is sufficient for developing level 1 disaster risk management plans.

2.1.4.4 Stage 4: Assess disaster risk.

i. This stage involves further prioritising disaster risks when there are multiple threats to assess. When several threats are assessed at the same level of risk, limited resources and budgets require prioritising them further. This process, called 'risk evaluation', is necessary because it is impossible to address all disaster risks simultaneously (see section 3.2 below).
ii. The priority at-risk people, areas, communities, households and developments identified during this assessment stage will be the subject of highly specialised multidisciplinary, comprehensive disaster risk assessments. These assessments must inform the holistic and integrated planning and implementation of focused disaster risk reduction initiatives.
iii. This stage of the disaster risk assessment will require unique combinations of risk science expertise relevant to the particular types of disaster risk facing the specific at-risk groups, areas or developments. See Table 2.2 on page 32 for the range of assessment methods and expertise required for different types of disaster risk.
iv. The following detailed assessments are required for the Stage 4 risk assessment.
    a. Develop hazard threat scenarios for worst-case, most probable and best-case scenarios.
    b. Identify prevention, mitigation and response capacity to deal with each scenario threat.
    c. Develop prevention, mitigation and response scenarios.
    d. Calculate cost-benefit for all scenarios.
    e. Determine acceptable risk.
    f. Establish priorities.

Identify risk transfer methods.

2.1.4.5 Stage 5: Disseminate, monitor and update plans

This stage involves ongoing monitoring to measure the effectiveness of disaster risk reduction initiatives, identify changing patterns and new developments in risk profiles, and update and disseminate information for disaster risk management planning.

The risk analysis and assessment process is illustrated in Figure 2.2.

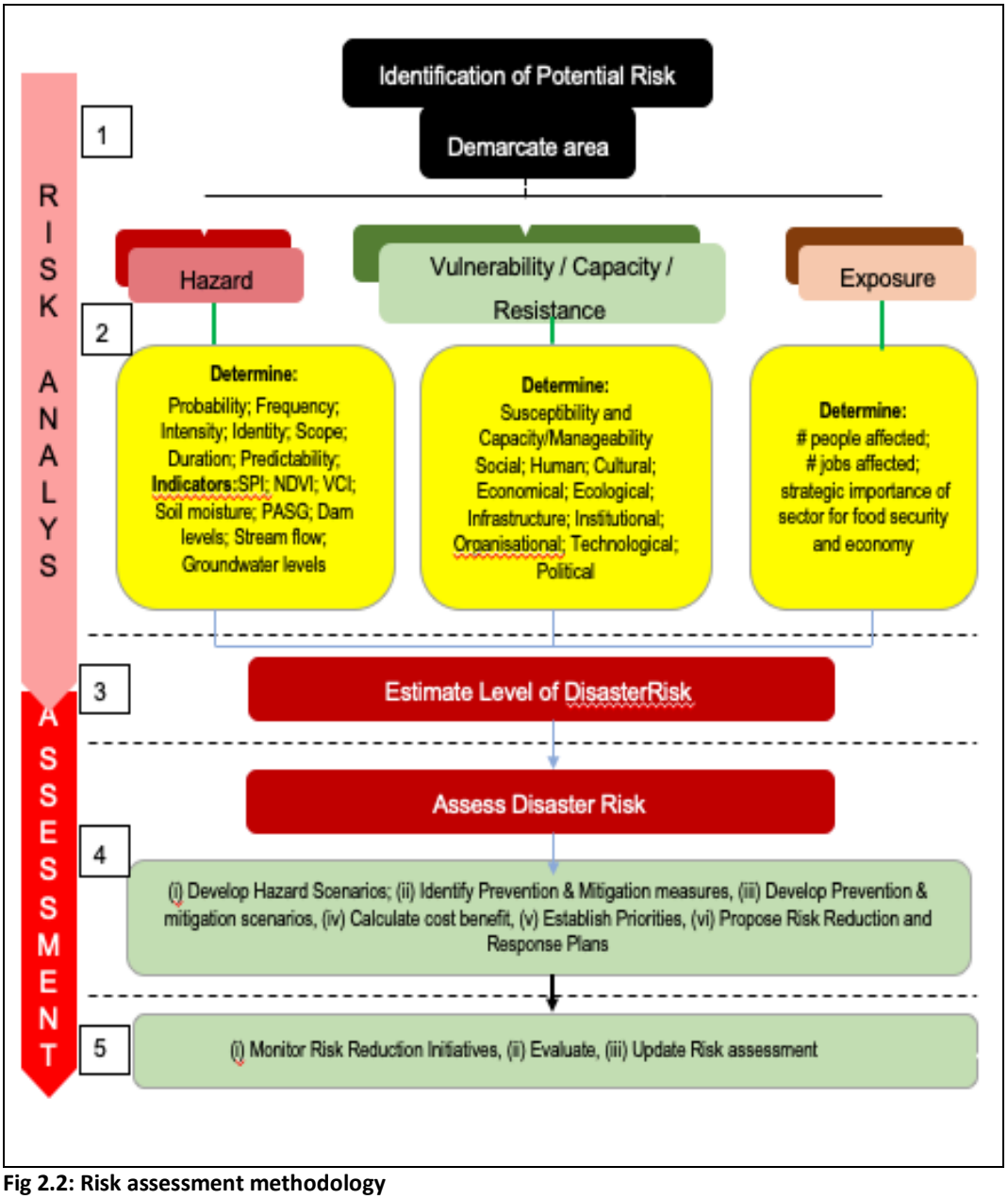


Fig 2.2: Risk assessment methodology

2.1.5

2.1.5 Link with Disaster risk management Planning

s7(2)(f)(ii), s7(2)(j), s20(1)(a), s20(2), s 33(1)(i–iii), s33(2), s 47(1)(a)(i–iii),

The findings of stages 2 and 3 will directly inform the development of a Level 1 Disaster risk management Plan (the first level of the planning process) as well as components of a Level 3 Disaster risk management plan by identifying:

i. Known priority risks for contingency planning.

s 47(2)

ii. Priorities for vulnerability reduction planning.
iii. High-risk areas, communities and households exposed to multiple risks and high-risk developments require further evaluation and prioritisation through focused comprehensive disaster risk assessments (see subsection 3.1.1.2).

The outcomes of Stage 4 will directly inform the development of a Level 2 and Level 3 Disaster risk management Plan (see subsection 3.1.1.2).

2.1.6 Community-based Disaster Risk Assessment

2.1.6

In accordance with the Act's intent to increase local capacity to minimise the risk and impact of disasters, disaster risk assessment efforts must actively include the participation of vulnerable communities and households, including physically isolated and traditional communities and female-headed and child-led households. The information collected using more technically sophisticated methods employed by risk scientists can be significantly enhanced by local and indigenous knowledge of disaster risk management. In addition, the active engagement of special needs groups, such as women, children and the elderly, 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.

Application of the Pressure and Release (PAR) model by identifying dynamic pressures and unsafe conditions within communities is easily understandable by most vulnerable communities. Unpacking causal factors and resulting impacts are concepts easy to understand and explain in practical terms.

2.1.7 Sourcing Additional Information when Undertaking a Disaster Risk Assessment

2.1.7

Information on specific disaster risks is often fragmented. Therefore, government departments or commissioned agents undertaking specific disaster risk assessments must undertake and document the following when doing an assessment:

s 20(1)(a)(i–ii)

i. Do an audit of past significant events and events classified as disasters. A review of previous small and medium-size events and declared disasters, where relevant, can identify areas and communities most at risk and help focus more detailed disaster risk assessment efforts. A review of newspaper articles may facilitate this.
ii. Consult with community members and traditional leaders in areas affected by past events for information on the frequency and severity of events classified as disasters, significant events and recurrent small-scale occurrences. Locate these events on a user-friendly map and record them on a graph to show seasonality/change over time.
iii. Consult with long-standing members of emergency services, the South African Red Cross Society, the Salvation Army or other humanitarian assistance organisations who can remember or have recorded ten years or more of past disaster responses.
iv. Consult with specialist research commissions, universities and the private sector and obtain existing or past research reports.
v. Check with the appropriate ministries for information or relevant research that may have already been carried out or commissioned.
vi. Consult with the (re-)insurance industry and other organisations offering risk transfer mechanisms.

2.1.8 Selecting Disaster Risk Assessment Methods and Approaches

2.1.8 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). The different methods can be categorised as follows:

i. Quantitative Risk Assessment – The best and most accurate assessment, but it requires quantitative data for calculations.
ii. Event tree analysis – Analyse and identify causal factors which are suitable for participatory community analysis.
iii. Risk matrix approach – focus primarily on hazard threat by showing probability and impact on a hazard threat matrix.
iv. Indicator-based approach – the most common method used in the absence of quantitative data. Ideal for the analysis of vulnerability and resilience. It is essential to apply indices with standardised index thresholds.

Table 2.2 provides examples of different types of risk and appropriate disaster risk assessment methods and expertise required.

Table 2.2: Types of disaster risk and disaster risk assessment methods

Types of risk	Possible disaster risk assessment focus	Expertise
Cholera risk in an isolated area known to be cholera-prone	• Epidemiological risk assessment • Environmental health assessment • Groundwater evaluation	• Public health specialists • Environmental health specialists • Sociologists
Drought risk in a rural community	• PRA/livelihoods analysis/focus group interviews • Historic rainfall information, history of drought and impacts • Remote-sensed information on vegetation and cloud cover	• Rural development facilitators • Agricultural specialists • Public health specialists • Climate scientists
Drought in urban areas	• Water supply/demand ratio • Water infrastructure adequacy • Water leakages	• Engineers • Economists
Flood risk in a developed estuarine area	• Flood hydrology and hydraulics analysis • Ecological and environmental assessment • Socio-Economic impact analysis • Infrastructure impact analysis	• Environmental and hydrological specialists • Structural engineers • Economists • Sociologists
Flood risk in rural and agricultural area	• Flood hydrology and hydraulics analysis • Ecological and environmental assessment • Socio-Economic impact • Infrastructure impact	• Environmental and hydrological specialists • Structural engineers • Agricultural economists • Sociologists
Fire risk in a large informal settlement	• Historic and seasonality review of past fire events graphed or mapped over time • Aerial photographs to indicate density or other spatial changes over time • Participatory rural appraisal (PRA)/livelihoods analysis/focus group interviews • Demographic and socio-economic analysis	• Urban development facilitators/planners • Fire prevention specialists • Social scientists
Geological disasters such as sink holes and earth quakes	• Geological formations • Mine activity	• Geologists • Town planners • Engineers
Wild fire risks	• Fuel load • Historic data on fire origins	• Fire prevention specialists • Fire fighting units

	• Garbage dumps	
Wind storm or tornado risk in a rural area	• Consultation with local leadership • History of past events • Historic climatology and seasonal analysis	• Indigenous knowledge • Community facilitators • Climate scientists
Pandemic / Epidemic	• International best practice and WHO guidance • Health related data • Vulnerable groups to threat • Health facilities to cope with threat	• Medical experts • Social scientists • Economists

2.1.9

2.1.9 National Standard for Assessment of Priority Disaster Risks

The national disaster management framework prioritises a uniform approach to disaster risk management and provides a national standard to assess priority disaster risks. This is necessary for managing cross-boundary risks and consolidating risk and disaster loss information from different sources. In this context, the framework foresees the development of a national standard for the assessment of priority disaster risks as well as guidelines developed by the NDMC for assessing priority disaster risks in national, provincial and municipal spheres.

The NDMC should establish and support a task group consisting of experts to continuously develop, monitor and capture standards and guidelines for:

i. Risk assessment methodology
ii. Indicators and indicator thresholds for major hazards
iii. Indicators and indicator thresholds for the measurement of vulnerability
iv. Indicators and indicator thresholds for the measurement of coping capacity and management
v. Indicators and indicator thresholds for the measurement of exposure

National standards and guidelines for assessing priority disaster risks should be monitored as follows:

i. The NDMC must review all proposed disaster risk assessments planned by national and provincial state organs before commissioning the assessments.
ii. The NDMC and the appropriate PDMC must review all proposed disaster risk assessments planned by metroploitan municipalities before commissioning the assessments.
iii. The appropriate PDMC must review all proposed disaster risk assessments planned by district municipalities prior to the commissioning of the assessments.
iv. The appropriate MDMC must review all proposed disaster risk assessments planned by local municipalities prior to the commissioning of the assessments.

2.1.10

s 20(1)(a)(i–ii)

2.1.10 Consolidation and Classification of Disaster Risk Information

Hazard and vulnerability assessment findings must be consolidated according to uniform classifications. This facilitates integrated multisectoral planning across government departments and with other partners. It also supports risk management cooperation between administrative areas (for example, two or more district municipalities) affected by the same risk. The recent United Nations Office for Disaster Risk reduction (DRR) classification of hazards is shown in Table 2.3 (UNDRR, 2020).

Table 2.3: Hazard typology (UNDRR, 2020)

Hazard cluster	Source	Examples
Meteorological and hydrological hazards	State and behavior of Earth's atmosphere, its interaction with land and oceans, the weather and climate it produces, and the resulting distribution of water resources	Drought, floods, heatwaves, cyclones,
Extraterrestrial hazards	Originating outside the Earth.	Asteroid and meteorite impacts, solar flares. Solar flares have potential to cause widespread disruption and damage to communications satellites, power transmissions, resulting in large economic losses.
Geohazards	Hazards with geological origin and classified in 3 classes namely seismogenic and volcanogenic, which are the result of the Earth's internal geophysical processes. Shallow geohazards is the result of surface and near-surface processes	Eartquakes, ground shaking, subsidence or ground rupture and can trigger tsunami and rock-falls. Lava flow, rockfall, ashfall and ground gasses. Sinkholes from mining or coastal erosion
Environmental hazards	Degradation of natural systems and ecosystem services. Ecosystem services include air, water land, biodiversity and some key earth processes threatened by environmental degradation.	Biodiversity loss, land salination, destruction of coastal and marine ecosystems, air pollution, water pollution, plastic pollution, deforestation
Chemical hazards	Use of chemicals increased dramatically the past decades. Organic and inorganic chemical substances cause health impacts	Explosions, pollution, chronic sickness
Biological hazards	Covers a range of hazards from organic origin including pathogenic microorganisms, toxins and bioactive substances, bacteria, viruses, parasites Some can originate from venomous animals and mosquitos such as malaria	Epidemics, pandemics, locusts, malaria outbreaks, cholera outbreak, virus outbreaks
Technological hazards	Complex with many subsystems. Failure of one element within the system has impacts that spread throughout the chain. Hazard is the result of failure of existing technology or emerging technology or human error in its management. Failure in power systems and transport system can lead to massive economic loss. Radiation and nuclear material spillage as result of accidents at nuclear plant can have disastrous effects. Information and communication technology disasters is a new threat in the 4IR environment.	Total power failure – black-out Failure in transport systems, nuclear radiation, air pollution, soil and water pollution. Communiation failure Cyber attacks
Societal hazards	Brought about entirely or predominantly by human activities and choices. Derived from socio-political activity, economic activity, cultural activity, human mobility and the use of	Within the security cluster domain: Xenophobia, civil strife and unrest, internal conflict.- secondary impacts

	technology, but also societal behavior. SFDRR does not refer to "armed conflict" and "civil strife", "social instability", but these hazards are recognized under the humanitarian law and national legislation. The secondary impacts such as IDPs might become a disaster management issue	Within disaster management domain: Secondary impacts of previously mentioned hazards, such as internally displaced persons (IDPs), temporary housing.

Vulnerability and resilience should be assessed as social, economic, political, environmental or physical (infrastructural). A more detailed classification for vulnerability and resilience indicators are the ten capitals, namely (i) social, (ii) human, (iii) cultural, (iv) economic, (v) infrastructure or build environment, (vi) natural environment and resources, (vii) technological, (viii) institutional, (ix) organizational, and (x) political. As vulnerability and resilience are often the significant drivers of disaster risk rather than external hazard threats, it is critical to identify these during a disaster risk assessment. This provides important insights for developing vulnerability reduction and resilience-building interventions that ultimately lower the levels of disaster risk.

2.1.11

2.1.11 Key Performance Indicators

s 7(2)(m), s 21

i. A national standard for conducting comprehensive disaster risk assessments has been generated by the NDMC and applied by organs of state.
ii. National guidelines for the application of a uniform disaster risk assessment methodology have been developed by the NDMC and applied by organs of state.
iii. A national standard for assessing priority disaster risks has been generated by the NDMC and applied by organs of state.
iv. National guidelines for assessing priority disaster risks in national, provincial and municipal spheres have been generated by the NDMC and applied by organs of state.
v. National guidelines for standardized indicators and indicator thresholds have been developed by the NDMC and applied by all disaster risk assessors.
vi. Disaster risk assessment legislation, policies, standards and implementation guidelines by national organs of state and their provincial counterparts have been developed and applied.
vii. Disaster risk assessments have been conducted and progressively integrated into the development plans of organs of state and other role players, with evidence of this seen in IDPs and annual reports submitted to the NDMC.

2.2

2.2 Generating Indicative and Comprehensive Disaster Risk Profiles

s17(1), s17(2)(a–c), s 17(2)(f)

The NDMC must establish the required capability to generate a national indicative and comprehensive disaster risk profile and maintain its dynamic character by continuously monitoring and updating it. The methodology for the indicative risk profile is described as the risk analysis in Figure 2.1. The methodology for the comprehensive risk profile includes the activities described in Step 4, Figure 2.1.

PDMCs and DDMCs should develop indicative risk profiles based on the risk analysis methodology and follow that up with a comprehensive risk profile that includes

scenario planning, cost-benefit analysis and risk prioritisation. PDMCs and MMDCs should provide the NDMC with information and data for developing national risk profiles.

2.2.1 Consolidating Information Across Sectors and Government Spheres

2.2.1

s 7(2)(i), s 15(1)(c)

Disaster risk assessment information generated by national and provincial departments, municipalities and other organisations must be consolidated by the NDMC to provide a National Indicative Disaster Risk Profile. This risk profile must include maps representing priority disaster risks affecting South Africa and consolidated information on recorded losses for specific threats in each province. It is expected that uniform assessment information on priority disaster risks will be updated from the National indicative disaster risk profile. Priority risks for South Africa are viewed from different perspectives. For example, the World Economic Forum (WEF) identify South Africa's priority risks for 2022 as

(i) prolonged economic stagnation,
(ii) (employment and livelihood crises,
(iii) state collapse,
(iv) failure of public infrastructure, and
(v) proliferation of illicit economic activity.

The Institute for Risk Managers South Africa (IRMSA) identifies priority risks for 2022 as:

(i) state failure,
(ii) breakdown of legal and ethical principles across society,
(iii) unmanageable societal unrest,
(iv) breakdown of the rule of law,
(v) complete economic collapse,
(vi) lack of skills to enable economic growth and recovery,
(vii) large scale disruption of economic activity relying on a stable supply of utilities,
(viii) debilitating loss of trade benefits through SA ports into Africa, and
(ix) inadequate response to current and future climate change impacts.

The risks mentioned by the WEF and IRMSA are not the focus areas for disaster management. However, the disaster risk assessment should continuously consider those risks as they exacerbate the impacts of disaster risks and increase societal vulnerability. Risk assessment experts registered with DMISA should link with IRMSA to exchange information and risk assessment techniques.

The process of auditing and compiling information must be inclusive. The NDMC, PDMCs and DDMCs must contact specialist research units, private sector partners, government departments and committees, and other sources for relevant scientific reports and data on hazard and vulnerability patterns within their specific governance domain. They must also consult with NGOs, CBOs and traditional authorities on historical and changing risk patterns.

The respective profiles must consider the unevenness in the available hazard and vulnerability information quality and the dynamic nature of the risks they describe. In this context, the information provided at the national scale will not fully represent

risk conditions at provincial or municipal levels. However, establishing the national risk profile may lead to more detailed risk assessments at provincial and municipal levels.

2.2.2 Communicating the Indicative and Comprehensive Risk Profile

2.2.2

Geographic information systems (GIS), remote sensing and other specialized software represent a powerful tool for spatially representing hazard, vulnerability and consolidated risk information. The NDMC must, however, ensure that the data defined in GIS format is scientifically validated and sufficiently robust for inclusion in the profile.

The NDMC should develop and maintain an interactive web-based portal for disaster risk portal that allows users to analyse and interact with their area of interest. In addition, information from other sources, such as the National Integrated Water Management System (NIWIS), South African Weather Service, The Agricultural Research Council's UMLINDI report, the CSIR Greenbook and other information and data sources, should be integrated into a single disaster risk web platform.

2.2.3 Key Performance Indicators

2.2.3

i. Mechanisms to store, consolidate, document, map and make accessible information on South Africa's priority disaster risks have been established by the NDMC.
ii. Priority disaster risks of national significance have been identified and mapped by the NDMC.
iii. Procedures to consolidate, map, update and make accessible information on South Africa's priority disaster risks have been established and documented by the NDMC.
iv. Disaster risk assessments are considered in spatial development planning at all governance levels.
v. An integrated inter-active web-based disaster risk platform is established and accessible by the public.
vi. NDMC developed guidelines for organs of state, NGOs and the private sector on who is responsible for what risk assessment and to what detail.

2.3 Comprehensive Risk Assessments

2.3

The indicative risk assessment is strictly referred to as risk analysis. In addition to the risk analysis, risk assessment requires scenario development, cost-benefit analysis, determining acceptable risk and prioritisation.

2.3.1 Scenario Planning

2.3.1

Scenario planning is an essential part of risk assessment. Organs of state should construct a worst-case, best-case and most probable scenario impact for each hazard threat within their functional area in practice and test mode for improvement. In addition, scenarios for disaster risk and response should be

2.3.2

developed for each hazard scenario (To be dealt with under KPA3 – DRR and KPA 4 – preparedness for response).

2.3.2 Cost-benefit Analysis

Cost-benefit is usually calculated in monetary terms, but it is also possible to determine the socio-economic impact or societal benefits. As a rule of thumb, disaster response is, on average, seven times costlier than risk reduction strategies
2.3.3 and plans. Therefore, the cost-benefit analysis will highlight the importance of DRR. State organs are encouraged to perform detailed cost-benefit analyses as part of risk assessments and before risk prioritisation.

s 7(1–2), s 39(2)(b–e)

2.3.3 Setting Priorities for Disaster Risk Management Planning

Although South Africa faces a broad range of disaster risks, it is impossible, given resource constraints, to address all potential threats simultaneously. Therefore, effective disaster risk management planning by all organs of state as well as other role players requires careful identification of priority disaster risks and the most
2.3.3.1 vulnerable areas, communities and households to these risks. Identifying priority disaster risks is informed by the disaster risk assessment findings obtained by taking the steps described in KPA 2.

s7(2), s 39(2)(b–e)

2.3.3.1 Identifying national priority disaster risks

Prioritisation of disaster risks is based on scenario development and cost-benefit analysis, which is part of the risk assessment process. Three important considerations inform national disaster priority setting, namely:

i. The expected magnitude for specific disaster types (variously referred to as 'impact', 'severity' or 'consequences' of a disaster).
ii. The expected frequency of specific types of disaster (variously referred to as 'the probability or 'likelihood' of a disaster).
iii. The expected manageability of specific types of disaster at provincial and municipal levels (which refers to 'how difficult it is to manage a disaster event, including the level of cross-sectoral management effort involved to reduce the risk).

While a wide range of different disaster events can occur at provincial and local levels, these are relevant as a national disaster risk management planning priority only when disaster risk assessments and/or ongoing risk monitoring processes indicate that:

i. A disaster event or process affects more than one province or exceeds the capabilities of a single province to manage it effectively.
ii. The same type of disaster event or process repeatedly occurs and at different times in more than one province with significant cumulative impacts on lives, property and the natural environment, but is not necessarily classified as a national disaster.

In this context, national disaster risk management priorities must focus on averting or limiting the impact of the following disaster risks:

i. Due to their scale and magnitude, wide-area events are likely to affect more than one province. These include extreme weather processes, such as cyclones, severe droughts, and riverine floods.
ii. Recurrent high- and medium-magnitude events occur in most provinces and may require national support and/or intervention. These include veld, urban fringe or large informal settlement fires. They can also include destructive wind storms, rainstorms and communicable disease outbreaks affecting people or livestock.
iii. Low-frequency/rare high-magnitude disaster risks with the potential for severe loss and require levels of specialist support possibly unavailable within a province. These include nuclear accidents, earthquakes, major transport disasters and maritime disasters such as severe oil spills.
iv. Disaster risks affect neighbouring countries and have consequences for South Africa. These include unplanned cross-border movements, as well as those events that require humanitarian or other relief assistance.

2.3.3.2 In implementing the Act, all national state organs must identify and prioritise those disaster risks relevant to their respective functional areas.

S7(2)

2.3.3.2 Identifying provincial and municipal priority disaster risks

While a wide range of different disaster events can occur at district municipality and municipal levels, they are relevant as a provincial disaster risk management planning priority only when a disaster risk assessment and/or ongoing risk monitoring processes indicate that:

i. Specific disaster risks affect more than one municipality or district municipality or exceed the capabilities of a single district municipality to manage it effectively.
ii. Disaster risk results in the same type of disaster repeatedly occurring at different times in more than one municipality or district municipality with significant cumulative impacts on lives, property and the natural environment, but that risk is not necessarily classified as a provincial disaster.

In this context, provincial disaster risk management priorities must focus on averting or limiting the impact of the following disaster risks:

i. Due to their scale and magnitude, wide-area events are likely to affect more than one district municipality. This includes extreme weather processes, such as cyclones, severe droughts, and riverine floods.
ii. Recurrent high- and medium-magnitude events occur in most district municipalities and may require provincial support and/or intervention. These include veld, urban fringe or large informal settlement fires. They can also include destructive wind storms, rainstorms and communicable disease outbreaks affecting people or livestock.
iii. Low-frequency/rare high-magnitude disaster risks with the potential for severe loss and require levels of specialist support possibly unavailable within a province. These include nuclear accidents, earthquakes, major transport disasters and maritime disasters such as severe oil spills.
iv. Disaster risks affect neighbouring provinces and countries and have consequences for the province. These include spontaneous cross-border movements and events that require humanitarian or other response and relief assistance.

2.3.4 In implementing the Act, all provincial organs of state must identify and prioritise those disaster risks relevant to their respective functional areas.

39(2)(c), s 39(2)(e–f), s 39(2)(h), s53(2)(c), s 53(2)(e–f)

2.3.4 Identifying the Most Vulnerable Areas, Communities and Households

Not all areas, communities and households face the same disaster risks. Therefore, in undertaking disaster risk management planning, priority must be placed on those

2.3.5 areas, communities and households exposed to natural or other threats and with the least capacity to resist and recover from the resulting impacts. These are called at-risk areas, communities or households.

2.3.5 Determine Acceptable Risks

Acceptable risk is the level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions. Acceptable risk is also used to assess and define the structural and non-structural measures needed to reduce possible harm from any hazard to people, property, services and systems to a chosen tolerated level or according to codes or accepted practice. Acceptable risk also considers known probabilities of hazards.

Depending on the conditions, a risk might be acceptable when:

i. It falls below an arbitrarily defined probability;
ii. It falls below some level that is already tolerated;
iii. It falls below an arbitrary defined attributable fraction of total hazard impact in the community;
iv. The cost of reducing the risk would exceed the costs saved;
v. The cost of reducing the risk would exceed the costs saved when the "costs of suffering" are also factored in;
vi. The opportunity costs would be better spent on other, more pressing, hazard threats;

2.3.6

vii. Experts and professionals say it is acceptable;
viii. The general public says it is acceptable (or, more likely, does not say it is not); and
ix. Politicians say it is acceptable.

SFDRR priority 3

2.3.6 Identify Risk Transfer Mechanisms

Organs of state at all governance levels, private sector and communities should actively explore risk transfer mechanisms such as innovative insurance schemes, risk sharing schemes, and risk retention mechanisms. Risk transfer can occur informally within the family, and community networks where there are reciprocal expectations of mutual aid by means of gifts or credit, or formally, wherein organs of state, insurers, banks and other risk-bearing entities establish mechanisms to help cope with disaster losses. Such mechanisms include insurance and reinsurance contracts, catastrophe bonds, contingent credit facilities and reserve funds, covering the costs of premiums, investor contributions, interest rates and past savings.

Disaster management centres and organs of state responsible for risk assessment and disaster risk management planning should actively explore potential risk transfer mechanisms jointly with communities and the private sector.

2.3.7

s 20(1)(a)(i– ii),
s 33(1)(a)(i–ii),
s 47(1)(a)(i–ii)

2.3.7 Updating a Comprehensive Disaster Risk Assessment

Disaster risk is driven by a combination of hazard and vulnerability processes, including changing land use patterns, infrastructure development/maintenance, urban growth and settlement densification. Similarly, household size and composition, health status and level of livelihood security affect the household's potential for loss. Some risks, particularly those triggered by climate processes, must be reviewed seasonally before the rainy season or hot summer months. Other risks, such as riverine flood risk, require extensive flood hydrology investigations and may be undertaken once in 10 years. National, provincial and municipal organs of state must seek technical advice from recognised risk specialists to determine the need for updating a comprehensive assessment for a specific threat.

National, provincial and municipal organs of state responsible for reducing and managing specific risks must review the National 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.

2.3.8 The NDMC should develop guidelines that demarcate functional areas to limit duplication and promote integration. Some functional areas might require integration, and state organs should ensure the integration of assessments with the NDMC responsible for coordination.

2.3.8 Responsibility for Monitoring and Updating Disaster Risk Information

National and provincial organs of state and other specialist role players with responsibilities for reducing and managing disaster risks must have clear mechanisms for:

i. Accessing and updating relevant hazard and vulnerability information on disaster risks specific to their functional areas
ii. Making this information available to the NDMC.

In addition, national, provincial and municipal disaster management centres must:

i. 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, coastal threats, drought and epidemics
ii. Develop and implement clear mechanisms for disseminating disaster risk assessment and monitoring information for ongoing planning, as well as for managing conditions of heightened risk
iii. Establish clear procedures for accessing, interpreting and disseminating timely weather information, particularly when this is associated with potentially

endangering rapid-onset storm or cyclone processes, hot, dry temperatures, strong winds, heavy rainfalls or snow, ice or fog conditions

2.3.9

iv. Ensure that the disaster risk and response information management systems implemented by the various disaster management centres are managed by skilled individuals with both information technology capabilities and disaster risk analytic skills.

2.3.9 Key Performance Indicators

i. National and provincial departments responsible for reducing and managing disaster risks specific to their functional areas have established clear and documented mechanisms for rapidly accessing and updating relevant hazard and vulnerability information and making it available to the NDMC.

ii. National, provincial and municipal disaster management centres, as well as all organs of state in all spheres of government, have established and documented clear mechanisms for accessing, consolidating and updating relevant information on hazards, vulnerability and disaster occurrence from partners responsible for monitoring specific risks.

iii. National, provincial and municipal disaster management centres and all organs of state in all spheres of government have established and documented clear mechanisms for disseminating disaster risk assessment and monitoring information for ongoing planning and managing conditions of heightened risk.

iv. National, provincial and municipal disaster management centres have established and documented clear procedures for accessing, interpreting and disseminating early warnings of both rapid- and slow-onset hazards.

v. Organs of state determined acceptable risks for known hazards.

vi. State organs provide evidence that they actively explored and implemented risk transfer mechanisms.

2.4

vii. NDMC developed and maintained an integrated, real-time disaster risk monitoring and early warning capacity.

2.4 Monitoring, Analysing and Disseminating Disaster Risk Information

2.4.1

s17(1), s 21, s 34, s 48

This section deals with dynamic and real-time disaster monitoring and risk assessment.

2.4.1 Monitoring Disaster Risks

Just like other risks, disaster risks are not static. They change seasonally and over time. To recognise such changes and to strategically adjust programmes accordingly, all organs of state must have monitoring systems in place that are relevant to their specific functional responsibilities. Information and data custodians such as state organs and other organisations should provide the information obtained in their monitoring systems to the NDMC. The NDMC is responsible for developing the capacity to maintain an all-hazard integrated disaster risk assessment platform based on information and data provided by information and data custodians.

The integrated system forms the basis for early warnings of, or alerts for, upcoming significant events or disasters. They are also essential for monitoring the

effectiveness of ongoing disaster risk reduction efforts. Risk monitoring systems involve:

2.4.1.1

i. hazard tracking
ii. vulnerability monitoring
iii. disaster event tracking.

2.4.1.1 Hazard monitoring and tracking

Hazard tracking systems monitor the physical phenomena that can trigger disaster events. They include systems that provide seasonal and early warning information on approaching adverse weather conditions. For example, systems that track the seasonal build-up of grass fuels over large areas provide critical warning information on potential veld fire conditions. Drought, for example, is a slow onset disaster which should be monitored as it progresses.

2.4.1.2

The NDMC should develop the system and capacity for real-time hazard monitoring, which is essential for adequate early warnings.

2.4.1.2 Vulnerability monitoring

Vulnerability monitoring systems track the ability of areas, communities, households, critical services and natural environments to resist and withstand external threats. Censuses, regular poverty surveys, nutritional surveys and information collected from health clinics provide important insights into changing social vulnerability patterns in at-risk communities (for example, an increase in the number of child-headed households or elderly adults with dependants). As this information is often routinely collected by government services, special surveys or parallel monitoring initiatives are not usually required to gather it.

2.4.1.3

These quantitative data must be supported by qualitative information that tracks local capabilities to absorb recurrent shocks and stresses and local capacities to resist and recover from external threats.

2.4.1.3 Disaster event tracking

Disaster event tracking systems monitor changing patterns in disaster risk. Increasing or decreasing frequencies of unclassified disaster incidents are sensitive indicators of changing risk patterns in at-risk areas. For instance, a rising incidence pattern of small and medium-sized informal settlement fires may represent an early warning of accumulating risks, resulting in a more serious and destructive fire event. It 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.

2.4.2

s20(1)(a)(i– ii),
s 33(1)(a)(i–ii),
s 47(1)(a)(i–ii)

2.4.2 Responsibility for Monitoring and Updating Disaster Risk Information

National and provincial organs of state and other specialist role players with responsibilities for reducing and managing disaster risks must have clear mechanisms for:

i. Accessing and updating relevant hazard and vulnerability information on disaster risks specific to their functional areas.
ii. Making this information available to the NDMC.
iii. Ensure integration of functional areas if it is required.

In addition, national, provincial and municipal disaster management centres must:

i. 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, coastal threats, drought and epidemics.
ii. Develop and implement clear mechanisms for disseminating disaster risk assessment and monitoring information for ongoing planning and managing conditions of heightened risk.
iii. Establish clear procedures for accessing, interpreting and disseminating timely weather information, particularly when this is associated with potentially endangering rapid-onset storm or cyclone processes, hot, dry temperatures, strong winds, heavy rainfalls or snow, ice or fog conditions.

2.4.3

iv. Ensure that the disaster risk information management systems implemented by the various disaster management centres are managed by skilled individuals with both information technology capabilities and disaster risk analytic skills.

2.4.3 Integrating Disaster Risk Information

The integration of disaster risk information is paramount for efficient early warning systems. Organs of state and other organisations (private, international, NGO's) monitor and collect data and information for disaster risks in their functional areas. The NDMC should coordinate and integrate disaster risk data into a single information management system that allows for all-hazard analysis and, ultimately, an integrated early warning system.

2.4.4

2.4.4 Analysing Real-time Disaster Risk Information

Analysis of real-time disaster risk information is a prerequisite for informed early warnings. The expertise to analyse the information and data is most probably within line departments, research organisations, and the private sector. Different organisations and data providers should provide real-time information and early warnings. For example, the SAWS provides "Severe Weather Warnings" that are issued as impact-based warnings from Level 1 to Level 10 for, but not limited to; Disruptive Rain, Damaging Winds, Severe Thunderstorms, Disruptive Snow, Damaging Waves, Storm surges, Reduced Visibility. In addition, the following should ensure the capacity for informed analysis:

i. The NDMC to establish a disaster risk and response analysis task team consisting of experts who regularly participate in the analysis of disaster risk data and information.
ii. Organs of state should delegate experts to contribute to the regular analysis of disaster risk data and information.

2.4.5

s 7(2)(m), s 21

iii. NDMC to develop and maintain a roster and network of experts who may contribute to the disaster risk analysis on a system that allows different teams of experts to replace each other.

s 17(1)(a)

2.4.5 Key Performance Indicators

s 17(1), s 30(1)(c), s 32(1)(b), s 44(1)(c), s 46(b)

i. Disaster risk assessments undertaken show documented evidence of:
    a. Capacity building and skills transfer
    b. Ground-truthing (based on the actual situation 'on the ground' or verified by those being assed), through field consultations in the areas and with communities most at risk from the threats being assessed.
    c. Consultation with appropriate governmental and other stakeholders about the design and/or implementation of the disaster risk assessment and the interpretation of the findings.

s 17(1)(d), s 17(2)(e), s 33(1)(a)(iv), s 35(1), s 47(1)(a)(iv), s 49(1)

ii. The methodology and results of the disaster risk assessment have been subjected to an independent technical review process and external validation before:
    a. The publication or dissemination of hazard, vulnerability or risk maps and/or reports for planning purposes
    b. The implementation of disaster risk reduction or other initiatives based on the disaster risk assessment results.
iii. Before implementation, disaster risk assessments show documented evidence of technical consultation with the appropriate disaster management centre(s).
iv. NDMC developed and maintained the capacity for real-time hazard monitoring.

2.5

v. NDMC develop and maintain a system for integrating disaster risk monitoring into a single disaster risk platform, accessible to the public.

s 56(4)(a–c), s 57(a–c)

vi. NDMC developed and maintained a roster and network of experts for disaster risk data and information analysis.

2.5 Conducting Quality Control

2.5.1

Disaster risk assessments must be robust and reliable to inform disaster risk reduction planning.

2.5.1 Disaster Risk Assessments Responsibility

Disaster risk assessments almost always require specialist input. This applies to characterising the hazard conditions that can trigger loss and understanding the vulnerability factors that increase the severity of the impact.

There are many research institutions, government departments and private companies in South Africa with expertise in assessing and managing different types of risk. However, when working with technical specialists, state organs must define terms of reference that specify feedback, consultation, skills transfer and capacity-building processes by the specialists commissioned. This is particularly important given the complex character of hazard and risk science for non-specialists and the serious legal and other implications of disseminating incorrect or unverified disaster risk assessment findings, which then inform planning decisions.

In South Africa, disaster risks are more significantly shaped by social, economic and environmental conditions than external threats. It is therefore critical that disaster risk assessments should be ground-truthed (that is, based on the actual situation '*on the ground*'), with field consultations in areas and communities most at risk. The drought plan, for example, provides for a system of reference farms and reference units that provides "*ground truth"* information regularly.

Field consultation increases the accuracy of the disaster risk assessment findings, provides insight into the vulnerability conditions that can potentially be reduced, and builds a greater sense of responsibility for 'sharing the risk' among the communities affected. In this context, the assessment process must include respectful pre-assessment consultation with the affected communities before the arrival of external assessment teams to build a cooperative partnership.

2.5.2 Community-based disaster risk assessment is often the best way to conduct risk assessments since communities understand the risk and take ownership of the risk assessment and future risk reduction plans. Experts or skilled staff should lead and facilitate the process of community risk assessment.

2.5.2 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 national, provincial and municipal area planning:

2.5.2.1

i. Establishment of a technical advisory committee.
ii. External validation or external peer review of methods and findings.

2.5.2.1 Technical advisory committee

The relevant sphere of government or organ of state that commissions 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. This applies mainly to national, provincial and large metropolitan disaster risk assessment processes. This committee can assist with the development of terms of reference, the monitoring of progress, and the validation and/or interpretation of the findings.

2.5.2.2

2.5.2.2 External validation process for methods and findings

At a minimum, all assessments carried out at national, provincial and municipal levels should be externally validated concerning the methods used and findings generated.

This external validation process should be undertaken before any programmes are implemented or before any maps or reports for planning purposes are published or disseminated. Such programmes, maps or reports are based on the assessment findings.

External validation of the findings should be undertaken with the input of nationally recognised specialists who may be drawn from specialist ministries, research institutions, NGOs or the private sector. The NDMC should provide a roster of experts suitably qualified and experienced to perform external validation.

2.5.3

s 7(2)(m), s 21

2.5.3 Key Performance Indicators

s7(2)(f)(i–iii)

i. Disaster risk assessments undertaken show documented evidence of:
ii. Community participation
iii. Stakeholder participation
iv. An advisory committee with technical expertise has been established and actively advises the relevant sphere of governance.
v. External validation of disaster risk assessments has been concluded.
vi. A roster of experts in disaster risk assessment has been developed with agreements from experts and relevant organisations.

s 20(1)(a)(i–ii), s 33(1)(a)(i–ii), s 47(1)(a)(i–ii), s 56(4)(a–c), s 57(a–c)

2.6 Guidelines to be Disseminated

i. National standards and guidelines for conducting comprehensive disaster risk assessments.
ii. National guidelines for applying a uniform disaster risk assessment methodology and standardising a format for disaster risk assessments.
iii. National standards and guidelines for assessing priority disaster risks in national, provincial and municipal spheres.
iv. National guidelines for the standardisation of disaster risk indicators and indicator thresholds

2.6

Relevant section of the Disaster Management Act, 2002 and SFDRR, 2015

3 Key Performance Area 3: Disaster Risk Reduction

Objective

Ensure all disaster risk management stakeholders develop and implement integrated disaster risk management plans and risk reduction programmes following the SFDRR. SFDRR S17 reads; "Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience".

s 25, s 38, s53 SFDRR s16,17,18

Introduction

The SFDRR expected outcomes S 16 stated, "*The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities, municipalities, provinces at the national and regional levels", and section 7 "There has to be a broader and a more people-centred preventive approach to disaster risk. Disaster risk reduction practices need to be multi-hazard and multisectoral based, inclusive and accessible in order to be efficient and effective".*

SFDRR s16

Successfully implementing the Act depends on preparing and aligning disaster management frameworks and plans for all spheres of government. The legal requirements for preparing disaster management frameworks and plans by national, provincial and municipal state organs are specified in sections 25, 38 and 52 of the Act. This KPA addresses requirements for disaster risk management planning within all spheres of government. It gives particular attention to the planning for and integrating the core disaster risk reduction principles of prevention and mitigation into ongoing programmes and initiatives.

SFDRR s7

Disaster Risk Reduction targets

The seven national targets for DRR in line with the SFDRR are:

i. Substantially reduce national disaster mortality by 2030, aiming to lower the average per 100,000 national mortality rate in 2020–2030 compared to 2005–2015.
ii. Substantially reduce the number of affected people nationally by 2030, aiming to lower the average national figure per 100,000 in 2020–2030 compared to 2005–2015.
iii. Reduce direct disaster economic loss to national gross domestic product (GDP) by 2030.

SFDRR targets

iv. Substantially reduce disaster damage to critical infrastructure and disruption of basic services, including health and educational facilities, and develop their resilience by 2030.
v. Substantially increase the number of stakeholders at all governance levels disaster risk reduction strategies by 2025.
vi. Substantially enhance international cooperation through adequate and sustainable support to complement national actions for implementing the present Framework by 2030.
vii. Substantially increase access to people to multi-hazard early warning systems and disaster risk information and assessments by 2030.

Outline

I. Section 3.1: Disaster risk management planning process.
II. Section 3.2: DRR strategy and plans.
III. Section 3.3: Integration of DRR plans with development planning.
IV. Section 3.4: Implementation and monitoring of DRR plans.
V. Section 3.5: KPIs and guidelines.
VI. Section 3.6: Guidelines

An illustration of the structure for KPA 3 is shown in Figure 3.1.

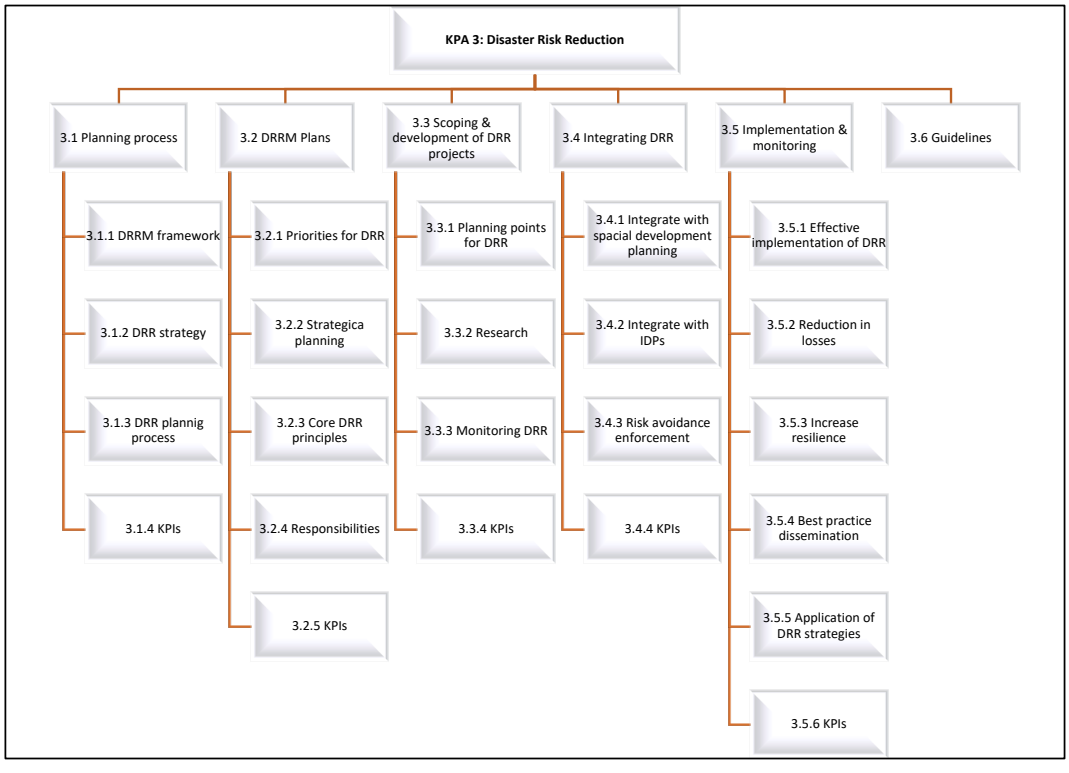


Fig 3.1: KPA 3 structure

3.1

3.1 Disaster risk management Planning

s 7(1)(a), s j19(a–f)

The NDMC must ensure that coherent and relevant disaster risk management planning is undertaken by national, provincial and municipal state organs, municipal entities and other institutional role players.

3.1.1

3.1.1 Disaster Management Frameworks and Disaster risk management Plans

Disaster management frameworks and disaster risk management plans are the strategic mechanisms through which disaster risk management action is coordinated and integrated across all spheres of government (see Figure 3.1).

s 7(1), s 28(1), s 42(1)

3.1.1.1 National, provincial and municipal disaster management frameworks

The Act requires the development of one national disaster management framework, a provincial disaster management framework for each province and disaster management frameworks for all district and metropolitan municipalities.

In all spheres of government, the disaster management framework is the guiding and coordinating policy instrument for ensuring an integrated and uniform approach to disaster risk management by all state organs and other institutional role players. This includes, among others, NGOs, the private sector and institutions of higher learning. In addition, with specific reference to district municipalities, the disaster management framework is the integrating instrument for consolidating individual municipalities' disaster risk management plans within the district.

Each disaster management centre in the respective sphere of government is responsible for consultatively facilitating the development of the disaster management framework in its area of jurisdiction and subsequently amending it in consultation with key stakeholders.

s 7(2)(a–m)

Provincial and municipal disaster management frameworks must be consistent with the national disaster management framework and must:

i. Establish institutional foundation for disaster risk management, including formal consultative processes that provide for participative planning.
ii. Define an appropriate vision and approach to disaster risk management for the area concerned through consultations with stakeholders.
iii. Define processes for undertaking appropriate disaster risk assessments for the areas in which they will be implemented.
iv. Specify disaster risk reduction and contingency planning arrangements, including response and recovery planning.
v. Establish an integrated supportive disaster risk information system
vi. Identify processes for building public awareness capabilities and supporting relevant education, training and research initiatives.
vii. Define supportive funding arrangements for implementing disaster risk management

3.1.1.2 Disaster risk management plans

3.1.1.2

s 25(1–2), s 38(1–2), s 53(1–3)

All national, provincial and municipal organs of state, municipal entities and other institutional partners identified as key role players in disaster risk management are 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:

i. There is considerable unevenness in disaster risk management planning capacity and experience, especially across the district and local municipalities.
ii. National and provincial state organs engaging seriously with disaster risk management for the first time will require careful consultation before developing a comprehensive disaster risk management plan.

The national disaster management framework prescribes a phased approach to disaster risk management planning and implementation. It comprises three progressive steps from a level 1 disaster risk management plan to a level 3 plan. Completing each disaster risk management plan will yield indicative information about common vulnerabilities in communities, local areas or provinces. Therefore, IDP planning processes and projects should consider the disaster risk management plan.

The requirements for each disaster risk management plan and the steps to develop the different levels are detailed in priority guidelines distributed by the NDMC to all stakeholders. The implementation of these plans will form an integral part of the implementation strategy of the Act.

3.1.1.2.1 Level 1 Disaster risk management Plan

A level 1 disaster risk management plan apply to national or provincial organs of state and municipal entities that have not previously developed a coherent disaster risk management plan. It focuses primarily on establishing the institutional foundation for disaster risk management and developing contingency plans for known priority threats identified in the initial stages of the disaster risk assessment. In addition, it should identify key governmental and other stakeholders and develop the capability to generate a level 2 disaster risk management plan.

3.1.1.2.2 Level 2 Disaster risk management Plan

A level 2 disaster risk management plan applies to national, provincial and municipal organs of state that have established institutional foundations and linkages and are building the essential support needed to carry out comprehensive disaster risk management activities. It includes establishing processes for a comprehensive disaster risk assessment, identifying and establishing formal consultative mechanisms for developing disaster risk reduction projects and introducing a supportive information management and communication system and emergency communications capabilities.

3.1.1.2.3 Level 3 Disaster risk management Plan

A level 3 disaster risk management plan should be developed by national, provincial and municipal organs of state that have established the institutional foundations

and linkages for disaster risk management and essential supportive capabilities. The plan must specify detailed institutional arrangements for coordinating and aligning the plan with other governmental initiatives and plans. It must also show evidence of informed disaster risk assessment, ongoing disaster risk monitoring and analysis capabilities, and relevant developmental measures that reduce the vulnerability of disaster-prone areas, communities and households. The level 3 disaster risk management plan should be based on a comprehensive disaster risk assessment, which includes scenario planning, cost-benefit analysis and the identification of acceptable risk and risk transfer mechanisms. The level 3 disaster risk management plan should contain at least the following:

i. DRR plan
ii. Disaster response plans for identified hazards
iii. Pre-approved contingency plans for identified hazard threats
iv. Disaster recovery plans for all identified hazards

S19 The structure of the level 3 plan is explained in the guideline for disaster management plans .

S19 All national, provincial and municipal organs of state should submit to the NDMC, at a minimum, level 1 disaster risk management plans before the end of 2024. Level 2 plans should be completed by 2025. All national, provincial and municipal state organs should complete and submit Level 3 Disaster risk management plans for their functional area before the end of 2026. NDMC and PDMCs should update Level 1 plans before the end of 2023, Level 2 plans before end of 2024 and Level 3 plans before the end of 2025.

National, provincial and municipal organs of state must specify which one of the three specified disaster risk management planning levels is most appropriate for their respective capabilities, experience and functional responsibilities. They must also indicate proposed steps to allow progress to more advanced planning levels. Disaster Management Centres at national, provincial and municipal levels should complete plans according to requirements for all three levels.

Disaster risk management plans developed by municipalities must be incorporated into IDPs with adequate funding and implementation monitoring mechanisms.

3.1.2 Strategic Integrating Role of Disaster Management Centres

3.1.2

The national, provincial and municipal disaster management centres play important strategic roles in integrating disaster management frameworks, plans and actions between the three spheres of government and across sectors and other role players within spheres.

To achieve integration across and between spheres:

S19 The NDMC must:

i. Guide the development of disaster risk management plans and align these to ensure a coherent and uniform national approach to disaster risk management.

ii. Consult the ICDM and the NDMAF concerning the development of standard guidelines to inform uniform disaster risk management planning and implementation.

s 28(1–2)

The PDMC must:

i. Ensure that the provincial disaster management framework is consistent with the
s 37(1–2) national framework and the broader development goals, priorities, strategies and objectives specified for the province.
ii. Align the disaster risk management plans of provincial organs of state, their respective district and metropolitan municipalities, and other role players.
iii. Consult the PDMAF (or, in the absence of an advisory forum, an appropriate alternative consultative forum in the province) concerning the development of disaster risk management plans as well as guidelines.

s 42(1)

The MDMC must:

s 48(1)(a)(i) i. Ensure that the municipal disaster management framework is consistent with the national disaster management framework and the provincial disaster management framework of the province concerned, as well as the priorities, strategies and objectives specified in the municipality's IDP.
s 51 ii. Ensure that the municipality's disaster risk management plans are aligned with those of other organs of state and role players.
iii. Consult the MDMAF (or, in the absence of an advisory forum, an appropriate alternative consultative forum in the municipality) about the development of disaster risk management plans as well as guidelines.

Figure 3.2 illustrates the linkages between the national, provincial and municipal disaster management frameworks and disaster risk management plans across the spheres of government.

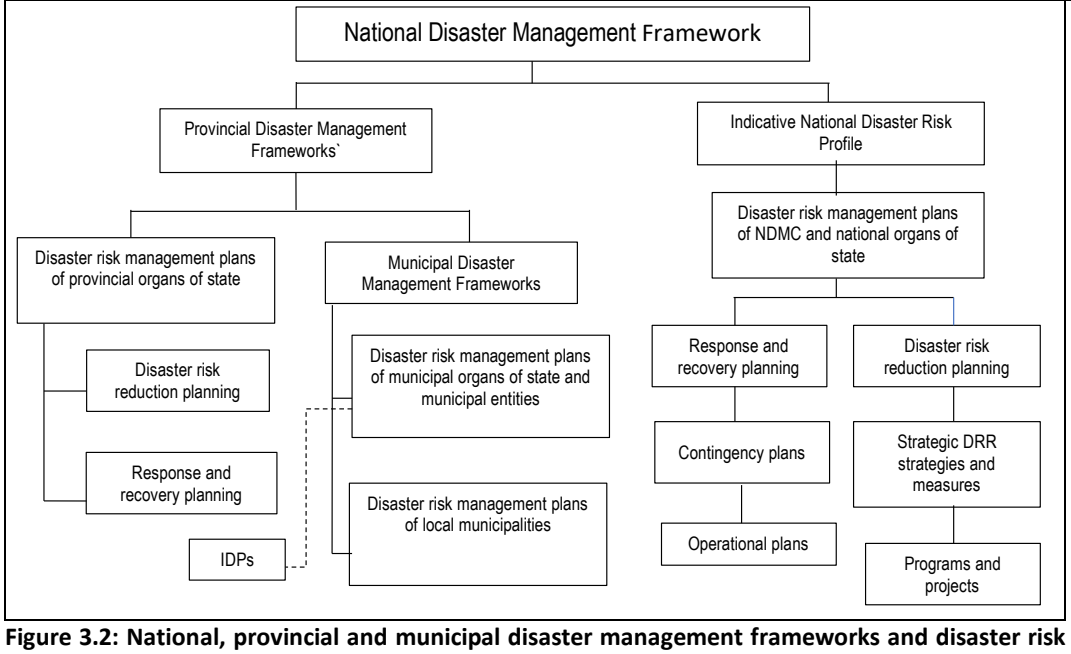


Figure 3.2: National, provincial and municipal disaster management frameworks and disaster risk management plans across the spheres of government

3.1.3

3.1.3 Key Performance Indicators

s 7(2)(m), s 21

s 6, s 28(1–2), s 42(1)

s 19(a–f)

i. The national disaster management framework is updated at least every ten years.
ii. Provincial and municipal disaster management frameworks are consistent with the national disaster management framework and are updated and submitted to the NDMC within two years of the national framework update.
iii. Disaster risk management planning guidelines have been developed, updated and disseminated by the NDMC.
iv. Disaster risk management plans have been updated and submitted to the NDMC by all relevant national, provincial and municipal organs of state and municipal entities.
v. National, provincial and municipal disaster management plans are revised at least two-yearly, as evidenced in annual reports submitted to the NDMC.
vi. Severe Weather Early Warnings are disseminated following recommendations by the South African Weather Service, the authoritative voice for issuing weather-related warnings for South Africa.

3.2

3.2 Disaster risk management planning

The guiding principles for DRR planning, adapted for South Africa from the SFDRR are the following:

i. All state organs are primarily responsible for preventing and reducing disaster risk, including through national, provincial and municipal transboundary and bilateral cooperation.
ii. The reduction of disaster risk is a common concern for organs of state, and disaster risk reduction policies and measures should be developed and implemented to further enhance resilience through integration and collaboration in sustainable developmental programs.
iii. Disaster risk reduction requires that responsibilities be shared by organs of state, societal and economic sectors and stakeholders as appropriate to their circumstances and levels of governance;
iv. Managing the risk of disasters is aimed at protecting persons and their property, health, livelihoods and productive assets, as well as cultural and environmental assets, while promoting and protecting all human rights, including the right to development;
v. Disaster risk reduction requires an all-of-society engagement and partnership. It also requires empowerment and inclusive, accessible and non-discriminatory participation, paying special attention to people disproportionately affected by disasters, especially the poorest. Gender, age, disability and cultural perspectives should be integrated into all policies and practices, and women and youth leadership should be promoted. In this context, special attention should be paid to the improvement of organised voluntary work of citizens;
vi. Disaster risk reduction and management depends on coordination mechanisms within and across sectors and with relevant stakeholders at all levels, and it requires the full engagement of all State institutions of an executive and legislative nature at national and local levels and a clear articulation of responsibilities across public and private stakeholders, including business and academia, to ensure mutual outreach, partnership, complementarity in roles and accountability and follow-up;
vii. While the enabling, guiding and coordinating role of the NDMC remain essential, it is necessary to empower local authorities and local communities to reduce disaster risk, including through resources, incentives and decision-making responsibilities, as appropriate;

viii. Disaster risk reduction requires a multi-hazard approach and inclusive risk-informed decision-making based on the open exchange and dissemination of disaggregated data, including by sex, age and disability, as well as on easily accessible, up-to-date, comprehensive, science-based, non-sensitive risk information, complemented by traditional knowledge;

ix. The development, strengthening and implementation of relevant policies, plans, practices and mechanisms must aim at coherence, as appropriate, across sustainable development and growth, food security, health and safety, climate change and variability, environmental management and disaster risk reduction agendas. Disaster risk reduction is essential to achieve sustainable development;

x. While the drivers of disaster risk may be local, national, regional or global in scope, disaster risks have local and specific characteristics that must be understood for the determination of measures to reduce disaster risk;

xi. Addressing underlying disaster risk factors through disaster risk-informed public and private investments is more cost-effective than primary reliance on post-disaster response and recovery and contributes to sustainable development;

xii. Effective and meaningful partnerships and the further strengthening of cooperation with national and provincial organs of state and municipalities, including the fulfilment of respective commitments of official development agendas, are essential for effective disaster risk management;

xiii. Vulnerable municipalities and communities facing specific disaster risk challenges need adequate, sustainable and timely support, including through finance, technology transfer and capacity building from national and provincial organs of state tailored to their needs and priorities, as identified by them.

3.2.1 Priorities for Disaster Risk Reduction Planning

3.2.1 For disaster risk management planning purposes, all national, provincial and municipal organs of state must, according to their functional area or area of jurisdiction, give priority to protecting:

s 7(1–2), s 39(2)(b–e)

i. Strategic infrastructure or lifeline services whose damage or disruption in disaster events would result in serious and widespread consequences.

ii. Critical economic, commercial, agricultural and industrial zones or sites with severe and widespread consequences would be damaged or disrupted.

iii. Fragile natural ecosystems and environmental assets offer protective ecological services and, if damaged or destroyed in a disaster event, would result in severe natural and economic losses.

s 7(2), s39(2)(b–e)

iv. Communities in areas exposed to extreme weather and/or other natural and technological hazards are likely to sustain severe human and property losses in a disaster.

39(2)(c), s 39(2)(e–f), s39(2)(h), s53(2)(c), s 53(2)(e–f)

v. Poor and under-served rural and urban communities, including informal settlements, especially those in fragile ecological areas, sustain repeated losses from recurrent small, medium, and significant disaster events and that lack insurance coverage to facilitate recovery.

vi. Highly vulnerable households in at-risk areas with limited capacity to resist or recover from external shocks, particularly child-headed households or those headed by the elderly or households affected by chronic illness.

Where possible, this process must take place in consultation with those most at risk.

3.2.2 Strategic Planning: Disaster Risk Reduction

3.2.2 In keeping with the Act's emphasis on disaster risk reduction and international best practices, strategic planning must focus on reducing disaster risks. This includes identifying strategies and measures that lessen the likelihood of harmful losses by avoiding endangering hazards or reducing vulnerability, increasing resilience, and increasing capacity to prepare for and enable timely response and recovery.

s 7(2)(b), s 39(2)(1), s 53(2)(i)

Disaster risk management involves a wide range of role players, especially since it requires a solid developmental focus that reduces the risk of disasters. In this context, different state organs' disaster risk management plans will necessarily differ in their emphasis on disaster risk reduction or on more operational response issues, depending on their respective functional areas.

3.2.3 Core Disaster Risk Reduction Principles of Disaster Prevention and Mitigation

3.2.3 All disaster risk management plans must prioritise the core principles of disaster prevention and mitigation. Internationally, disaster prevention, mitigation and preparedness are referred to as disaster risk reduction measures because they lessen the likelihood of harmful losses by avoiding endangering hazards or reducing vulnerability. In this way, prevention and mitigation 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 is preventive or mitigative. For this reason, it is more practical to refer to them jointly as disaster risk reduction measures because both minimise the risk of disasters.

3.2.3.1 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, essential public works and effective municipal services that factor in the frequency and severity of natural or other hazards and human actions. Examples include:

i. Replanting indigenous grasses or trees on a recently burned slope near roads or dwellings to stabilise the soil and prevent damaging land subsidence
ii. Locating critical rail, road and telecommunications structures behind a coastal 'set-back' line in areas exposed to storm surges to prevent disruption to essential services during violent summer or winter storms
iii. Careful positioning of storm-water drainage and its ongoing maintenance and protection of natural wetlands to prevent destructive flooding during heavy rain.
iv. Vaccination programs against epidemic and pandemic outbreaks.

Unfortunately, many small, medium and large disaster events cannot completely be prevented. Their severity can be reduced, however, through ongoing disaster mitigation efforts.

3.2.3.2 Disaster mitigation

Disaster mitigation refers to 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. These efforts can target the hazard or threat (for example, a fire break that stops a fire from spreading close to residential areas). This is often referred to as "structural mitigation", since it 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 and increasing resilience to a specific threat (for instance, promoting community responsibility for controlling fire risk in an informal settlement). This is often called "non-structural mitigation", as it promotes risk-avoidance behaviours and attitudes.

3.2.4 Key Performance Indicators

3.2.4

7(2)(m), s 21

i. National DRR strategies and plans are aligned with priority risks as indicated in the risk assessment.
ii. Provincial DRR strategies and plans are aligned with priority risks as indicated in the provincial risk assessment.
iii. Municipal DRR strategies and plans are aligned with priority risks as indicated in the municipal risk assessment.
iv. Provincial and municipal DRR plans are documented and submitted to the NDMC. Municipal DRR plans are incorporated in local IDPs.
v. National and provincial state organs have identified initiatives to reduce priority risks and documented them in annual reports submitted to the NDMC and consolidated by the NDMC in its annual report to the Minister.

3.3 Scoping and Development of Disaster Risk Reduction Plans, Projects and Programmes

3.3

s 7(2)(a),s 7(2)(b) s 7(2)(f), s 7(2)(k)

3.3.1 Eight Key Planning Points for Disaster Risk Reduction Projects or Programmes

3.3.1

s 19(a–b), s 19(e), s 20(1)(a–c)

Eight key planning points or requirements must be applied and documented by all national and provincial organs of state and municipal entities when planning disaster risk reduction initiatives. These enhance the established principles and approaches detailed in existing guidelines for integrated development planning.

3.3.1.1 Planning point 1: Use disaster risk assessment results to focus planning efforts

A reliable disaster risk assessment must inform disaster risk reduction efforts. This is essential for providing insights into recurrent threats' frequency, seasonality,

severity and spatial extent. It also includes detailed information on the social, environmental and economic vulnerability factors that increase losses.

3.3.1.2 Planning point 2: Establish an informed multidisciplinary team with the capacity to address the disaster risk and identify a primary entity to facilitate the initiative

Disaster risk reduction planning must be multidisciplinary and must draw on appropriate expertise. Consequently, disaster risk management is highly multidisciplinary, requiring technical expertise in hazard processes and an understanding of the complex social and economic conditions that drive disaster risk in vulnerable communities.

3.3.1.3 Planning point 3: Community involvement

Actively involve communities or groups at risk. Disaster risk reduction planning must involve constructive consultation between at-risk groups and/or communities and external service providers. Risk reduction initiatives are more effective when discussed and implemented collaboratively with those affected, as this allows for the inclusion of local knowledge and expertise.

3.3.1.4 Planning point 4: Address multiple vulnerabilities wherever possible

Multiple vulnerabilities can be addressed by:

i. Improving socio-economic conditions and building community cohesion.
ii. Ensuring the continuity of protective environmental services.
iii. Increasing resilience and/or continuity of public services and infrastructure to better respond to expected external shocks.

Disaster risk reduction projects and programmes must add value to other development initiatives. Risk reduction is a value-adding capability that aims to reduce disaster losses in vulnerable areas and groups. It is, therefore, more effective to implement broadly defined disaster risk reduction initiatives that add value to development programmes than specific 'disaster management projects.

3.3.1.5 Planning point 5: Plan for changing risk conditions and uncertainty, including the effects of climate variability

Disaster risk is highly dynamic and is driven by rapidly changing environmental, atmospheric and socio-economic conditions, of which population growth and urbanisation are the most significant contributors to increased risk. This requires that plans are robust enough to manage anticipated and expected threats and sufficiently adaptive to minimise the impacts of unexpected events or processes.

3.3.1.6 Planning point 6: Apply the precautionary principle to avoid inadvertently increasing disaster risk

Effective disaster risk reduction planning must apply the precautionary principle of "do no harm". This is because well-intentioned disaster risk reduction projects can inadvertently increase disaster loss potential by reconfiguring and accelerating risk

processes. The likelihood of negative consequences is reduced if a disaster risk assessment actively informs the planning process, a competent multidisciplinary team is established, and mechanisms for transparent community consultation are put in place

3.3.1.7 Planning point 7: Unintended consequences

Avoid unintended consequences that undermine risk-avoidance behaviour and ownership of disaster risk. The disaster risk reduction planning process must anticipate and manage unintended consequences that increase disaster risk. Well-intentioned disaster risk reduction programmes that "deliver" external services to at-risk areas, communities and households can inadvertently reward risk-promotive behaviour and undermine existing capabilities. For example, the repeated distribution of relief for recurrent threats such as fire, flooding and drought can discourage ownership of disaster risk by reinforcing the expectation of external support and transferring individual and/or household risk to governmental and humanitarian assistance agencies.

3.3.1.8 Planning point 8: Clear goals and targets

Establish clear goals and targets for disaster risk reduction initiatives and link monitoring and evaluation criteria to initial disaster risk assessment findings. Disaster risk reduction plans must define clear monitoring and evaluation criteria for measuring effectiveness. These must be linked to initial assessment findings to demonstrate the effectiveness of the specific initiative in reducing vulnerability or disaster loss. Assessment findings must also be used to highlight learning points for future projects and programmes.

3.3.2 Research

Disaster risk reduction initiatives must be preceded by transparent research and careful planning and must provide evidence of the relevance or likely effectiveness of the planned intervention(s).

3.3.2

s 25(1)(a)(i–ii), s 7(2)(b), s 7(2)(h), s 30(1)(b), s 38(1)(a)(i–ii), s 44(1)(b), s 52(1)(a)(i–ii), s 53(2)(c)

Robust research carried out as a prerequisite for any risk reduction intervention increases the likelihood of a successful programme. It also improves coordination across services and reduces the chance that resources are wasted in the long term. (See Enabler 2.)

3.3.3 Monitoring Effectiveness and Disseminating Results

3.3.3

s 21(a)(i) s 24(1)(b), s 24(1)(g), s 24(1)(i), s 34(a)(i–ii), s 36(1)(b)(i), s 48(1)(a)(ii), s 50(1)(b)(i)

As part of the annual reporting requirements specified in the Act, municipal and provincial disaster management centres must include documented accounts of the disaster risk reduction projects, programmes and initiatives planned and implemented, including those aimed at reducing vulnerability and loss for defined priority disaster risks. Numerous DRR projects exist within other organisations, and in most cases, it is not called DRR projects, but in essence, it is DRR. Examples are "Working For…." programs in DEFF, land degradation initiatives in DEFF, Landcare programs in Agriculture and many others. Almost all those projects are DRR projects. MDMCs, PDMCs and the NDMC should identify and acknowledge those as DRR. The

information gathered from PDMCs and MDMCs must be further consolidated by the NDMC in its annual report to the Minister and communicated accessibly via the NDMC's website.

3.3.4 Key Performance Indicators

3.3.4

i. Case studies and lessons learned in integrating disaster risk reduction measures with national, provincial and municipal initiatives have been documented and disseminated by the NDMC.

ii. Documentation, accessible to key stakeholders, demonstrates the effectiveness of disaster risk reduction measures for different risk scenarios.

s 7(2)(m), s 21

iii. The NDMC monitors the effectiveness of disaster risk reduction initiatives.

iv. NDMC to coordinate plans and actions between organs of state to prevent unnecessary duplication of DRR programs.

3.4 Inclusion of Disaster Risk Reduction Efforts in Other Structures and Processes

3.4

3.4.1 Integration of Disaster Risk Reduction with Spatial Development Planning

3.4.1

Disaster risk is driven by hazard and vulnerability factors reflected in spatial development frameworks. In addition, disaster risk assessment findings and ongoing monitoring information on disaster occurrence are directly applicable to spatial development planning. For this reason, provincial and municipal disaster management centres must establish mechanisms in association with spatial planners in both spheres 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.

s 39(2)(a)

3.4.2 Incorporation of Disaster Risk Reduction Planning into Integrated Development Planning

3.4.2

As disaster risk reduction efforts are medium- to long-term multisectoral efforts focused on vulnerability reduction, they must be incorporated into ongoing 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.

s 53(2)(a)

In addition, national, provincial and municipal organs of state must also test and evaluate specific disaster risk reduction initiatives before these are undertaken and implemented. This fosters innovation and cross-sectoral linkages at a small or local scale. It also assesses the vulnerability reduction potential, appropriateness, cost-effectiveness and sustainability of previously untested disaster risk reduction strategies before a more widespread programme roll-out or "scaling-up".

s 7(2)(h), s 20(1)(a–d)

Focused pilot projects are particularly applicable when investigating ways to:

i. Add value to an existing municipal, provincial or national programme (for example, weather-proofing homes and critical infrastructure in engineering projects planned for areas regularly exposed to extreme weather systems).
ii. Protect a specific at-risk group (for example, establishing evacuation procedures for school children attending schools in areas exposed to fire, flood or extreme weather systems).
iii. Introduce a new initiative or project to address a specific risk scenario (for example, the introduction of small-scale rainwater harvesting initiatives in areas repeatedly exposed to drought).
iv. Integrate disaster risk reduction with relief or recovery actions to identify opportunities for changing the underlying drivers of risk and possible unintended consequences (for example, the spatial reconfiguration of informal settlements to pro- vide fire breaks after large fires).
v. Investigate new approaches to promoting risk-avoidance attitudes and behaviour (for example, exploring a system of community or household incentives for "well-managed" risks rather than creating dependence on external relief).

Table 3.1 illustrates the role of hazard assessment in the IDP

Table 3.1: Role of Risk assessment in IDP

PHASE	ROLE OF HAZARD ASSESSMENT	
Preliminary Mission	Hazard-related objective:	To collect information to establish the presence of natural events in the study area and the limitations imposed by hazards.
	Effect on development planning activities:	Presence of hazards indicates the need for further qualitative and quantitative assessment of this potential effect on development.
Phase I: Development Diagnosis, Strategy Formulation, and Project Identification	Hazard-related objective:	To assess those hazards present in the study area and identify existing critical segments or elements of production facilities, infrastructure, and settlements (lifeline network mapping).
		To include vulnerability in the determination of development potential and strategy (for example, by identifying floodplains, landslide areas, incipient desertification).
		To identify alternative non-structural and structural mitigation measures in initial project identification.
	Effect on development planning activities:	Presence of hazards will affect the overall strategy. Hazard mitigation should influence identification of sectoral projects, particularly agriculture and infrastructure.
		Presence of hazards will affect the identification, type, and location of investment projects, which may require modification of the lifeline network.
Phase II: Action Plan Preparation Project Formulation	Hazard-related objective:	To determine specific mitigation measures for selected investment projects and identify critical elements of lifeline network disaster preparedness activities.
	Effect on development planning activities:	Presence of hazards will affect the action plan for project implementation, the specific site selection of investment projects at the local level, the project engineering design, and the economic feasibility.
Implementation	Hazard-related objective:	To follow through on implementation of mitigation measures and disaster preparedness.
	Effect on development planning activities:	Monitoring of natural phenomena for early warning against possible damage, and formulation of future risk assessment and disaster preparedness activities.

3.4.3

3.4.3 Risk Avoidance Enforcement Mechanisms

s 20(1)(a–d)

Critical components of effective disaster risk reduction are regulations, standards, by-laws and other legal enforcement instruments that discourage risk-promotive behaviour and minimise the potential for loss. Therefore, national, provincial and municipal organs of state must assess the disaster risk management component of existing policies, regulations, by-laws and other relevant legal instruments for their functional areas and introduce measures to ensure alignment with the requirements specified in the Act.

i. Within provincial and municipal spheres, this may involve:
ii. Amendment of urban planning standards.
iii. Amendment of land-use regulations and zoning.
iv. Amendment of minimum standards for environmental impact assessments.
v. Introducing standards for "risk-proofing" lifeline services and critical facilities from known priority disaster risks.
vi. Introduction of by-laws to implement extraordinary measures to prevent an escalation of a disaster or to minimise its effects.

3.4.4

3.4.4 Key Performance Indicators

s 7(2)(m), s 21

i. Mechanisms to disseminate experience from pilot and research projects that explore the vulnerability reduction potential, appropriateness, cost-effectiveness and sustainability of specific disaster risk reduction initiatives have been established.
ii. Risk-related information has been incorporated into spatial development frameworks.
iii. Projects and initiatives that include a focus on disaster risk reduction have been included in IDPs.
iv. Guidelines for incorporating disaster risk management programmes and initiatives into the activities of other national organs of state and key institutional role players have been consultatively developed and implemented.
v. Regulations, standards, by-laws and other legal instruments that encourage risk-avoidance behaviour have been enforced by national, provincial and municipal organs of state and documented in annual reports to the NDMC.

3.5

3.5 Implementation and Monitoring of Disaster Risk Reduction Programmes and Initiatives

3.5.1

3.5.1 Effective Implementation of Disaster Risk Reduction Programmes

s 34(a)(i–ii), s 36(1)(b)(i), s 48(1)(a)(ii), s 50(1)(b)(i)

The eight planning points outlined in subsection 3.3.1 above must also be applied when implementing disaster risk reduction programmes and initiatives. In addition, the monitoring processes and evaluations for disaster risk reduction initiatives targeted explicitly at at-risk communities must include qualitative and quantitative vulnerability reduction outcomes.

In addition, projects should comply closely with the goals, objectives, time frames and resource requirements identified in the planning process. Mechanisms must

also be established to allow for project adaptation and adjustment for unforeseen conditions and opportunities.

Municipal and provincial disaster management centres must include documented accounts of the disaster risk reduction projects, programmes and initiatives planned and implemented in their annual reports. This includes reports demonstrating the effectiveness of disaster risk reduction pilot projects and research initiatives and initiatives that aim to reduce vulnerability and loss for defined priority disaster risks.

3.5.2

3.5.2 Measurable Reductions in Small-, Medium- and Large-scale Disaster Losses

s 17(1)(a), s17(1)(c), s 17(2)(c), s 24(1)(c–e), s 36(1)(c–e), s 50(1)(c–e)

The Act specifies that national, provincial and municipal disaster management centres must incorporate in their respective annual reports, as well as in a disaster management information system, a report on disaster risk reduction initiatives undertaken. They are also required to report on disasters within their specific jurisdiction areas. In this context, national, provincial and municipal disaster management centres must report on the frequency and severity of small-, medium- and large-scale disaster events, especially those in communities and areas identified as high risk through disaster risk assessment processes. Significant changes in frequency and severity, type or location of occurrences must also be reported, including systematic accounts of recorded loss.

SFDRR s48(c)

Municipalities and provinces should capture baseline data aligned with the seven SFDRR targets and monitor risk reduction accordingly. The seven SFDRR targets should be downscaled to the relevant governance levels. These are the following:

i. Substantially reduce disaster mortality by 2030, aiming to lower the average per 100,000 national mortality rate in 2020–2030 compared to 2005–2015.
ii. Substantially reduce the number of affected people by 2030, aiming to lower the average national figure per 100,000 in 2020–2030 compared to 2005–2015.
iii. Reduce direct disaster economic loss concerning the national gross domestic product (GDP), regional gross product or local gross product by 2030;
iv. Substantially reduce disaster damage to critical infrastructure and disruption of essential services, among them health and educational facilities, including through developing their resilience by 2030;
v. Substantially increase the number of stakeholders at all governance levels with disaster risk reduction strategies by 2025;
vi. Substantially enhance cooperation through adequate and sustainable support to complement national or provincial actions for implementation of the present Framework by 2030;
vii. Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030

3.5.3

3.5.3 Building Resilience in Disaster-prone and Economically Vulnerable Communities

s 7(2)(a), s 36(1)(e–g), s 50(1)(e–g)

While effective social relief is essential to disaster response and recovery, the Act explicitly prioritises vulnerability reduction and resilience building in disaster-prone areas, communities and households. Annual reports generated by the national Department of Social Development and its provincial counterparts must account for the number of households receiving social relief assistance. This information must

be further differentiated by location, date, disaster type, and amount. An essential benchmark for monitoring the effectiveness of disaster risk reduction initiatives in the most vulnerable communities will be changing demands for social relief assistance due to resilience building.

3.5.4

3.5.4 Generation and Dissemination of Case Studies and Best-practice Guides in Disaster Risk Reduction

s 7(2)(g–h), s15(1)(c) 15(1)(h–i), s 17(1)(d), s 19(e), s20(1)(a)(iii), s 20(1)(b), s 20(1)(c), s (20)(2)

Promoting a "culture of prevention" is enabled by providing examples of best practices in disaster risk reduction. Therefore, in addition to the adoption of measures outlined in subsections 3.3.1 and 3.5.1, the NDMC must develop as a component of its education, training and capacity-building strategy mechanisms for disseminating information on best practices in disaster risk reduction for South Africa. This includes developing learning materials and support guides for different risk scenarios and contexts. (See Enabler 2.)

3.5.5

3.5.5 Progressive Application of Disaster Risk Reduction Strategies, Techniques and Measures by National and Provincial State Organs, Municipalities and Other Key Stakeholders

s 7(2)(d–f), s 15(1)(b), s 21(a)(i–iii), s 24(1)(b), s 24(1)(f–i)

In consultation with other national, provincial and municipal state organs and municipal entities, the NDMC must develop monitoring indicators for tracking the application of disaster risk reduction strategies, techniques and measures in all spheres. These include indicators to track shifts in policies, planning and project implementation, generation of standards, regulations, by-laws and other risk-avoidance enforcement mechanisms.

3.5.6

s 7(2)(m), s 21

3.5.6 Key Performance Indicators

i. Disaster risk reduction programmes, projects and initiatives have been implemented by national, provincial and municipal organs of state and other key role players.
ii. Measurable reductions in small-, medium- and large-scale disaster losses have been recorded according to the SFDRR targets.
iii. A measurable reduction in social relief in disaster-prone, economically vulnerable communities has been recorded.
iv. Case studies and best-practice guides in disaster risk reduction, facilitated by the NDMC, have been generated and disseminated.
v. There is evidence of the progressive application of disaster risk reduction techniques and measures by national, provincial and municipal state organs, as reported in annual reports submitted to the NDMC.

3.6

3.6 Guidelines to be Disseminated

i. National guidelines specify the requirements for each progressive disaster risk management plan, from a level 1 disaster risk management plan to a level 3 plan, for use by national, provincial and municipal state organs.

ii. National guidelines to ensure uniform disaster risk management planning and implementation.

iii. National guidelines for incorporating disaster risk reduction programmes and initiatives into the activities of other national organs of state and key institutional role players.

4

4 Key Performance Area 4: Preparedness, Response and Recovery

Objective

The main objective is to efficiently prepare, respond to, and recover from hazard threats and "build back better" after disasters. The following sub-objectives are relevant:

SFDRR s

i. Ensure effective and appropriate disaster response and recovery by:
ii. implementing a uniform approach to the dissemination of early warnings
iii. averting or reducing the potential impact in respect of personal injury, health, loss of life, property, infrastructure, environments and government services
iv. implementing immediately integrated and appropriate response and relief measures when significant events or disasters occur or are threatening to occur
v. implementing all rehabilitation and reconstruction strategies following a disaster in an integrated and developmental manner with the embedded principle of "build back better".

Introduction

Priority 4 of the Sendai Framework for Disaster Reduction (SFDRD) called for "*preparedness for effective response and to build back better in recovery, rehabilitation and reconstruction*." Therefore, integrating disaster risk reduction into development programs and everyday operational and tactical decision-making are essential components of the preparedness plan.

The Act requires an integrated and coordinated policy focusing on rapid and effective response to disasters and post-disaster recovery and rehabilitation. When a significant event or disaster occurs or is threatening, there must be no confusion regarding roles and responsibilities and the procedures to be followed. This section addresses critical requirements to ensure that planning for disaster response, recovery, rehabilitation, and reconstruction achieves these objectives.

Outline

i. Section 4.1: Preparedness and preparedness planning
ii. Section 4.2: Assessment, classification and declaration of state of disasters
iii. Section 4.3: Response coordination
iv. Section 4.3: Disaster relief
v. Section 4.5: Rehabilitation and reconstruction
vi. Section 4.6: Guidelines

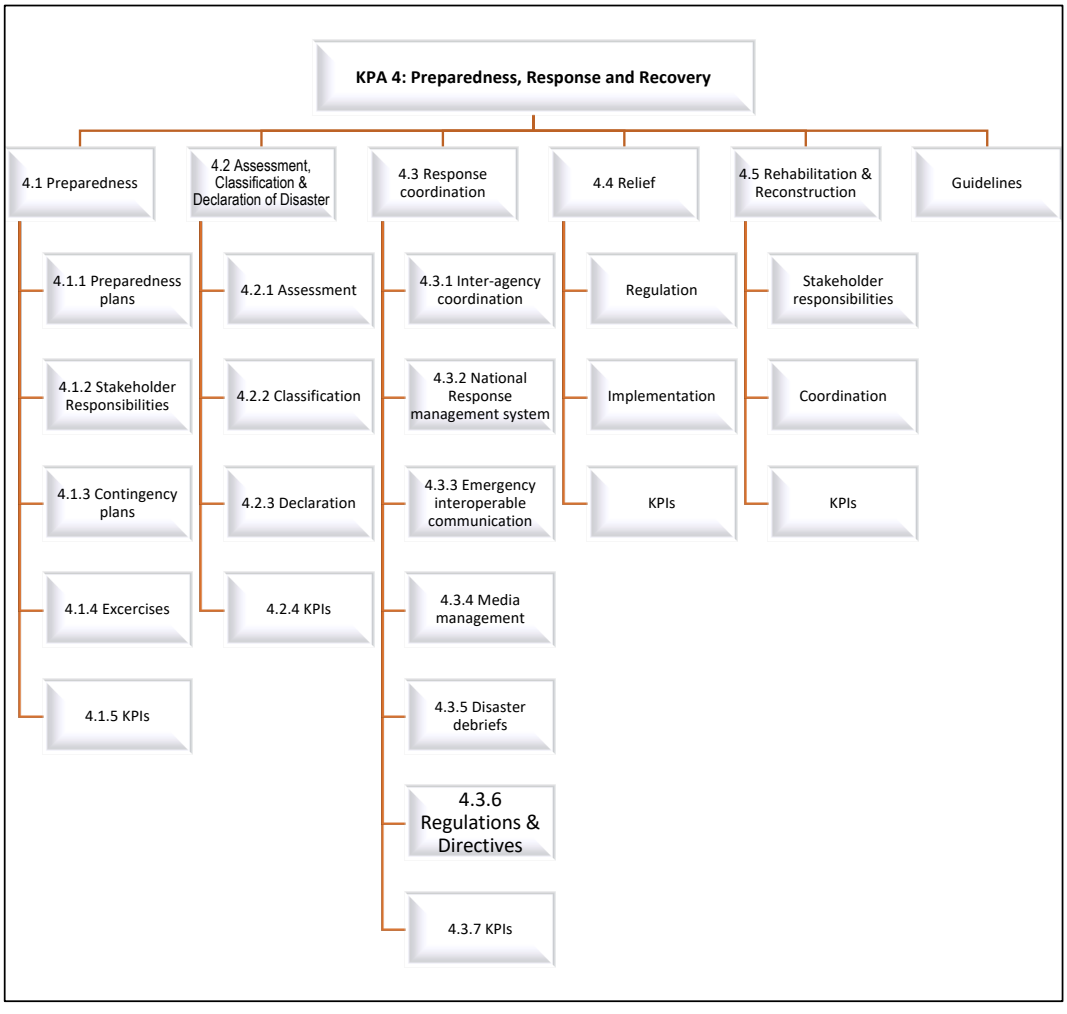


Fig 4.1: KPA4 structure

4.1

4.1 Disaster Response Management Planning

SFDRR s33(a)

"Prepare or review and periodically update disaster preparedness and contingency policies, plans and programmes with the involvement of the relevant institutions,…."

Disaster risk management plans must also incorporate elements of preparedness, response and recovery appropriate to the respective functional areas of different state organs.

4.1.1

4.1.1 Stakeholder Responsibilities

"Train the existing workforce and voluntary workers in disaster response and strengthen technical and logistical capacities to ensure better emergency response".

Disaster Management Centres at the national, provincial and municipal levels are responsible for coordinating preparedness and contingency plans for disaster response. Disaster Management Centres should involve experts from line departments and other stakeholders or contract experts to assist with facilitation only if capacity is unavailable within their ranks. Depending on the hazard threat contingency plan, the following sectors are essential stakeholders:

i. Agriculture
ii. Health
iii. Housing
iv. SAPS
v. SANDF
vi. Social services
vii. Treasury
viii. Water & Sanitation
ix. Stakeholders outside the government include:
x. NGOs and CBOs
xi. Businesses
xii. Financial organisations

Stakeholders, including state organs at national and provincial levels, municipalities and other organisations, should develop their preparedness and response plans to support the preparedness- and contingency plans of NDMC, PDMCs and municipalities. Table 4.1 shows the comparison between preparedness planning, contingency planning and operational planning

Table 4.1 Comparing preparedness, contingency & operational plans

Aspects	Preparedness planning	Contingency planning	Operational planning
When	Planning phase	Before emergency	During emergency
Scope of plan	General	Time-frame specific	More specific
Involved partners	Everybody within system	Decisionmakers and experts	People actually involved
Focus	All types	Specific and projected	Specific and actual
Planning style	Long term	Specific time-frame	Actual
Allocation	Estimated	Quantified	Precise
Planning level	All levels	Managerial level	Operational and field level
Time frame	Annual	Specific but uncertain or developing	Executed exact time
Relationships	Long-term	Developing	Utilizing

4.1.2

4.1.2 Preparedness Planning

SFDRR s33(f)

Preparedness enables organs of state and other institutions involved in disaster risk management, the private sector, communities and individuals to mobilise, organise, and provide relief measures to deal with an impending disaster or disaster's effects.

Disaster preparedness planning involves the following:

i. Identification of organisational structures and resources available for disaster response and recovery.
ii. Determining roles and responsibilities for all stakeholders.
iii. Developing policies and plans.

iv. Planning to efficiently respond to seasonal threats, such as heavy rainfall, flooding, strong winds, veld or informal settlement fires, and communicable disease outbreaks.
v. Anticipating and planning for the potential dangers associated with large concentrations of people at sporting, entertainment or other events.
vi. Establish clear information dissemination processes based on impact-based forecasting to alert at-risk communities of an impending seasonal threat, such as a potential cholera outbreak during the rainy season.
vii. Specifying evacuation procedures, routes and sites in advance of expected emergencies, including the evacuation of schools in areas exposed to flash floods.
viii. Defining in advance clear communication processes and protocols for different emergencies.
ix. Development and testing of pre-approved contingency and operational plans.
x. The timely dissemination of an early warning for an impending extreme weather threat to isolated or remote communities.
xi. Pre-allocate funding mechanisms.

These actions are critical components of the contingency plans that should be developed for specific threats as part of a provincial or municipal disaster risk management plan.

Preparedness differs from prevention and mitigation as it focuses on activities and measures taken before a specific threat or disaster.

4.1.3

4.1.3 Contingency Plans

Contingency Plans are comprehensive documents that provide for a full range of activities in the event of a disaster. Organs of state and other stakeholders at the national, provincial and municipal level, and affected organisations directly affected by a hazard threat, within or across Provincial boundaries, should agree on when, where, and to what extent resources will be utilised during disasters. To achieve a collaborative response to disasters, each organisation must understand the other organisations' systems, structure, resources, capabilities and statutory obligations. The objective of a contingency plan is the establishment of operational procedures for disaster response and recovery. The contingency should be;

Developed in line with the indicative disaster risk profiles of the region and must ensure a coordinated management approach.

i. Provide a framework for partnership working.
ii. Ensure that all partners can contribute to an integrated approach, including; recording resource application, resource utilisation, strategy for disaster relief, funding, impact assessment and debriefing.
iii. The contingency plan should support the efficient provision of disaster response and relief from all organisations in an equitable way to all affected by the disaster.

4.1.3.1 Principles for contingency planning

Organs of state should apply the following principles while developing contingency plans:

i. Information should answer the following questions:
    a. Potential threats. When, where, intensity and probability

b. Vulnerabilities. What will be affected and to what extend
c. Own sources - people. Capacity and contact details
d. Logistical resources and equipment. What, where located, condition, what can resources do.
e. Administration. Acts applicable, rules & regulations, Service agreements, MOUs.

ii. Clarity
iii. Flexibility
iv. Continuity
v. Coordination
vi. Optimal and efficient use of resources
vii. Maintenance of reserves
viii. Evaluation and monitoring

The contingency plan foresees operational response as accurately as possible, but the operational plan is an adjustment of the contingency plan according to the actual incident requirements.

4.1.3.2 Developing contingency plans

The flowchart for the development of contingency plans is shown in Figure 4.2.

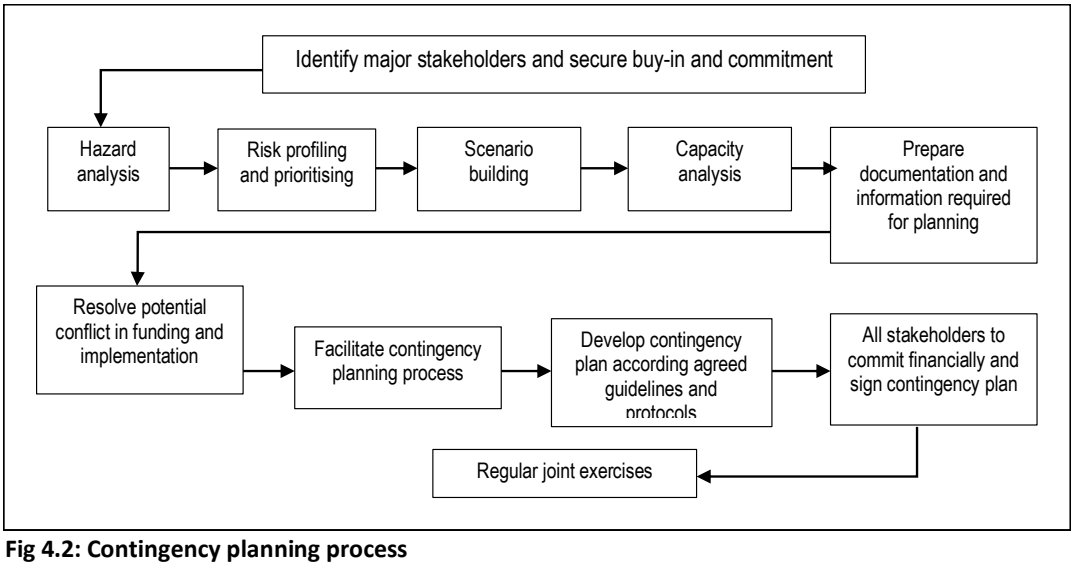


Fig 4.2: Contingency planning process

Organs of state should follow the following steps in developing contingency plans.

i. Identify major stakeholders and secure buy-in and commitments.
ii. Hazard analysis.
iii. Risk profiling and prioritisation.
iv. Scenario building.
v. Capacity analysis.
vi. Prepare documentation and information required for planning.
vii. Resolve potential conflicts in funding and implementation and facilitate the contingency planning process.
viii. Develop contingency plans according to agreed guidelines and protocols.
ix. All stakeholders are to commit financially and sign contingency plans.

x. Regular joint exercises.

4.1.3.3 Content of contingency plans

Organs of state should include the following in contingency plans:

i. Objectives and standards for all role-players.
ii. Activities and tasks for all role-players.
iii. Responsibilities.
iv. Time-frame for implementation.
v. Supporting SOPs.
vi. Reporting structure.
vii. Unified Command.
viii. Costing.
ix. Logistics.
x. Administration.
xi. Communication.
xii. Answering the Ws:
    a. Who (Which of stakeholders).
    b. What (Objectives and tasks of each stakeholder).
    c. When (Thresholds for activation for specific tasks).
    d. With What (Funding, equipment people).
    e. Why (Objective).

4.1.3.4 Implement contingency plans

Disaster management centres at all governance levels should facilitate and coordinate the development of contingency plans in collaboration with stakeholders involved in different hazard threats.

4.1.4

4.1.4 Operational Plans

The contingency plan becomes the operational plan as soon as it is activated, with potentially minor adjustments depending on the following conditions

i. the type of hazard threat,
ii. the scale of the hazard threat
iii. the geographical area
iv. resources available

Contingency plans seldom provide for all the challenges during a disaster response and, therefore, the requirement of strong leadership, especially during the initial phases of the response. However, well-thought-out contingency plans developed and rehearsed according to different scenarios improve operational plans' efficiency and implementation a hundred-fold. As a result, responders and their leaders familiar with the contingency plan should be able to provide an efficient response with minor adjustments.

For many responsibilities in the operational plan, it is enough to assign responsibilities to an individual or an organisation and specify the assignee’s accountability; to who do they report, or with whom do they coordinate? The operational plan should be free of unnecessary detail. The detail and “how to” instructions should be part of standard operation procedures (SOPs) or procedures.

Consequently, responders need to understand the SOPs of the different response organisations, which should be addressed during rehearsals.

4.1.4.1 Implement Operational plans

Disaster management centres at all governance levels should appoint and train responders and their leaders to efficiently adjust to response needs and execute contingency plans.

4.1.5

4.1.5 Standard Operating Procedures (SOPs)

Standard Operational Procedures (SOPs) provide an "on-the -ground" explanation of what needs to happen to ensure a given outcome. SOPs provide clear-cut instructions on how teams and members within an organisation must operate and coordinate.

SOPs are essential because they allow organisations to systemise their processes, keep team members and other stakeholders on the same page at all times and perform tasks at hand in a singular, cohesive manner. The major outcomes of SOPs are the following:

i. Ensures adherence to best practice
ii. Ensures adherence to rules and regulations
iii. Ensures consistency
iv. Enables efficient response
v. Enables training guidance
vi. Maintains organisational knowledge

4.1.5.1 Implement Standard Operational Procedures

Disaster management centres at all governance levels should facilitate opportunities for different stakeholders to share SOPs with one another.

4.1.6

4.1.6 Exercises

SFDRR s33(h), s 34(b)

"*Promote regular disaster preparedness, response and recovery exercises, including evacuation drills, training and the establishment of area-based support systems, to ensure a rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-food relief supplies, as appropriate to local needs"* (SFDRR, s33(h));

Exercises are an essential management tool for informing and motivating personnel and giving confidence to those who may be required to respond to disasters. Exercises;

i. Provide the only comprehensive way of realistically evaluating contingency plans.
ii. Bring together those who may be involved with responding to an incident and allow scrutiny of responses under controlled conditions.
iii. Establish and reinforce relationships between those taking part, often under stressful conditions.

iv. Bring people from different areas together to work as a team, realise clear goals, and know and respect each other's strengths and weaknesses.

Thus, exercises should reflect reality as far as is practicable.

NDMC, PDMCs and MDMCs should conduct and coordinate exercises for the four major hazards identified within their functional area at least once every year. Types of exercises can be:

i. Seminar exercises are designed to inform participants about the organisation and the procedures used to respond to an incident. It should be conducted regularly, especially with staff changes.
ii. Table-top exercises are cost-effective and efficient for testing plans, procedures and people. It should be conducted at least once a year in addition to live exercises.
iii. Live exercises are the most effective way of testing own capabilities and preparing participants. It should be exercised once every two years.

4.1.7

4.1.7 Key Performance Indicators

i. KPIs are applicable to disaster management centres at all governance levels and other organs of state with reference to own internal functions.
ii. Preparedness plans completed.
iii. Contingency plans for major hazards completed.
iv. Contingency plans approved and signed by all stakeholders, including treasury.
v. Exercises for response coordination completed as required.

4.2

4.2 Assessment, Classification and Declaration of a State of Disaster

4.2.1

4.2.1 Assessment

s23(1)(a), s23(2)(a–b)

Uniform methods and guidelines for conducting initial on-site assessments of damage and needs when significant events or disasters threaten to occur are critical tools for informed decision-making. Typically, on-site assessments would include establishing what resources are necessary to deliver immediate, effective and appropriate response and relief measures to affected areas and communities and facilitate business continuity.

s 25(1)(a)(iii–iv)

National organs of state tasked with primary responsibility for dealing with disasters due to a particular hazard, or significant event must prepare operational guidelines for initial assessments regarding the extent of the area affected and the damage to critical infrastructure, lifeline facilities, property and the environment. In addition, the NDMC should develop clear guidelines on who is responsible for what.

s 25(1)(a)(vi)

Disaster Management Centres at the different governance levels are responsible for coordinating disaster response National organs of state might be responsible for coordinating specific activities associated with disaster response and relief efforts, such as emergency medical care, search and rescue, evacuation, shelter and humanitarian relief. All organisations responsible for coordination must prepare

operational guidelines for initial assessments of the immediate needs of those affected.

s 15(1)(h), s 26(1)

Provincial and municipal disaster management centres must ensure that the information in the guidelines is disseminated to the relevant role players in communities and/or areas at risk. In addition, training and capacity building must complement the dissemination of the guidelines to ensure their correct application.

s 56, s 57

The guidelines must include protocols for the inclusion of the results of initial assessments in reports of significant events and events classified as disasters to the disaster management centre of the relevant province or district or metropolitan municipality as well as the NDMC. These assessments must show evidence that due consideration had been given to the implications of sections 56 and 57 of the Act.

Overall, limited information about the costs associated with disasters or significant events in South Africa is available. Disaster reviews must therefore include information about the costs of significant events and disasters to inform planning, budgeting and evaluation processes (see subsection 4.2.3 below). To capture this information, the NDMC must develop a template for collecting the relevant data.

4.2.2

s 15(1)(f)(iii)

4.2.2 Classification of a Disaster and the Declaration of a State of Disaster

With the exception of a security-related event, the responsibility for strategic coordination in responding to a national disaster or significant event which occurs or is threatening to occur rests with the Head of the NDMC. The Head of the NDMC must make recommendations to the appropriate organ of state or statutory functionary on whether a national state of disaster should be declared in terms of section 27 of the Act.

s 27

s 23, s 41, s 55

The NDMC must establish uniform mechanisms and develop guidelines to facilitate the rapid and effective processing of disaster classifications and declarations.

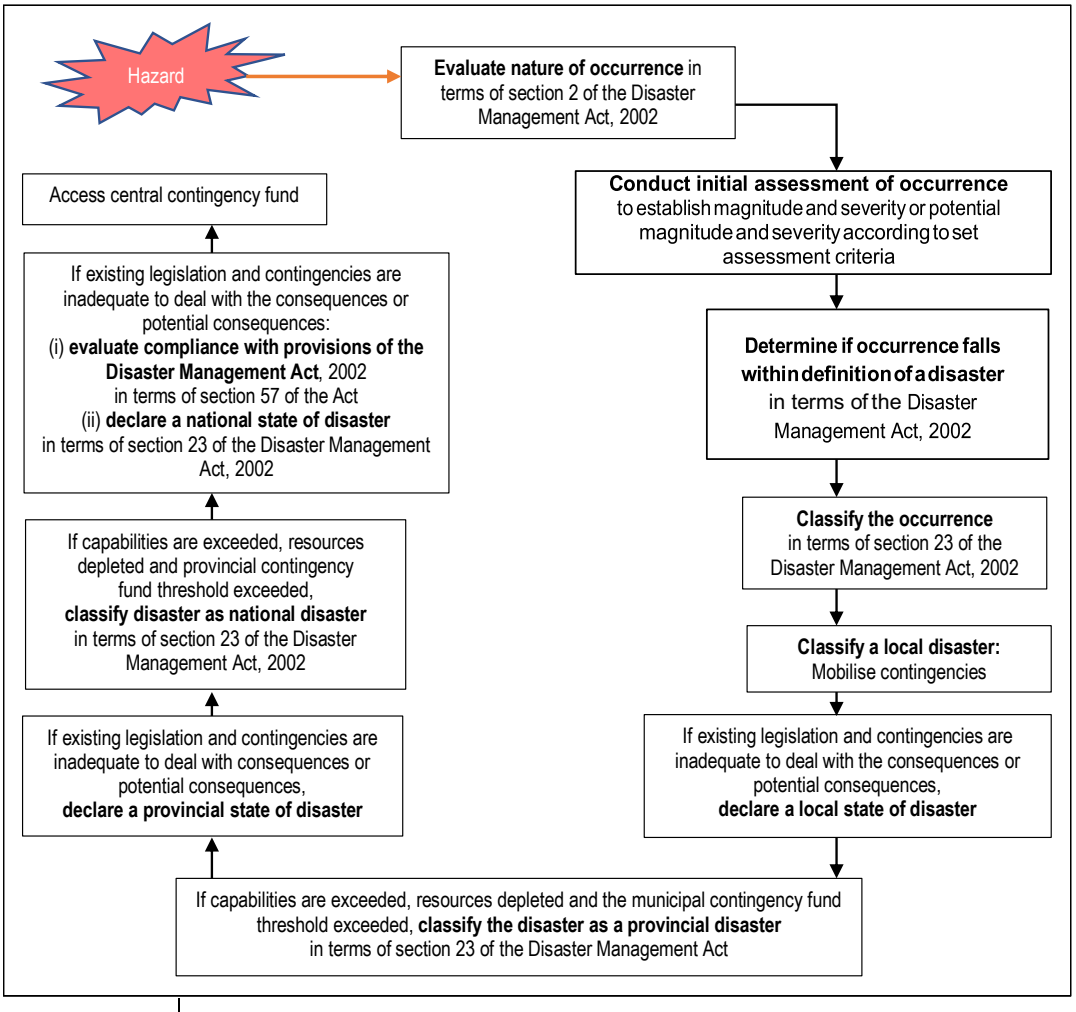
4.2.3

The process for the classification and declaration of disasters is illustrated in Fig 4.3.

4.2.3 Declaration

i. National disasters: At recommendation of the NDMC, the responsible Minister for disaster management may declare national state of disaster and publish the declaration in the Gazette (see Section 27 in the Act).
ii. Provincial disasters: At recommendation of the PDMC and after consultation with other MECs, the Premier of a province may, by notice in the provincial Gazette, declare a provincial state of disaster (See Section 41 in the Act).
iii. Local disasters: At recommendation of the MDMC, the council of a municipality having primary responsibility for the coordination and management of the disaster may, by notice in the provincial Gazette declare a local state of disaster (See Section 55 in the Act)

Fig 4.3: Processes for the classification and declaration of a state of disaster



4.2.4

4.2.4 Key Performance Indicators

i. Guidelines and uniform methods, including templates, for assessing and costing significant events or disasters have been developed.
ii. Mechanisms for the rapid and effective disaster classification and declaration of a state of disaster have been established.

4.3

4.3 Response Coordination

s 25(1)(a)(vi), s 7(2)(c)(iii)

Disaster response refers to providing assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those affected. It can be of an immediate, short-term or protracted duration.

4.3.1

4.3.1 Inter-Agency Coordination

The responsibility for coordinating national, provincial and local disaster response is vested with the NDMC, PDMCs and MDMCs through unified command, also called inter-agency coordination. Single organisational response remains with the organ of state responsible for the event or disaster. Stakeholders should acknowledge the difference between coordination and primary responsibility. For example, flood response and recovery efforts would involve the combined efforts of many stakeholders. Still, the primary responsibility must be allocated to a specific organ of state, with the other stakeholders assuming supportive responsibilities. In the case of riverine floods, for example, the Department of Human Settlement, Water and Sanitation could bear primary responsibility. In the case of agricultural drought, the Department of Agriculture could be the primary agency. In almost all cases, the disaster management function at the appropriate governance level remains responsible for coordination through inter-agency coordination.

Table 4. Allocation of primary responsibility to selected emergencies

Emergency type	Responsible agency	Secondary responsibility
Hydrological floods	DHSWS	Municipalities
Hydrological floods on irrigation land	DARDLR & Prov Agric	Irrigation Boards
Drought - Agricultural	DARDLR & Prov Agric	
Drought – Built areas (Domestic/Industrial)	DHSWS & Municipality	
Environmental disasters	DEFF	
Pollution - water	DEFF	
Pollution - ocean	DEFF	
Pollution air	DEFF	
Pandemics	DoH	
Health related disasters	DoH	
Fires - Veld	DARDLR & Prov Agric	
Fires - Forest	DEFF	
Fires - structural	Municipality	
Plant disease - Agricultural	DARDLR & Prov Agric	
Plant diseases – Forest & other	DEFF	
Locusts	DARDLR & Prov Agric	
Animal diseases	DARDLR & Prov Agric	
Nuclear accident	ESCOM	
Mining disasters	DMining	
Industrial disasters	Municipality	
Social unrest	SAPS	
Internally displaced persons	DHSWS	
Refugees	DoFA	

The contingency plans, operational plans and guidelines of the various response agencies that contribute to response operations must be considered when allocating responsibilities for response and recovery. In this regard, primary and secondary responsibilities must be allocated for each of the operational activities

associated with disaster response, for example, evacuation, shelter, search and rescue, emergency medical services and fire-fighting.

s 11 Response and recovery operations should also provide for the delegation of responsibilities of the Head of the centre and the assignment of alternate arrangements for a disaster management centre in a particular sphere as a contingency if the particular disaster management centre itself is affected and unable to continue to operate.

4.3.1.1 Resources

Mechanisms for activating and mobilising additional resources for response and recovery measures must be clearly set out in operational plans.

4.3.1.2 Volunteers

Mechanisms for the deployment of volunteers must be outlined in contingency and operational plans.

4.3.2

4.3.2 National Response Management

Incidents and emergencies handled daily by emergency and essential services personnel are routinely managed by an incident commander of a particular agency. However, in the case of significant events and disasters that are threatening, disaster management centres must activate an inter-agency response management system to ensure a systematic approach and coordination to effectively utilise facilities, personnel, equipment, resources, procedures and communication. A response management system provides for the clear allocation of responsibilities, strategic, tactical and operational direction mechanisms and a participative approach to event management. (See Enabler 1.)

The NDMC must develop regulations to implement a national standard response management system. The system must identify specific roles and responsibilities for each response and recovery activity included in the operational plans of the various agencies participating in response and recovery efforts. In addition, it must provide mechanisms to determine the level of implementation of response and recovery measures according to the magnitude of the event or disaster and the capacity of an agency to deal with it. The system must be introduced in all spheres of government. It should also make provision for the development of partnerships between agencies involved in response and recovery and the private sector, NGOs, traditional leaders, technical experts, communities and volunteers to enhance capacity.

Each agency identified in the response management system must establish standard operating protocols or procedures (SOPs) to coordinate response and recovery operations and ensure government/business continuity. The SOPs must be consistent with relevant legislation, regulations and standards requirements.

The response management system must include common terminology for identifying stakeholders responsible for the direction, control and coordination of an event at the operational, tactical and strategic levels. For example, the tactical

level (field operations coordination) is called the Joint Operations Centre (JOC) during joint operations. Where strategic intervention is also required, for example, in the case of a significant event, the Head of the disaster management centre will be responsible for activating the Disaster Operations Centre (DOC) located in the centre of the relevant sphere. The Interagency Coordinating Team consists of senior decision-makers supported by the DOC. They meet once a day or less regularly, depending on the requirements and intensity of response operations. However, staff in the DOC representing different stakeholders should have operational decision-making authority or direct and immediate contact with senior decision-makers.

The system must consider conditions in South Africa, where frequent significant daily events require extraordinary measures but do not necessarily justify the declaration of a local state of disaster.

The system must provide a mechanism to track the escalation of incidents and facilitate reporting "trigger" indicators. "Trigger" indicators must be identified and included in preparedness and contingency plans. Examples include the routine reporting of all veld and forest fire incidents to the disaster management centre when fire danger rating indices are at certain levels or the reporting of all incidents requiring a predetermined response level. "Trigger" indicators are also a requirement for the activation of contingency plans.

4.3.3

4.3.3 Emergency Interoperable Communication

Given the critical role of interagency communication in managing incidents, significant events and disasters, the NDMC must prioritise the development of an emergency communication system for this purpose. Interoperable communication between different stakeholders is a priority, and the NDMC should deal with it as a priority. The use of communication, such as WhatsApp, is useful but not reliable for operational purposes. The NDMC should also develop guidelines for the use of alternative communication methods. (See Enabler 1.)

4.3.4

4.3.4 Media Management

The NDMC must determine responsibilities and protocols for media liaison, including press releases and media interviews, in the event a national disaster occurs or threatens to occur. Social media can be used as an essential force multiplier, or it can harm and disturb response activities. Therefore, the NDMC should develop guidelines for operating and managing social media. (see subsection 6.5.3 below).

4.3.5

4.3.5 Disaster Debriefs, Reviews and Reports

4.3.5.1 Disaster debriefs

s 20, s 21, s 33, s 34, s 47, s 48, s 56, s 57

A debriefing immediately or soon after disaster response is a moderated discussion focused on gaining understanding and insight regarding the particular operation and involving those personally involved. The debrief provides an opportunity to explore and make sense of what happened during an event, incident or disaster, discuss

what went well, and identify what could be done to change, improve, and do better in the future.

Disaster management centres at all governance levels should facilitate debriefs immediately or soon after response activities. Different types of debriefs should be conducted depending on the circumstances. These are:

i. **Hot debrief**: Immediately after an incident, and key issues should be captured
ii. **Single-agency debriefs**: Debrief looking at response within a single organisation.
iii. Internal debrief: occur when the organisation's reputation is at stake due to mismanagement or unlawful conduct from staff or an accident within the organisation.
iv. **Multi-agency debrief:** a culmination of the debrief process and might occur days or weeks after the incident or disaster.
v. **Cold debrief:** the opportunity to review the incident after a period when all the facts are available, including those from the hot debrief.

s 20, s 21, s 33, s 34, s 47, s 48, s 56, s 57

PDMCs and MDMs should submit debrief reports to the NDMC.

4.3.5.2 Reviews

Comprehensive reviews are similar to the "cold debrief" and must be conducted routinely after all significant events and events classified as disasters. The reviews will provide the information against which to assess the application of the principles of sections 56 and 57. The findings will directly influence the review and updating of disaster risk management plans and serve as valuable training aids.

To maximise the benefits of regular reviews of significant events and disasters, the NDMC must develop a review programme in consultation with provincial and municipal disaster management centres. Such a programme should include the following:

i. Guidelines for the process and procedures to be followed in conducting reviews of significant events and events classified as disasters, including the principles specified in section 56 and the requirements outlined in section 57 of the Act.
ii. Appointment of review panels with the relevant expertise
iii. A mechanism for reporting on the actual performance in a disaster situation with the aim of improving performance.
iv. Mechanisms to ensure that post-disaster reviews and reports are disseminated to stakeholders.
v. Mechanisms to ensure that immediately following a significant event or disaster, disaster risk management plans are reviewed, and appropriate amendments are made based on the outcomes of post-disaster reviews.
vi. Mechanisms to ensure that learning occurs.

The disaster management centres at all governance levels are responsible for guiding the review process within their sphere. When conducting a review, the appointed review team must consider local conditions, disaster risk management plans implemented before the significant event or disaster, and existing disaster risk management plan

4.3.6

4.3.6 Regulations and Directives for Response

s 27(2-4), s 41(2-4), s55(2-4)

The NDMC must develop regulations and directives to standardise and regulate the practice and management of response and recovery operations in all spheres of government.

4.3.7

4.3.7 Key Performance Indicators

s 7(2)(m), s 21

i. Disaster Management Centres at all governance levels, state organs and other role-players have developed contingency plans.

ii. Disaster Operation Centres are equipped and staffed and capable of coordinating disaster response.

s 56, s 57

iii. An inter-operable communication system is developed and implemented.

iv. Guidelines and uniform methods, including templates, for assessing and costing significant events or disasters have been developed.

s 24, s 36, s 50

v. Mechanisms for conducting and updating disaster reviews and reporting, including mechanisms to enable assessments that will comply with and effect the provisions of sections 56 and 57 of the Act, have been developed and implemented.

vi. Review and research reports on significant events and trends are routinely submitted to the NDMC and disseminated to stakeholders.

vii. Debrief and review reports on actual disasters are routinely submitted.

viii. NDMC developed and published guidelines for disaster debriefs and reviews.

ix. NDMC developed and published guidelines on what state organs are responsible for what hazard impact.

x. Disaster Management Centres at all governance levels, state organs and other role-players have developed contingency plans.

xi. Disaster Operation Centres are equipped, staffed and capable of coordinating disaster response.

xii. An inter-operable communication system is developed and implemented.

xiii. Guidelines and uniform methods, including templates, for assessing and costing significant events or disasters have been developed.

xiv. Mechanisms for conducting and updating disaster reviews and reporting, including mechanisms to enable assessments that comply with and effect the provisions of sections 56 and 57 of the Act, have been developed and implemented.

xv. Review and research reports on significant events and trends are routinely submitted to the NDMC and disseminated to stakeholders.

xvi. Debrief and review reports on actual disasters are routinely submitted.

xvii. NDMC developed and published guidelines for disaster debriefs and reviews

xviii. NDMC developed and published guidelines on what state organs are responsible for what hazard impact.

xix. The state organ, which must bear primary responsibility for contingency planning and the coordination of known hazards, has been identified and allocated such responsibility.

xx. Stakeholders who must bear secondary responsibility for contingency planning and the coordination of known hazards have been identified and allocated such responsibility.

xxi. Contingency plans for known hazards by national state organs have been developed.

xxii. Response and recovery plans are reviewed and updated annually.

xxiii. Field operations guides for the various disaster response and recovery activities have been developed, reviewed and updated annually.

xxiv. A national standard response management system has been developed and is reviewed and updated annually.

xxv. Standard operating protocols or procedures and checklists have been developed and are understood by all stakeholders.

xxvi. Regulations and directives for managing disaster response and recovery operations have been developed, gazetted, or published.

4.4

4.4 Disaster Relief

(2)(f)(iii), s 27, s 41, s 55

Disaster Management Centres must coordinate relief operations following significant events and/or events classified as disasters and ensure the equitable distribution of relief assistance and donations.

The NDMC must develop regulations to standardise and regulate the practice and management of relief operations.

The regulations must address:

s 7(2)(m), s 21

i. Responsibilities for the release of appeals for donations.
ii. Standards of relief (in keeping with international standards).
iii. Duration of relief efforts.
iv. Acceptance of international assistance.
v. South Africa's assistance to other countries.

4.4.1

4.4.1 Key Performance Indicators

i. Regulations for the management of relief operations have been developed and gazetted.
ii. Based on lessons learned, progressive monitoring and annual reviews of regulations for the management of relief operations are conducted.

4.5

4.5 Recovery, Rehabilitation and Reconstruction

SFDRR Priority 4

SFDRR Priority 4. "*Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction"*

s 20

To ensure a holistic approach to rehabilitation and reconstruction in the aftermath of a significant event or disaster, the organ of state tasked with primary responsibility for a known hazard must facilitate the establishment of project teams for this purpose.

Checks and balances must be effected to ensure that projects and programmes maintain a developmental focus. Project teams established for this purpose must determine their terms of reference and key performance indicators and report on progress to the NDMC.

Disaster recovery (including rehabilitation and reconstruction) focuses on the decisions and actions taken after a disaster to restore lives, livelihoods, services, infrastructure, and the natural environment. In addition, developing and applying disaster risk reduction measures simultaneously, reduces the likelihood of a repeated disaster event. Disaster recovery includes:

i. Rehabilitation of the affected areas, communities and households
ii. Reconstruction of damaged and destroyed infrastructure

iii. Recovery of losses sustained during the disaster event, combined with the development of increased resistance to future similar occurrences.

Disaster recovery initiatives present excellent opportunities to incorporate disaster risk reduction actions to "build back better". Following a disaster event, there are usually high levels of awareness about the risk factors that exacerbate its impact. This presents opportunities to introduce disaster risk reduction efforts with the affected communities and key stakeholders to reduce the likelihood of future loss.

4.5.1

4.5.1 Key Performance Indicators

7(2)(m), s 21

i. Post-disaster project teams for rehabilitation and reconstruction have been established and operate effectively.
ii. Mechanisms for monitoring rehabilitation and reconstruction projects have been established, and regular progress reports are submitted to the NDMC.
iii. The principle of "build back better" is the foundation of all rehabilitation and reconstruction plans and efforts.

4.6

4.6 Guidelines

i. National guidelines for conducting disaster impact assessments.
ii. National guidelines for the classification and declaration of states of disaster.
iii. National guidelines for the process and procedures to be followed in conducting debriefs and reviews of significant events and events classified as disasters.
iv. National guidelines (set out in FOGs) for the various activities associated with disaster response and recovery.
v. Regulations for the management of relief operations.
vi. Guidelines for the management and utilisation of social media
vii. Guidelines for primary responsibility of state organs for recovery, relief, rehabilitation, and reconstruction.

5 Enabler 1: Information Management and Communication

Objective

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

Introduction

Disaster risk management is a collaborative process that involves all spheres of government, NGOs, the private sector, a wide range of capacity-building partners and communities. It requires capabilities to manage risks on an ongoing basis, and to anticipate effectively, prepare for, respond to and monitor a range of natural, biological, technical, meteorological, climate and other hazards.

Integrated disaster risk management depends on access to reliable hazard and disaster risk information and effective information management and communication systems to enable the receipt, dissemination and exchange of information.

It requires systems and processes that will:

i. Provide an institutional resource database, including a reporting and performance measurement facility.
ii. Facilitate information exchange between primary interest groups.
iii. Facilitate risk analysis, disaster risk assessment, mapping, monitoring and tracking.
iv. Guide and inform focused risk management and development planning and decision making.
v. Facilitate timely dissemination of early warnings, public awareness and preparedness, especially for at-risk people, households, communities, areas and developments.
vi. Enable timely and appropriate decision-making to ensure rapid and effective response and recovery operations.
vii. Facilitate integrated and coordinated multi-agency response management.
viii. Record and track real-time disaster response and recovery information.
ix. Facilitate education, training and research in disaster risk management.
x. Facilitate funding and financial management for disaster risk management.

The system must be capable of acquiring, sorting, integrating, storing and analysing data to target information for primary interest groups. In addition, it must have geospatial capacity through mapping and information display applications and nationally standardised multimedia communication capabilities.

Outline

i. Section 5.1: Requirements of an IMCS for disaster risk management. Requirements include system and staff requirements.
ii. Section 5.2: Information and communication requirements concerning the KPAs described in the national disaster management framework.
iii. Section 5.3: Information and communication requirements regarding the enablers described in the national disaster management framework.
iv. Section 5.4: Technical functionalities that need to be included in the IMCS.
v. Section 5.5: Development and system requirements of an IMCS.
vi. Section 5.6: Various communication media required to enable the receipt, dissemination and exchange of information
vii. Section 5.7: Guideline

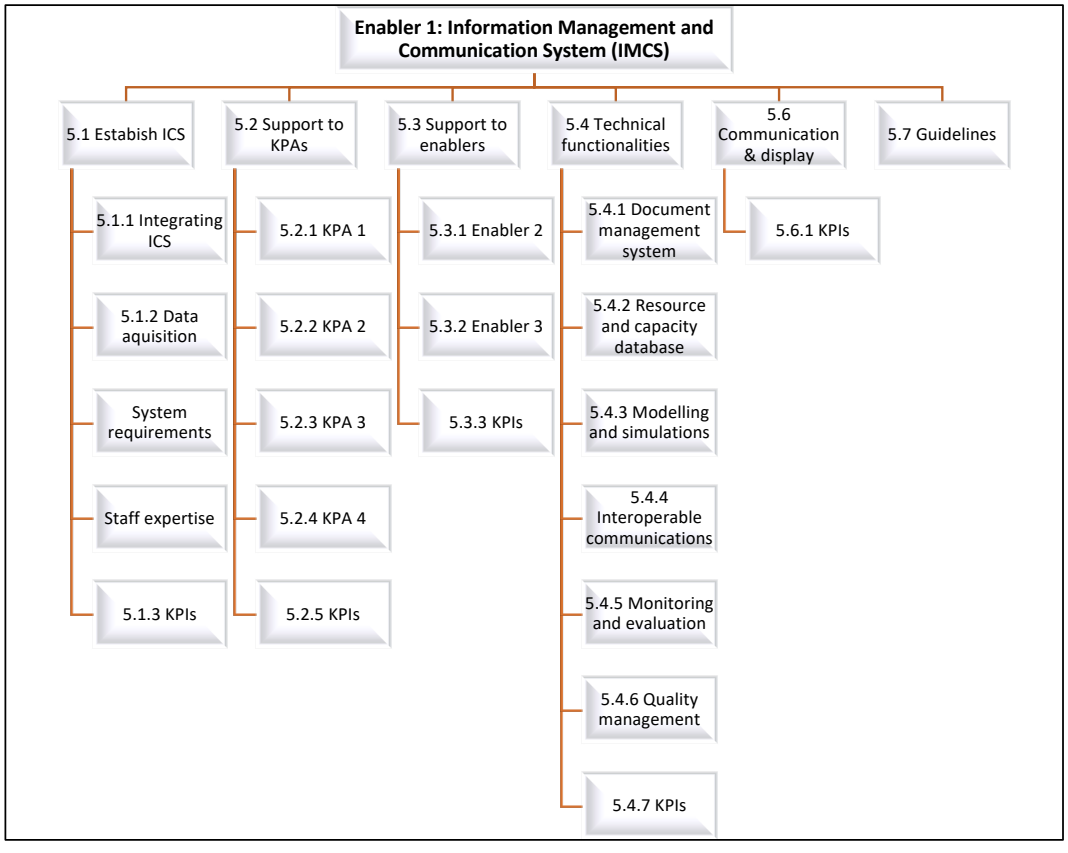


Fig 5.1: Enabler 1 structure

5.1

5.1 Establishing an Information Management and Communication System (IMCS)

Sections 16 and 17 of the Act envisage an integrated and uniform system that provides information exchange between all the relevant interest groups in all three spheres of government, in communities and the private sector through various

communication mechanisms and media. In addition, the system must provide for the receipt, storage, analysis and dissemination of information.

Information management and communication have two distinct focus areas, namely external and internal. The external focus is on hazard, vulnerability and resilience-related data and information. In contrast, the internal system focuses on the internal operations, namely, the functionality and efficiency of systems, the different disaster management centres, and efficiency of resource and personnel allocation and utilisation.

In addition, the information management and communication system must include establishing communication links, which will enable the receipt, transmission and dissemination of information between disaster management centres and those likely to be affected by disaster risks, as well as other role players and stakeholders involved in disaster risk management. In this regard, the system's design must consider the lack of technological infrastructure in areas and communities most at risk and telephonic system failures during disasters. This will require a dedicated two-way national emergency radio communication network.

The NDMC serves as an information clearinghouse for disaster risk management. In this, provincial and municipal disaster management centres should support the NDMC and assist the NDMC with developing and maintaining information management and communication systems relevant to their areas of responsibility. Provincial and municipal systems must be compatible with the national system and conform to the requirements of the NDMC.

Responsibility for the various components of the information management and communication system is addressed below.

5.1.1

5.1.1 Integrated Information Management and Communication Model

The initial step in developing an integrated information management and communication system for disaster risk management is integrating the data from existing databases and information management systems. Secondly, to integrate the databases developed for each KPA and enabler (as described in this enabler) into a coherent, integrated database (utilising a tool appropriate for the purpose). In addition, shortcomings and problem areas must be identified and addressed to ensure that the system meets the requirements detailed in the national disaster management framework.

The NDMC should initiate a comparative analysis to identify the difference between the actual or current system and the desired future system described in the national disaster management framework to inform the improvement process. The analysis must incorporate relevant standards and inputs from all stakeholders.

Therefore information management and communication as a function at the national, provincial and municipal levels should achieve the objectives of the KPAs and enablers outlined in the national disaster management framework. Such a system must encompass the following primary functionalities (see Figure 5.1):

i. Data acquisition system (data gathering and collection.
ii. Support for KPAs:
    a. Institutional capacity
    b. Disaster risk assessment
    c. Disaster risk reduction
    d. Response and recovery.
iii. Support for the enablers:
    a. Education, training and research
    b. Funding.
iv. Additional functionalities required:
    a. Integrated disaster risk management database and information management.
    b. Information dissemination and communication link to facilitate information flow between role players.

Responsibility for integrating and supporting the integrated information and communication system components is assigned to NDMC at the national level, the PDMC at the provincial sphere and the MDMC at the municipal sphere. This will ensure that the functionalities required to support the system are developed and maintained in all spheres of governance. In addition, the components must be integrated into a single standardised system that is user-friendly, scalable per component, and easy to maintain and upgrade.

The IMCS should be able to integrate and analyse data, hazard monitoring and early warning systems from different sources into a single national disaster risk platform. External national sources include, among other things:

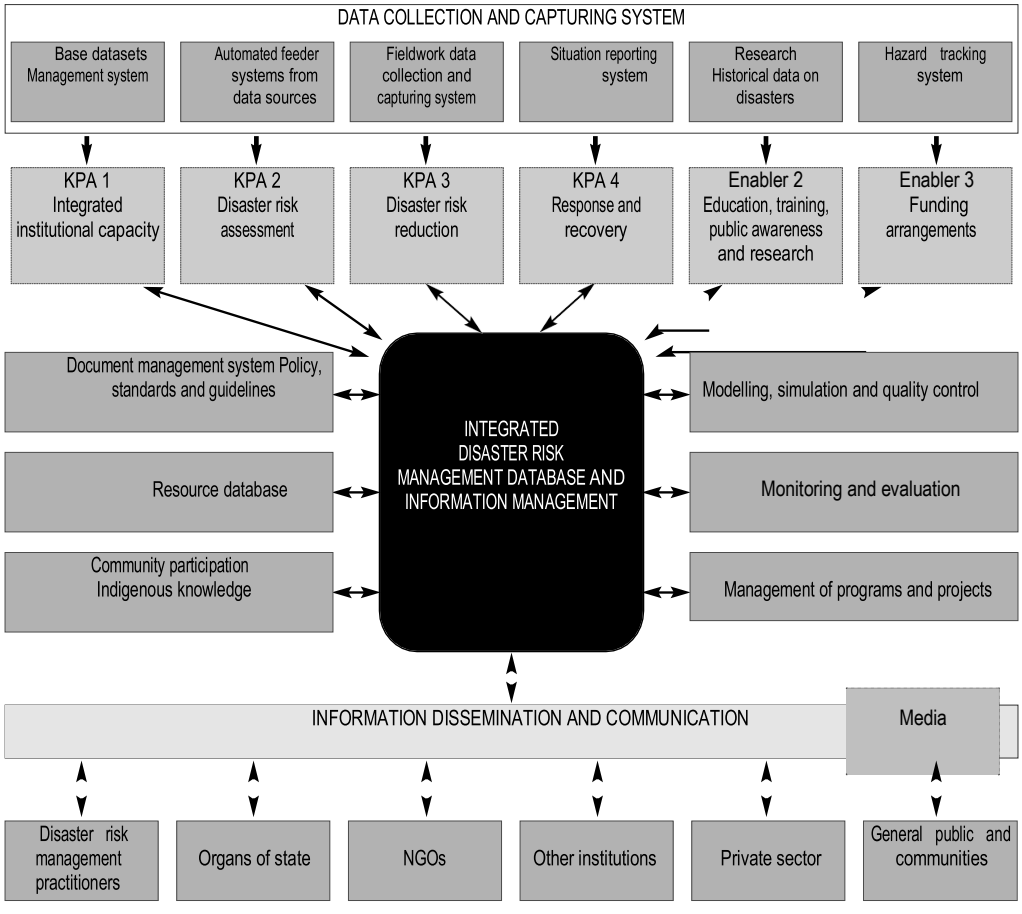
i. SAWS meteorological data and other weather data feeds.
ii. National Integrated Water Information System (IWIS).
iii. ARC products such as data specific platforms and the UMLINDI report.
iv. Agricultural and food production projections and estimates.
v. CSIR data and information products and services.
vi. Land degradation and other land-use data from DEFF.
vii. Information and data from research organisations and specialized research units.
viii. Other sources.

Global data and information sources include, among other things:

i. Centre for Research on the Epidemiology of Disasters (CRED)
ii. USGS
iii. NOAA
iv. UNSPIDER
v. ESRI
vi. Global drought risk platform
vii. Global Facility for Disaster Risk and Recovery
viii. Global Data Risk Platform
ix. Global Risk Data Platform
x. GAR Risk Atlas
xi. DISINVENTAR - Consolidated disaster loss database

The IMCS should be able to provide a national/provincial/municipal daily disaster threat analysis to the respective Head of Centre, timely early warnings to the potentially affected areas or sectors, and daily/weekly reports of the progression of slow-onset disasters or vulnerability.

Figure 5.1: Model of an integrated information management and communication system for disaster risk management



The IMCS should be able to provide the following interactive geospatial data and maps on the national disaster risk platform:

i. Desertification maps
ii. Drought maps, e.g. soil moisture, NDVI, VCI
iii. Epicentre and seismic maps
iv. Geotechnical maps
v. Floods and Flash Flood maps
vi. Hydrology and Floodplain maps
vii. Hydrological data & maps, e.g. stream flow, dam levels, groundwater levels
viii. Landslide maps
ix. Maximum Observed Intensity maps
x. Meteorological maps, eg. SPI (3-,6-,12-24-,36-,48-month), precipitation, temperature, climate change predictions
xi. Seismotectonic maps
xii. Soil moisture maps, e.g. moisture 1st 400cm, moisture 40cm to 1.5 m

xiii. Storm Surge maps
xiv. Windstorm maps
xv. Vulnerability to different hazard data and maps
xvi. Exposure to different hazard data and maps
xvii. Disaster risk maps

5.1.2

5.1.2 Data Acquisition (data collection and capturing)

S 18

The NDMC must perform a detailed analysis of the data needs of each KPA and enabler to ensure the objectives of the Act and the national disaster management framework are met. To this end, it must identify the inputs and data sources (data custodians/data owners) required to ensure effective support for implementing the Act and the framework.

The IMCS should contain the following data among others:

i. Base data (for example, topographical, census, land cover, infrastructure, deeds, environmental).
ii. Dynamic data (for example, all role players' contact and other relevant details).
iii. Field data (for example, features of buildings and infrastructure).
iv. Situational reporting system (for example, incidents, local conditions).
v. Research and historical data (for example, research reports and data on historical incidents).
vi. Hazard tracking (weather, flood, fire hazard conditions, droughts, etc.).
vii. Early warnings.

Data obtained in the field, whether electronically recorded (for example, with hand-held electronic devices and differential GPS for real-time data capture) or paper-based (for example, questionnaires), must be uploaded to the integrated disaster risk management database using standardised input forms or templates to ensure uniformity of data capturing formats. The Internet, via wireless communication, could also be used to obtain access to source data.

The NDMC must make provision for importing data from identified existing databases and GIS systems owned and used by other organs of state and organisations to perform their primary activities (for example, topographical datasets owned and maintained by the Department of Land Affairs; census data owned by Statistics South Africa). The NDMC must negotiate agreements with all identified data custodians for access to the relevant datasets and the management and maintenance of such datasets to ensure quality and reliable data inputs. In addition, the NDMC must also assign responsibility to the respective data custodians concerning providing access to data and the quality and reliability of the data provided.

In the case of municipalities, the datasets collected must be converted into information for the benefit of planning and decision-making by stakeholders, role-players and the community. The information must be stored or archived within the local Disaster Management Centre environment.

5.1.3

5.1.3 System Requirements

s 7(2)(m), s21

The minimum system requirements for IMCS are listed below:

i. The development and management of the IMCS must occur within the context of the objectives identified in the Act and the national disaster management framework.
ii. Design the IMCS so it can be built, implemented, maintained and modified in a modular, flexible, evolutionary and incremental manner.
iii. The various components and functionalities of the IMCS must provide the platform for a single, shared disaster risk management common operating environment designed for disaster risk management. The Common Operating Environment (COE) must facilitate the following:
iv. interoperability between systems and system components
v. sharing of standard system components
vi. standard infrastructure components and standard data/information
vii. reuse and customisation of system solutions or components.
viii. A critical aspect of the COE, and, by extension, the entire IMC, is the need for improved, high-performance communication solutions.
ix. Identify clear roles and responsibilities for the provision and governance of an IMCS for disaster risk management and assign them to the appropriate primary and support agencies and stakeholders involved in disaster risk management.
x. Users and user communities must carefully formulate their requirements regarding management information.
xi. Secure access remains a crucial concern. Users must be able to trust the IMCS.
xii. The information management and communication system must accommodate a management information component for producing reports as required by the Act.
xiii. The IMCS must be designed to keep pace with the constantly increasing flow of data, information and intelligence resulting from the greater use of computer systems and the ongoing development of high-performance data communications and powerful sensor systems.
xiv. Provision of appropriate and ongoing training in working with new digital tools.

5.1.4

5.1.4 Integrated Information Management and Communication Staff

The information management and communication function at NDMC and PDMCs require, among other expertise, at least specialised and professional skills as follows:

i. Specialisation in GIS and other spatial software platforms.
ii. Remote sensing and data integration
iii. Specialisation in Information Technology, including infrastructure and software platforms.
iv. Capacity to perform modelling for structural vulnerability, for example, engineers.
v. Capacity to perform a cost-benefit analysis and economic or financial modelling.
vi. Capacity to understand environmental vulnerability.

The NDMC and PDMCs should enter into agreements with line departments, research organisations and the private sector to delegate specialists if the expert knowledge is unavailable within NDMC or PDMC structures.

5.1.5 The information and communication function at a municipal level is partly guided by municipal information management and or communication policy. However, the above 5.1.4[i-v] NDMC and PDMC expertise and skill sets should be considered important auxiliary requirements.

5.1.5 Key Performance Indicators

i. A disaster risk management IMCS for all spheres of government has been established and implemented.
ii. The disaster risk management information and communication system support the KPAs and enablers in all spheres of government.
iii. Provincial and municipal IMCS are fully compatible with the national system and are part of a single integrated network.
iv. The NDMC has defined data needs.
v. The NDMC, PDMCs and municipalities have identified data sources.
vi. Data collection and capturing methodologies have been developed and implemented.
vii. The responsibilities of the respective data custodians have been defined and assigned.
viii. Agreements with identified data custodians have been negotiated to ensure data availability, quality and reliability.
ix. An integrated disaster risk platform with interactive geospatial data and maps is available and updated.

5.2

5.2 Integrated Information Management and Communication Support for Key Performance Areas

SFDRR s14, s24(e,f,d), s25(c,e), s33(b), s34(c,d), s47(b,c

5.2.1 This section describes the essential information management and communication system features required to support the KPAs and enablers described in the national disaster management framework.

5.2.1 Key performance area 1: Integrated Institutional Capacity for Disaster risk management

KPA 1 deals with the establishment of integrated institutional capacity to give effect to the Act. In this regard, it outlines some functions that have to be performed by the information management and communication (ICDM) system. These are listed below.

i. A directory of the names, contact details and roles and responsibilities of all key role players in national, provincial and municipal organs of state involved in disaster risk management must be developed and maintained.
ii. A directory of the names, contact details and roles and responsibilities of all key role players in the ICDM must be recorded and regularly updated.
iii. The names, contact details, roles and responsibilities of all members of the NDMAF and similar forums established at provincial and municipal levels, as well as mechanisms for accessing emergency resources under their control, must be recorded and regularly updated.
iv. Disseminate a record of decisions and recommendations made by the ICDM and the NDMAF to all role players affected by the decisions.

v. A directory of the names and contact details of all members of planning project teams initiated by the various disaster management advisory forums (or similar forums at the provincial and municipal levels) must be established and maintained.
vi. Record minutes of meetings.
vii. A central communications centre, with a central 24-hour communications facility for reporting and managing the dissemination of early warnings, must be established. A reflexive facility for confirming or acknowledging receipt of early warnings should be part of the system. The centre must also allow for the coordination of response measures in the case of significant events and disasters.
viii. Keep updated records of international cooperation, memoranda of understanding, mutual assistance, and bilateral and multilateral agreements.
ix. An accurate record-keeping system must be established and maintained, incorporating disaster risk management, disaster risk reduction and contingency plans, plans for specific projects, minutes, reports, memoranda and correspondence.
x. Comprehensive records of units of volunteers, including skill levels and capabilities, must be maintained.
xi. A directory of the names of community participation structures and the contact details of the participants must be established and maintained.
xii. Keep a record of performance measurement and monitoring of disaster management centres and primary entities tasked with disaster risk management responsibilities.
xiii. It must provide stakeholder relations and engagement support to enhance and maintain capacity.

5.2.2

5.2.2 Key Performance Area 2: Disaster Risk Assessment

Critical analysis and assessment of the implications of natural or technological hazards and environmental degradation depend on spatial and non-spatial information. Such information assists in the following:

i. Identifying hazards and their potential impacts.
ii. Mapping of hazards and disaster risks.
iii. Planning appropriate disaster risk reduction measures.
iv. Monitoring and tracking hazards for the purposes of hazard classification.
v. Monitoring and tracking hazards for the purposes of early warnings and updating this information.
vi. Facilitating response management when significant events or events classified as disasters occur, assessing and tracking the damage caused by hazards, and planning appropriate response and recovery measures.
vii. Evaluating the appropriateness and effectiveness of disaster risk reduction measures and response and recovery plans.
viii. Develop a hazard and risk communication strategy

The disaster risk assessment component of the IMCS must therefore be able to produce electronic GIS-based risk profiles generated from standardised data inputs. Such inputs may be drawn from various sources, including hazard and disaster event tracking, vulnerability monitoring, historical reviews of significant events and disasters, scientific and specialist research, and field consultations in at-risk areas and communities. In addition, data and information captured and used in the municipal and provincial spheres must also be included in the information

management system. Finally, the IMCS must reflect changes in status through predefined and customisable parameters to develop comprehensive profiles.

The hazard and vulnerability functionality must present disaster risk assessment information as GIS-based risk maps, with different layers holding data about particular map features. The system should deliver maps for different types of hazards, including, among others, fire, flood, drought, major transport incidents and infrastructure collapse. In addition, it should provide information on political boundaries, transport networks, settlements and natural resources. These maps must give layers of data containing basic location information about hazards with thematic support maps displaying data about specific features such as population distribution, infrastructure, geological information, landforms, drainage, land use/land cover and soils.

The IMCS be able to must determine and show the vulnerability of communities, businesses and infrastructure by overlaying different risk maps on base maps that evaluate and analyse the potential impacts of identified hazards and risks. These hazard and vulnerability maps must also be disseminated or displayed for orientation and training purposes.

5.2.3

5.2.3 Key Performance Area 3: Disaster Risk Reduction

5.2.3.1 Disaster risk reduction planning component

Once indicative disaster risk profiles have been developed, an integrated planning functionality will be required to assist role players in all spheres of government with the development and updating of disaster risk management plans. Such a component would need to draw on the risk profiles and a detailed resource database and would have to facilitate both risk reduction planning and contingency planning.

5.2.3.2 Disaster risk reduction component

This component must include disaster risk reduction strategies in IDPs and other development initiatives and programmes. It must enable tracking of the status of these initiatives, programmes and plans and storage of related documentation and correspondence. Planning templates must facilitate standardised planning and recording of programmes and plans and be linked to GIS for easy retrieval and updating.

5.2.4

5.2.4 Key Performance area 4: Response and Recovery

5.2.4.1 Response and recovery component

This component is intended to facilitate the management of response and recovery operations and the recording, retrieval and updating of specific real-time information during single and multiple significant events and/or disasters. It must also allow for direct links with the communication system to provide the information required for mobilisation.

The response and recovery component must include the following:

i. The area affected (indicating the specific and surrounding affected areas and links to all the spatial and other relevant data associated with the area).
ii. The type of event (classification by type, magnitude and severity).
iii. Analysis of the status of critical lifeline infrastructure.
iv. Analysis of reported impacts and progress monitoring progress with recovery operations per the standard assessment and situation report formats.
v. Situation reporting, tracking and analysis of the status of critical disaster operations, such as search and rescue, emergency medical care, access routes and fire suppression.
vi. Response and recovery resource database, including:
    a. Primary agency (contact details of the primary agency, response and recovery plans and SOPs applicable to the specific area and event).
    b. Resources and support agencies (contact details of the support agencies, response and recovery plans and SOPs applicable to the specific activity).
    c. Relevant service providers (listing of all other related services that may be required to assist with response and recovery operations in a specific area).
vii. Protocols to deal with media enquiries and interviews on an incident site.

The response and recovery features should be designed as templates and drop-down menus to make the information easily accessible for use by all role players during a disaster or significant event.

Provision must be made for real-time manipulation of data related to the event or disaster gathered during the planning phase. The component must also be linked to the resource database (see subsection 5.5.2 below) to identify the location of resources locally and to facilitate and record the management and allocation of resources during a significant event or disaster. The DOC must be able to access this information to track the deployment of resources and the progress of response activities.

Specialist GIS-based applications linked to the IMCS, must facilitate computer-aided response and recovery operations by allowing for simulated or real-time modelling, tracking and situational reporting in an affected area.

5.2.4.2 Mobilisation and communication component

The primary system requirements for mobilisation and communication are an on-site automated dialing and/or message delivery system and two-way radio communication facilities that call designated small or large groups of people, community members, volunteers and response agencies where required. Disaster management centres should determine the method of communication in consultation with other stakeholders.

The system must be able to use standard landline telephones, cellular telephones connected to all available networks, and telephony-enabled radio systems. It must relay digitally recorded voice messages to and request responses from recipients, who must be able to use the telephone keypad to send signals in reply. The system must record and log all details of calls, and it must generate reports from this

information. The system must also be capable of sending messages to pagers (alpha and digital) and sending e-mails and other modes of communication.

5.2.4.3 Event logging and tracking management component

The system must allow for the recording and logging of all messages received and sent, all decisions made, and instructions or directives communicated during a significant event or disaster. In addition, recording devices must allow for the recording and storage of voice, pictures and documents as well as their retrieval *"on the fly"* for management and evaluation purposes.

5.2.5

5.2.5 Key Performance Indicators

i. An integrated information management and communication system has been designed and implemented to support:
ii. Integrated institutional capacity.
iii. Disaster risk assessment.
iv. Disaster risk reduction programmes and plans.
v. Response and recovery operations.

5.3

5.3 Integrated Information Management and Communication Support for Enablers

5.3.1

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

The following functionalities are required to support the education, training, public awareness and research enabler:

i. Education and training programmes on disaster risk management in all spheres of the education system need to be recorded and monitored.
ii. The ICDM must record the content of education and training programmes as well as records of participants (professionals, volunteers, communities, learners) and the education and training programmes they attended.
iii. The ICDM must keep a register and records of all accredited service providers and facilitators to meet the minimum standards of Sector Education and Training Authorities (SETAs).
iv. Research programmes and projects need to be registered and monitored and the information disseminated to relevant stakeholders.
v. Initiatives related to an integrated awareness programme by all spheres of government need to be recorded to minimise duplication and to ensure synergy among stakeholders.
vi. Facilitate or participate in research programmes through stakeholder relations or collaborations.

The NDMC is responsible for the development of such a system. All organs of state in all spheres of government must use the system to record information related to disaster risk management training, education, awareness, and research.

5.3.2

5.3.2 Enabler 3: Funding Arrangements for Disaster Risk Management

CONTINUES ON PAGE 130 OF BOOK 2

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The ICDM must support a database for all funding matters. For example, the funding mechanisms for different aspects of disaster risk management, budgets, applications for funding, approvals and spending need to be recorded to ensure proper usage and management of available funding.

5.3.3 Key Performance Indicators

5.3.3

i. An integrated information management and communication system has been designed and implemented to support the following:
ii. Education, training, public awareness and research.
iii. Funding mechanisms and financial controls.

5.4 5.4 Specialised System Functionalities

5.4.1 5.4.1 Document Management System

The IMCS must contain a comprehensive document management system to classify, store and retrieve all documents pertaining to disaster risk management policies, standards, regulations and guidelines. The system must also provide for the classification, storage, and retrieval of all documents about institutional capacity (minutes of meetings, agreements), disaster risk assessments (risk assessment reports), disaster risk reduction programmes, plans and operational activities (action plans, SOPs, memoranda). This capacity would facilitate ease of access for all users in the three spheres of government. It would also facilitate including relevant information in the training and information systems. The system must accommodate text, video, digital, electronic and voice formats.

The NDMC is responsible for developing a uniform documentation management system for all national, provincial and municipal state organs to submit, record and retrieve documentation related to disaster risk management.

5.4.2 Resource and Capacity Database

5.4.2

The NDMC must develop and implement a comprehensive, uniform and easily updateable resource and capacity database to support the activities described in the KPAs and enablers. To this end, the system must capture the following:

i. infrastructure and facilities,
ii. human resources,
iii. equipment and material, and
iv. natural resources.

The database must be accessible to all national, provincial and municipal organs of state, NGOs and organisations involved in disaster risk management. These users must be able to access, record and update their data sections, which should include the resources and capacities available for disaster risk management. It is, therefore, necessary to assign responsibility for updating and maintaining the respective sections of the database to designated officials in the relevant state organs. In

addition, the NDMC must ensure that the system is maintained and the information is available to all role players.

5.4.3

5.4.3 Modelling and Simulations Functionality

The IMCS should have the functionality to perform modelling and simulation of risks related to different scenarios and the probability that specific events would occur to ensure continuous situational awareness and the effective allocation of resources.

Furthermore, simulations should support training programmes to develop and evaluate skills and competencies in particular roles. In addition, modelling and simulations should allow for testing the effectiveness of specific courses. Finally, such models can ensure that policies and procedures to address particular situations or events follow best practices.

5.4.4

5.4.4 Monitoring and Evaluation System

The Act and the national disaster management framework emphasise the role of the NDMC, PDMCs and MDMCs in monitoring and measuring performance and evaluating the status of all disaster risk management activities in their respective areas of jurisdiction. To facilitate a uniform approach and simplify reporting on the status of disaster risk management by organs of state in all spheres of government, one integrated monitoring, reporting and evaluation system must be developed and implemented. The NDMC is responsible for the development and implementation of such a system. All state organs in all government spheres must use the system to report on the status of their programmes, plans and operations.

The key performance indicators outlined in the national disaster management framework must be used as a basis for the monitoring and evaluation system. In addition, annual reports submitted by the NDMC, PDMCs and MDMCs, as required by the Act, must also be included in the system.

5.4.5

5.4.5 Management of Disaster Risk Management Programmes and Projects

An integrated portfolio (homogeneous grouping of programmes or projects and programmes per KPA, province or department), programme and project management system must be developed and implemented by the NDMC. Features that need to be included in this component are:

i. Disaster risk management planning.
ii. Mechanisms to monitor progress with preparing and regularly updating disaster risk management plans.
iii. Mechanisms to track the status of projects.

The portfolio, programme and project management system must allow all role players in all spheres of government involved in implementing disaster risk management programmes and projects to view information related to their respective programmes and projects. These role players must also have secure

access to the system, allowing them to register new projects, update existing information, and view and track progress and cost information.

5.4.6

5.4.6 Quality Management System

A quality management system (QMS) must be established, which will form an integral part of the disaster risk management database. The purpose of the QMS is to ensure the quality of management and operational processes conducted by organs of state involved in disaster risk management in the three spheres of government. In addition, it will ensure the integrity and effectiveness of the information management and communication system on an ongoing basis and in a planned and systematic manner.

The QMS must conform to ISO 9001 – the standard for quality management systems set by the International Organization for Standardization (ISO). Therefore, the NDMC, PDMCs and MDMCs must establish, document, implement and maintain a QMS and continually improve its effectiveness following ISO 9001.

The Head of the centre at all governance levels should appoint a designated person responsible for performing the quality management function.

All state organs 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.

5.4.7

5.4.7 Key Performance Indicators

i. A uniform document management system has been developed and implemented and is used by all role players.
ii. A comprehensive, uniform and easily updateable resource and the capacity database has been developed and implemented and is used by all role players.
iii. A modelling and simulation application has been developed and is used by all role players.
iv. An integrated monitoring and evaluation system has been developed and implemented and is used by all role players.
v. A uniform programme and project management tool has been developed and is used by all role players involved in disaster risk management programmes and projects.
vi. A QMS has been developed and implemented, and designated individuals in relevant national, provincial and municipal state organs have been assigned to administer the system.
vii. NDMC appointed specialised professionals responsible for information management and communication.
viii. Arrangements are made and implemented for the temporary delegation of specialists from line departments.

5.5

5.5 Information Dissemination and Display System

An effective information dissemination and display system must be developed and implemented by the NDMC in consultation with PDMCs and MDMCs to ensure

accessibility and widespread use of disaster risk management data and information. Identifying and defining the information needs of all role players and identifying the most appropriate communication channels are integral parts of this process. In addition, the NDMC must ensure that public-access systems are available in several languages.

Section 17(3) of the Act requires the NDMC to take reasonable steps to ensure that disaster risk management information is electronically available to anyone. To this end, the NDMC must develop, implement and maintain an interactive website to provide controlled access to the information management system based on defined information needs.

A public information service that provides two-way communication within communities and among individuals by providing information on disaster risk reduction, preparedness, response, recovery and all other aspects of disaster risk management is required. Such a service must provide communities with the mechanisms for obtaining access to assistance in a significant event or disaster and for reporting crucial local information to the relevant disaster management centre. In addition, the system should provide a facility for information dissemination to the media.

This information dissemination and display system must disseminate visual, electronic and hard-copy information. In addition, the system should provide links to information from other state organs or data custodians. Links must also be established with the recipients of information to facilitate an easy-to-use reporting and publishing function. Lastly, the system must also allow for the visual display of GIS-related information and functionality to connect to and publish information on the Internet.

5.5.1

5.5.1 Key Performance Indicators

i. Information dissemination programmes and communication channels between all spheres of government, state organs, communities and the media have been established.
ii. Disaster risk management information is easily accessible for all at no additional charge.
iii. An integrated disaster risk platform with interactive geospatial data and maps is available and updated.

5.6

5.6 Guidelines to be Disseminated

i. National guidelines for implementing the integrated information and communication system in provincial and municipal spheres.
ii. National guidelines for a standardised information reporting system.
iii. National guidelines for real-time hazard and vulnerability monitoring and analysis.
iv. National guidelines for disaster risk management programme and project management.
v. National guidelines for a disaster risk management performance measurement, monitoring and evaluation system.

6

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

Objective

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

SFDRR s14, s17,

The SFDRR is clear on its goal to; *"Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience".*

Introduction

s 15, s 20(2) SFDRR 19(k), s23 s24(d,g,h,l,j,k ,l,m), s25(a,d,f,g), s26(g), s30(j), s36(a,d), s48(c)

Sections 15 and 20(2) of the Act specify the encouragement of a broad-based culture of risk avoidance, the promotion of education and training throughout the Republic, and the promotion of research into all aspects of disaster risk management. This enabler addresses the requirements for the development and implementation of 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.

Outline

i. Section 6.1: Development of national education, training and research needs and resources analysis.
ii. Section 6.2: Requirements for developing and implementing an integrated national disaster risk management education and training framework.
iii. Section 6.3: Promotion of education for disaster risk management professionals and associated fields and learners in primary and secondary schools.
iv. Section 6.4: Development of disaster risk management training programmes.
v. Section 6.5: Developing an integrated public awareness strategy and promoting risk-avoidance behaviour.
vi. Section 6.6: Research programmes and the provision of information and advisory services.

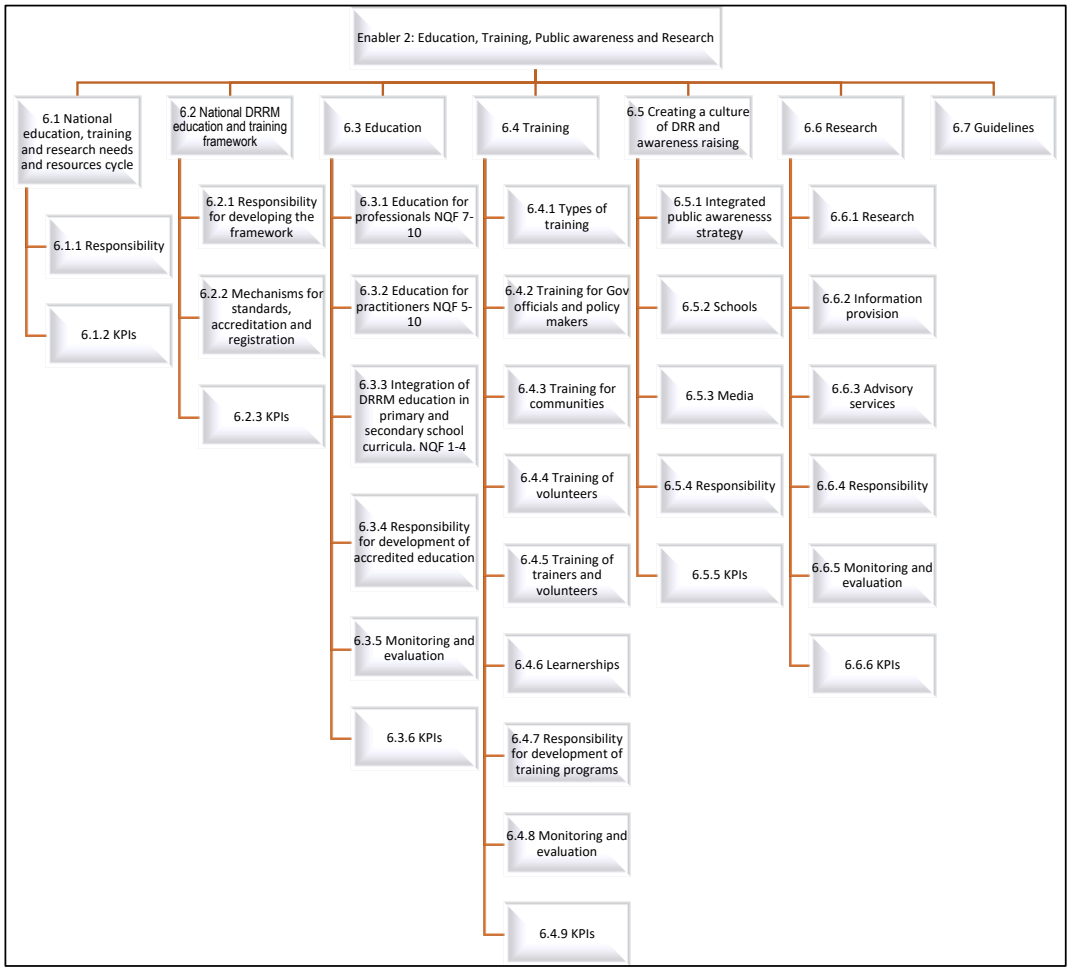

Fig 6.1: Enabler 2 structure

6.1

SFDRR 19(k), s23, s24(d,g,k,l,m), s24(d,g,h,l,j,k,l,m), s25(a,d,f,g,i), s26(g), s30(j), s31(c), s36(a,b,c,d), s40, s47(c), s48(c)

6.1 National Education, Training and Research Needs and Resources Analysis

The NDMC should regularly update the national education, training and research needs and resources analysis (NETaRNA) to determine the disaster risk management education, training and research 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.

6.1.1

6.1.1 Responsibility for Updating the NETaRNA

It is the responsibility of the NDMC to update the national education, training and research needs and resources analysis (NETaRNRA) and facilitate the process. The NETaRNRA should be updated at least every four years.

6.1.2

6.1.2 Key Performance Indicators

7(2)(m), s 21 SFDRR s23, s24(g)(h)(i)(j)(k)(l)((m) s25(a)(d)(g) s26(g)

i. The NETaRNRA has been updated every four years.
ii. The NETaRNRA is the foundation for developing a national disaster risk management education and training framework.
iii. The NETaRNRA informs the development of appropriate education and training programmes that not only build on existing strengths but are responsive to southern Africa's changing disaster risk management needs.

6.2

6.2 National Disaster risk management Education and Training Framework

SFDRR s19(k) s23, s24(g)(h)(i)(j)(k)(l)((m) s25(a)(d)(g) s26(g)

"*In the post-disaster recovery, rehabilitation and reconstruction phase it is critical to prevent the creation of and to reduce disaster risk by "Building Back Better" and* ***increasing public education and awareness of disaster risk***" (SFDRR, 2015, s19(k))

The NDMC should review and regularly update the NETaRNA to ensure a uniform approach to education and training needs considering the updated National Indicative Disaster Risk Profile. The framework should focus on the areas outlined below.

i. Communication of the Act and the national disaster management framework by:
    a. Communicating and integrating the policy objectives of the Act across the three spheres of government.
    b. Defining a comprehensive education, training, research and human resource capacity-building guide contains the requirements for successfully delivering the outputs called for in the Act.
ii. Establishment of uniform qualification criteria by:
    a. Identifying and defining all levels of disaster risk management education and training.
    b. Identifying and defining possible exit-level qualifications and the registration of these qualifications per the requirements of the South African Qualifications Authority (SAQA) and the National Qualifications Framework (NQF).
    c. Identifying measures that support regional and associated efforts in disaster risk management education and training
    d. Establishing minimum standards for education and training materials.
iii. Support the procedures for registration and certification of education and training professionals and programmes by:
    a. Determining criteria and a process for the registration of disaster risk management training providers and facilitators/trainers and the appointment of a custodian of such a register.
    b. Determining criteria and a process for certification and accreditation of various education and training programmes through a central quality assurance body.
    c. Reviewing current qualification requirements and, where necessary, establishing appropriate qualification requirements for different levels of

disaster risk management officers and heads of disaster management centres in all spheres of government.
d. Determining the requirements for disaster risk management learnerships.
e. Allowing for regular assessments and adaptations of disaster risk management unit standards.

iv. Integration of disaster risk management training, education and research into strategic areas by:
a. Establishing a process for integrating disaster risk management into education and training programmes of other relevant disciplines.
b. Determining criteria for a research directory of disaster risk management research for academics and students and criteria for the appointment of a custodian of such a directory.
c. Investigating the mainstreaming of disaster risk management research into development planning and practice.
d. Determining criteria and processes for recording awareness programmes and the custodian of such information.

The education and training framework must also serve as a mechanism for recording available education and training programmes and courses in South Africa and other countries in southern Africa.

6.2.1 Responsibility for Updating a National Disaster Risk Management Education and Training Framework

6.2.1 The NDMC must regularly update the national education and training framework.

The NDMC must ensure that all education and training standards and qualifications comply with the requirements of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995) and the guidelines prescribed in the NQF.

6.2.2 Mechanisms for Standards, Accreditation and Registration

6.2.2 The NDMC must establish and maintain a technical advisory body straddling national and provincial spheres of government to assist the NDMC, PDMCs, MDMCs and SETAs in maintaining the required standards of disaster risk management education across all functional/professional areas. The technical advisory body should also ensure that similar standards underpin the national education and training framework. Each province may initiate subcommittees of the technical advisory body with specific roles and responsibilities.

Members of the advisory body must be recognised individuals in the field, and their appointments must be based on their knowledge of and contributions to disaster risk management. These role players should include representatives from institutions of higher learning, research institutions, the Department of Labour, the Department of Education, SETAs, provincial governments, NGOs and the private and public sectors.

The NSDMC should keep an accreditation and registration system to ensure that all education and training initiatives undertaken by specialist agencies, trainers, training institutions, NGOs, and the private and public sectors comply with the

minimum standards established for disaster risk management education and training.

Where possible, short and/or modular education and training courses and programmes must be designed and structured so that participants are awarded credits contributing to obtaining a formal qualification.

6.2.3 Key Performance Indicators

i. The national disaster risk management education and training framework has been updated and directs the implementation of all disaster risk management education and training in South Africa.

ii. All disaster risk management education and training standards and qualifications comply with the South African Qualifications Authority Act, 2008 (Act No. 67 0f 2008) and the guidelines prescribed in the NQF.

iii. A technical advisory body has been established and is active.

iv. An accreditation and registration system has been established and maintained to ensure that all education and training providers and facilitators are registered and accredited.

6.2.3

s 7(2)(m), s 21

6.3 Disaster risk management Education

"*Build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning*" (SFDRR, 2015, 24(g)

6.3

SFDRR s23, s24(g,h,l,j,k,l,m) s25(a,d,g), s26(g)

Disaster risk management education programmes must be designed as part of the formal education system. They must be in line with the NETaRNRA, the national education and training framework and SAQA and NQF requirements.

6.3.1 Education for Disaster risk management Professionals (NQF levels 7 - 10)

Specific education programmes that will enhance a professional career path in disaster risk management must be further developed and implemented by tertiary institutions following approved unit standards and academic requirements.

6.3.1

6.3.2 Education for Practitioners in Professions Associated with Disaster risk management (NQF levels 6 - 10)

Aspects of disaster risk management must be integrated into the education programmes of relevant professions associated with disaster risk management.

6.3.3 Integration of Disaster Risk Reduction Education in Primary and Secondary School Curricula (NQF levels 1 - 5)

6.3.2

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

6.3.3

6.3.4 Responsibility for the Development of Accredited Education Programmes

The NDMC is responsible for promoting, facilitating and monitoring the development, implementation and accreditation of education programmes for professionals in disaster risk management and associated fields. The NDMC should also promote, facilitate and monitor the development and implementation of education programmes in schools.

6.3.5 Monitoring and Evaluation

6.3.4

The NDMC must establish a register of all disaster risk management programmes and institutions offering education in disaster risk management and related fields.

The NDMC must facilitate the appointment of an independent body to serve as an education and training quality assurer (ETQA) of facilitators, presenters, other service providers and course materials.

The NDMC must also establish a register of all accredited facilitators, presenters, instructors, educators and institutions offering formal disaster risk management programmes and a register of formal disaster risk management course materials.

6.3.5

6.3.6 Key Performance Indicators

i. Curricula for various NQF levels within different disciplines have been developed and applied in line with the NETaRNRA.
ii. Aspects of disaster risk management are included in the curricula of all relevant tertiary disciplines and primary and secondary school programmes.
iii. Various quality professional courses, workshops, seminars and conferences focusing on disaster risk and response issues through a multidisciplinary approach are held.
iv. Approved service providers have been registered and offer education and training services and products.
v. There is a widespread use of education and training materials.
vi. Qualified facilitators, instructors and presenters have been accredited.

6.3.6

6.4 Training Programmes for Disaster risk management

s 7(2)(m), s 21

"Promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in

formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training" (SFDRR, 2015, 2 24(l))

Disaster risk management training programmes must be designed in line with the NETaRNRA, the national education and training framework, and, where appropriate, SAQA and NQF requirements.

6.4

6.4.1 Types of Training

SFDRR s23, s24(g,h,l,j,k,l,m) s25(a,d,g), s26(g)

Training outside of the formal primary, secondary and tertiary education systems has a pertinent role in the drive to transfer skills and capacitate disaster risk management stakeholders and other interested persons.

Such training programmes may include accredited interventions registered with the NQF, which may earn trainees credits towards a registered qualification, and programmes that are not accredited.

Training interventions may include:

6.4.1

i. modular courses
ii. short courses
iii. workshops
iv. conferences
v. seminars
vi. mentorships
vii. in-service training
viii. learnerships
ix. self-teaching, experiential training
x. mass communication
xi. indigenous knowledge
xii. drills, exercises and rehearsals.

The NDMC must make every effort to promote the registration of training programmes, such as short courses and workshops, with the relevant SETAs so that they can count as credits towards formal qualifications.

6.4.2 Training Programmes for Government Officials and Policymakers

Training programmes for government officials and policymakers must cover disaster risk reduction, disaster response and recovery with "build back better" principles. Other relevant areas include development planning, hazard identification and assessment, communicable diseases, droughts, participatory rural appraisal, applied climate science and GIS. Such training programmes must embrace the multidisciplinary and interdisciplinary dimensions of 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

6.4.2

in these Acts will directly affect the qualifications and career paths of officials involved in disaster risk management.

6.4.3 Training Programmes for Communities

Training programmes for communities must focus on disaster risk awareness, disaster risk reduction, volunteerism and preparedness for disaster response. Local indigenous knowledge needs to be incorporated into training programmes aimed at local communities. Where appropriate, communities must be given the opportunity to modify and enhance training programmes through the inclusion of indigenous knowledge, practices and values, and the incorporation of local experience of disasters and disaster risk management. Indigenous knowledge must also be harnessed and incorporated into needs analyses and course development processes.

6.4.3

SFDRR s35(a)

6.4.4 Training of Volunteers

Special training programmes must be developed for persons interested in volunteering their services (see subsection 1.3.3 above). These programmes should address disaster risk reduction, vulnerability assessments, greater awareness of risks and hazards and general preparedness and response. In addition, there should be an emphasis on the training of community trainers to serve as “force multipliers” by, in turn, training others. In this regard, special consideration must be given to training costs, provision of protective clothing, travel expenses, insurance and incentives.

6.4.4

MDMCs must maintain a record of all volunteers trained in such programmes for submission to the NDMC for inclusion in the national database.

58
SFDRR s23, s24(g,h,l,j,k,l,m) s25(a,d,g), s26(g), s34(h), 36(a)

6.4.5 Training of Trainers and Facilitators

Training programmes must facilitate the development of accredited trainers and facilitators in disaster risk management to transfer improved 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.

6.4.6 Learnerships

6.4.5

Disaster risk management learnerships must be developed and promoted. These should include mentorship programmes that transfer skills from experienced officials to young 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 augment disaster risk management learnerships.

6.4.7 Responsibility for the Development of Training Programmes

6.4.6

The NDMC is responsible for promoting, facilitating and overseeing the development and implementation of training programmes and materials for

disaster risk management practitioners and associated fields (including government officials, policymakers, trainers and facilitators), relevant stakeholders and interested people and communities.

National, provincial and municipal organs of state must plan, organise and implement training programmes relevant to their respective areas of responsibility
6.4.7 in consultation with local communities and in line with the NETaRNRA.

NGOs and private sector institutions should be encouraged to plan, organise and implement disaster risk management training programmes for clients, suppliers,
s (2)(g) service providers and the general public.

6.4.8 Monitoring and Evaluation

The NDMC must establish a service provider register to regulate the quality and standards of training programmes. In addition, the NDMC must ensure that a register of facilitators, presenters, service providers and course materials is kept following the national disaster risk management education and training framework.

The NDMC must facilitate the appointment of an independent body to serve as an ETQA to approve course materials, facilitators, presenters and other service providers.

6.4.8

6.4.9 Key Performance Indicators

i. Ongoing training interventions, including short courses, workshops, seminars and conferences, are available to stakeholders.
ii. Training programmes have been developed, updated and implemented.
iii. Facilitators, instructors and presenters have become qualified and have been accredited.
iv. Approved service providers have been registered and are offering training services and products.
v. Widespread community-based disaster risk management training (in line with national training standards) is taking place.
vi. Disaster risk management learnerships have been developed and are operational.
vii. The ETQA is fully functional.

6.4.9
s 7(2)(m), s 21

6.5 Creating Awareness, Promoting a Culture of Risk Avoidance and Establishing Media Relations

"…….engage in the implementation of local, national, regional and global plans and strategies; contribute to and support public awareness, a culture of prevention and education on disaster risk; and advocate for resilient communities and an inclusive and all-of-society disaster risk management which strengthen the synergies across groups……." (SFDRR, 2015, s36(a))

6.5.1 Integrated Public Awareness Strategy

6.5

s 20(2) SFDRR s3, s19(k), s24(m), s25(c,f), s27(a), s33(d), s36(a,c,d)

An integrated public awareness strategy must be developed, updated and implemented nationally to encourage risk-avoidance behaviour by all role players, including all departments in the three spheres of government, especially in schools and communities known to be at risk. Such a strategy is necessary for the promotion of an informed, alert and self-reliant society capable of playing its part in supporting and cooperating with the government in all aspects of disaster risk and vulnerability reduction. The National Indicative Disaster Risk Profile (see KPA 2) and the NETaRNRA must inform the integrated awareness strategy.

6.5.1

To achieve this objective, a disaster risk management public awareness and information service, which takes cognisance of relevant international trends and initiatives and indigenous knowledge, must be established by the NDMC. As part of this service, the NDMC must support provincial and municipal disaster management centres with the implementation of programmes in communities at risk, which focuses on the hazards to which the communities are exposed and the steps they should take to reduce the impact. The disaster risk management public awareness and information service will be a critical interface between the information management system, the emergency communication system, all organs of state involved in disaster risk management and the general public. (See Enabler 1.)

s 20(2), s 17(1)(d), s 17(2)(f)

s 17(1), s 17(2)(g)

Developing 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. In addition, 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 service's success.

To inculcate risk-avoidance behaviour by all stakeholders, public awareness campaigns to raise awareness about disaster risks must provide information on how to reduce vulnerability and exposure to hazards. Such campaigns could include:

i. Organised and planned awareness programmes aimed at communities, officials, politicians and other stakeholders, using the media, posters, videos, publications and any other innovative means.
ii. Planned conferences by all disaster management centres in all spheres of government, with participation by the relevant intergovernmental relations structures, and, in the case of provinces, the inclusion of municipal intergovernmental structures in provincial conferences.
iii. Imbizo meetings (the participation of volunteers at such meetings is recommended).
iv. Awareness campaigns are conducted at least 30 days before a change of season or climate.
v. Annual recognition and celebration of World Disaster Risk Reduction Day (the first Wednesday in October).
vi. Rewards, incentives, competitions and recognition schemes to enhance awareness of and participation in risk reduction activities.
vii. 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.

6.5.2 Schools

The NDMC must establish links with existing awareness creation programmes in schools to disseminate information on disaster risk management with a focus on risk avoidance. In addition, the creation of school programmes focusing on relevant and appropriate aspects of disaster risk management must be encouraged.

All disaster management centres in metropolitan areas and districts must actively engage schools to ensure a practical approach to awareness programmes. School awareness programmes must be conducted, assessed and adapted annually.

6.5.3 Role of the Media

6.5.2

Communication about disaster risk reduction, preparedness, response and recovery activities is essential to ensure that information is passed on to communities and those involved in early warning, response and recovery efforts. The role of the media during disasters must be defined and managed through a consultative process involving the media, role players involved in response and recovery efforts, and communities routinely affected by disasters or impending disasters.

Informed publicity about disaster risk management initiatives and achievements will increase public awareness and support. To achieve this, national, provincial and municipal disaster management centres must establish and manage ongoing relations with relevant local and national media. However, media relations can be complicated and, at times, sensitive. Therefore, all centres should adhere to organisational policy guidelines in this regard.

6.5.3

SFDRR s25(c), 36(d)

Organised promotions and positive reinforcement of disaster risk reduction programmes through the media must be initiated to ensure public participation in and support for such programmes. In addition, disaster risk reduction programmes' objectives, benefits and activities must be communicated to all role players and specifically to communities directly affected by disaster risks.

The following has to be monitored regularly:

i. Positive and negative publicity.
ii. Effectiveness of media communications, especially in communities at risk.
iii. Social media.

6.5.4 Responsibility for an Integrated Public Awareness Strategy

The NDMC must plan, organise and initiate a national public awareness strategy informed by robust disaster risk assessment findings and in consultation with relevant stakeholders. In addition, the NDMC should develop and implement programmes aimed at creating awareness and encouraging risk-avoidance

behaviour by stakeholders. The NDMC must also establish good media relations to ensure balanced media coverage and publicity to increase public awareness and understanding of disaster risk management.

Each state organ in all three spheres of government must formulate and implement appropriate public awareness programmes in alignment with the national strategy.

6.5.4 Communities, NGOs and the private sector must be consulted about the design of such programmes. Using volunteers to assist with implementing awareness programmes should be encouraged to ensure ownership of and participation in public awareness programmes.

Each organ of state and disaster management centres in the national, provincial and municipal spheres must assign responsibility for managing media relations to a specific functionary or office. Where possible, the NDMC should be informed in advance about electronic broadcasts, the publication of press reports or the public appearances of officials regarding disaster risk management issues.

6.5.5 Key Performance Indicators

i. An integrated national public awareness strategy based on the National Indicative Disaster Risk Profile and the NETaRNRA has been updated.
ii. All disaster risk management awareness programmes focus on disaster risk reduction.
iii. Awareness of disaster risk management is promoted at schools and in communities known to be at risk.
iv. Awareness of disaster risk management is widespread, and risk-avoidance behaviour is integrated into the day-to-day activities of all stakeholders.
v. There is widespread evidence of balanced media reports and coverage of hazards, disasters and disaster risk management issues.
vi. Articles on disaster risk management are regularly published in the media, including social media.

6.5.5

vii. Good relationships with media representatives have been established and are maintained.

s 7(2)(m), s 21s

viii. Disaster risk reduction is a standard agenda item for consideration at executive meetings of all role players and stakeholders.

6.6 Research Programme and Information and Advisory Services

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

i. Create additional applied knowledge and information on disaster risk.
ii. Provide access to disaster risk management and related information to all stakeholders and role players.
iii. Provide an organised and value-added advisory service to all stakeholders.

6.6.1 Research

The Act calls for ongoing research into all aspects of disaster risk reduction, disaster response and related fields. The NDMC, through a process of consultation, must develop a strategic disaster risk reduction and response research agenda to

6.6 effectively inform disaster risk management planning and implementation in southern Africa. Research initiatives should also be linked to the IDP processes of municipalities. Research is the responsibility of every role player in disaster risk management.

SFDRR s7, s14, s24(k), s25(g,i), s31(c), s36(b,c), s40, s47(c)

There are many existing and ongoing research initiatives taking place in the region that provide essential insights into disaster risk reduction. To support a focused research agenda, the NDMC must facilitate the following:

6.6.1

i. Consultation and engagement between the communities of disaster risk scientists, disaster response experts and professionals in southern Africa to identify priorities for collaborative research and development and mechanisms for implementing such initiatives.
ii. A process for auditing existing research initiatives and programmes to identify those that add value to an understanding of disaster risk management processes and trends and provide insights into effective disaster risk reduction and response strategies and measures.

s 15(1)(i), s30(1)(i), s 44(1)(i), s17(2)(m)

iii. Consultation with appropriate national and international agencies and foundations that support research, including the private sector, to profile the importance of focused and coordinated funding support for disaster risk management research.
iv. Develop an integrated disaster risk reduction and response research agenda and programme, along with mechanisms for publishing and disseminating research results.

6.6.2 Information Provision

To provide a comprehensive information service, the NDMC must undertake the following:

s 15(1)(i)

i. Develop an information database.
ii. Establish a library or resource centre on disaster risk reduction and response.
iii. Make provision for easy access to the information database.

6.6.3 Advisory Service

An effective advisory service must encompass the following:

i. Other specialist stakeholders should provide technical advice to national, provincial and municipal spheres of government.
ii. National, provincial and municipal disaster management centres must create the capacity to act as information repositories of and conduits for disaster risk reduction and disaster impact information in their respective areas.

6.6.2

iii. Consultants must be registered to ensure that acceptable standards of consulting services are rendered in line with the national disaster management framework and the national disaster risk management education and training framework.

s 15(1)(d)

6.6.4 Responsibility for Establishing a Research Programme and Information and Advisory Services

6.6.3 The NDMC must create an organised national research programme and establish an information and advisory service. In addition, the NDMC should liase and coordinate

s 22

with research organisations such as the Water Research Commission (WRC), the CSIR and other research organisations.

All national organs of state must gather and provide information relating to disaster risk management in their respective functional areas for inclusion in a national information management system.

6.6.5 Monitoring and Evaluation

The NDMC must monitor and evaluate all research projects under its management to ensure national research objectives are met.

6.6.4

6.6.6 Key Performance Indicators

s 19, s 20 SFDRR s14, s24(k), s36(b)

i. A strategic disaster risk research agenda has been established and updated.
ii. Research institutions participate in the national research programme on an organised basis.
iii. A link between scientific research and policy exists (evidence-based and policy-oriented research).
iv. Regional and international exchange, cooperation and networking occur regularly.
v. Disaster risk management research contribute to technology development.
vi. All stakeholders have access to a comprehensive research database.
vii. All stakeholders have access to a comprehensive advisory service.

6.6.5

6.7 Guidelines to be Disseminated

6.6.6

7(2)(m), s 21

s 15(1)(i)

i. National guidelines for the design and content of disaster risk management education and training programmes.
ii. National guidelines for developing and accreditation course materials for accredited education and training programmes.
iii. National guidelines for registering disaster risk management education and training institutions and organisations.
iv. National guidelines for the accreditation and registration of trainers, facilitators and service providers.
v. National guidelines for designing and developing public awareness programmes related to risk-avoidance behaviour.
vi. National guidelines for media relations.
vii. National guidelines for the use of social media.

6.7

s 15(1)(i)
s 15(1)(c–d)

Relevant sections of the Disaster Management Act, 2002 and SFDRR

7 Enabler 3: Funding Arrangements for Disaster risk management

Objective

Mechanisms for the funding of disaster risk management in South Africa.

s 7(1), s7(2)(k)

Introduction

SFDRR s30(a,b,m), s31(d), s36(c), s45

Section 7(2)(k) of the Act requires that the national disaster management framework makes provision for "a framework within which organs of state may fund disaster risk management with specific emphasis on preventing or reducing the risk of disasters, including grants to contribute to post-disaster recovery and rehabilitation and payment to victims of disaster and their "*dependents*". Given the Act's provisions, funding arrangements must ensure that disaster risk management activities are funded adequately and sustainably. This enabler describes the disaster risk management funding arrangements for state organs in the national, provincial and local spheres of government.

Adopt public policies and actions that support the role of public service workers to establish or strengthen coordination and funding mechanisms and procedures for relief assistance and to plan and prepare for post-disaster recovery and reconstruction (SFDRR, 2015).

SFDRR s33(e)

Enabler 3 builds on the recommendations made by the Financial and Fiscal Commission (FFC) on funding arrangements in its Submission on the Division of Revenue 2003/04.

Outline

i. Section 7.1: Legislative framework governing funding arrangements for organs of state.
ii. Section 7.2: Principles underpinning funding arrangements.
iii. Section 7.3: Overview of the recommended funding arrangements.
iv. Section 7.4: Funding arrangements are required to establish the necessary institutional arrangements, including information management and communication system for disaster risk management.
v. Section 7.5: Mechanisms for funding disaster risk assessment in different spheres of government as part of a national disaster risk reduction strategy.
vi. Section 7.6: Funding requirements for disaster risk reduction planning and its integration with existing development planning processes.
vii. Section 7.7: Funding arrangements for disaster response and recovery.
viii. Section 7.8: Funding education, training, public awareness and research

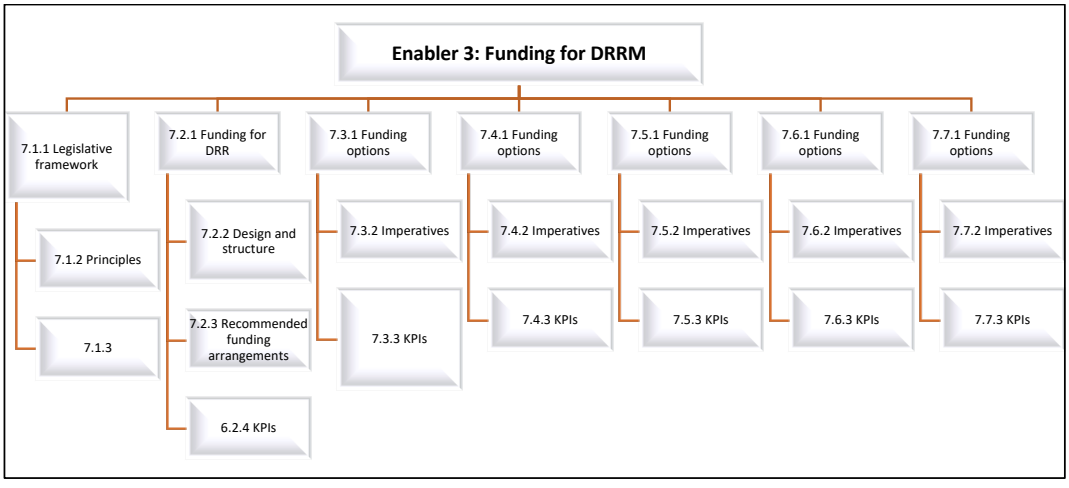

Fig 7.1 Enabler 3 structure

7.1

7.1 Legislative Framework for Funding Arrangements

SFDRR s30(m)

Promote, as appropriate, the integration of disaster risk reduction considerations and measures in financial and fiscal instruments (SFDRR, 2015, s30(m)).

The following primary legislation provides the context for disaster risk management funding arrangements:

i. Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)
ii. Disaster Management Act, 2002, (Act No. 57 of 2002)
iii. Public Finance Management Act, 1999 (Act No. 1 of 1999) (PFMA)
iv. Municipal Finance Management Act, 2003 (Act No. 53 of 2003) (MFMA)
v. Municipal Systems Act, 2000 (Act No. 32 of 2000).

23(7)
SFDRR s30(m), s36(c)

The Constitution assigns exclusive or concurrent functions to different spheres of government. For example, schedule 4 of the Constitution designates disaster risk management as a concurrent national and provincial competence. However, the Act places the responsibility for certain disaster risk management activities squarely within the local government sphere. For example, section 23(7) of the Act states that a disaster must be regarded as a local disaster until it is classified as either a national or a provincial disaster.

s 56(2) , s 57

As amended in section 10A of the Municipal Systems Act, the disaster risk management function imposes new constitutional obligations on local government. These obligations are that the responsible Cabinet member, MEC or another organ of state must take appropriate steps to ensure sufficient funding and capacity-building initiatives as may be needed for the performance of the assigned function. Since disaster risk management at the municipal level encompasses a wide range of activities (including disaster risk reduction, preparedness, response and recovery), funding mechanisms must be designed to allocate optimal resources to each of these activities.

s 56(3), s 56(4)

Chapter 6 of the Disaster Management Act outlines two principles that should be applied to funding the cost of a disaster when such an event is declared. Firstly, section 56(2) of the Act states that in the event of a disaster, "national, provincial and local organs of state may financially contribute to response efforts and post-disaster recovery and rehabilitation". Secondly, the Act assigns the responsibility for repairing or replacing infrastructure to the state organ responsible for maintaining such infrastructure. Section 57 of the Act, however, provides some leeway for a municipality or provincial government to request financial assistance for recovery and rehabilitation from the national government.

The Act encourages budgeting for disaster recovery and rehabilitation through threshold funding. Section 56(3) allows the Minister to prescribe a percentage of the budget of a provincial or municipal state organ as a threshold for accessing national funding for disaster response efforts. In addition, the extent to which an organ of state has implemented disaster risk reduction efforts will be considered when requests for disaster response and post-disaster rehabilitation funding are considered.

The broad funding guidelines set out in sections 56, and 57 of the Act make access to disaster recovery and rehabilitation funding contingent on organs of state earmarking funds for disaster risk reduction activities. This principle reduces the risk of moral hazard behaviour on the part of provincial or municipal state organs by ensuring that they budget for all disaster risk management activities. However, in this way, the national government does not implicitly guarantee the provision of financial assistance to organs of state for disasters that could have been reasonably prevented or reduced in some way.

Apart from the Act, other legislative provisions govern the release of funds for disaster recovery and rehabilitation. For example, sections 16 and 25 of the PFMA allow the Minister of Finance or relevant MEC to appropriate funds from their respective revenue funds for use in emergencies. Funds released in terms of these provisions must be reported to either Parliament or the provincial legislature, as the case may be, and to the Auditor-General within 14 days of their authorisation. In addition, these funds must be attributed to a vote when the adjustments budget is passed.

Similarly, section 29 of the MFMA allows the Mayor of a municipality to authorise unforeseeable and unavoidable expenditures in an emergency. The council must ratify such expenditure in an adjustments budget within 60 days of the expenditure having been incurred. Furthermore, section 29(2)(b) of the MFMA states that unforeseeable and unavoidable expenditures may not exceed a percentage of the budget. This restricts the amount of funds available to respond to emergencies. National Treasury must pre- scribe this percentage in regulations.

7.2 Principles Underpinning Funding Arrangements

Any funding arrangement must be consistent with the principles set out in the Act and any other related legislation (see section 7.1 above). Furthermore, the

management of intergovernmental transfers must be grounded in public finance theory.

The core principles for disaster funding are (World Bank, 2019):

i. Timelines of funding. Speed matters but not all resources are needed at once.
ii. How money reaches beneficiaries is as important as where it comes from.
iii. Disaster risk layering. No single financial instrument can address all risks.
iv. To make financial decisions, you need to have the correct information.

Funding mechanisms should ensure that the objectives of the relevant legislation are safeguarded and enabled. In addition, the recipients of the funds are accountable for implementing the legislation. Important criteria for funding are the following:

i. **Adequacy.** Provincial governments and municipalities should have adequate resources to perform their functions effectively. Concerning disaster risk management, all state organs should have access to sufficient funding to discharge their legislative responsibilities.
ii. **Equity.** Funding mechanisms should ensure that legislation is implemented equitably across provinces and municipalities. This would help to avoid inter-jurisdictional spillovers arising from uneven and inequitable implementation.
iii. **Predictability.** Any funding mechanism that includes intergovernmental transfers should ensure predictability by making allocations from national to provincial and local state organs over the term of the Medium-term Expenditure Framework (MTEF). Any allocations to municipalities should be disclosed timeously so that municipalities can take cognisance of these allocations in their annual budgets.
iv. **Administrative efficiency.** The cost of administering the funding mechanisms should be kept to a minimum. The funding mechanisms should not impose new reporting obligations on provincial or local state organs. Therefore, the reporting process should be integrated into the existing reporting cycle.
v. **Incentive effects.** Funding mechanisms should be designed to provide incentives for sound fiscal management and reduce the likelihood of inefficient fiscal practices. In this way, perverse incentives in the system may be minimised, and the risk of moral hazard behaviour by recipients of the funds discouraged.
vi. **Autonomy.** The assignment of functions or the transfer of funds between spheres of government should not undermine the constitutionally mandated autonomy of provincial and municipal state organs. The autonomy criterion should be viewed within the context of cooperative governance.
vii. **Risk pooling.** The cost of a disaster can become so substantial that no single provincial and municipal state organ can fund recovery efforts on its own. In such cases, funding mechanisms should provide post-disaster recovery costs to be shared across the broadest possible population rather than burden the affected population.

In addition, it should be borne in mind that disaster risk management has certain unique characteristics which differ markedly from other 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.

7.3 Overview of Funding Arrangements

7.3

Funding arrangements for disaster risk management must be based on the legislative framework outlined in section 7.1 above and consider the various criteria for an optimal funding mechanism.

7(2)(k)

7.3.1 Funding Options for Disaster Risk Management

7.3.1

s 56(2)(a), s 57 SFDRR s29, s30

The responsibilities imposed by the Act on provincial and municipal organs of state require substantial start-up costs, including investment in infrastructure and new technology for provincial and municipal disaster management centres and funding for capacity building. Given the substantial start-up costs involved, it is unlikely that all the provinces and municipalities will be able to fund these amounts from their budgets.

The national government has two options:

i. It can fund disaster risk management through a centralised mechanism.
ii. It can decide not to fund any disaster risk management activities, thereby placing the onus on provincial and local government to finance expenditures for disaster risk management activities from their existing equitable share transfers or own revenues.

Under the first option, the national government would have to fund certain costs associated with particular disaster risk management activities. Then, it can either use conditional grants, the equitable share or a combination thereof to fund disaster risk management at the provincial and local government levels. This option ensures that disaster risk management is implemented evenly within provincial and local spheres, especially since fiscal capacity varies markedly across provinces and municipalities.

National government funding of start-up costs could also act as a catalyst for the institutionalisation of disaster risk management in provincial and municipal state organs. Once the institutional structures are set up, provinces and municipalities can then plan and budget for the costs as part of their operational activities.

The primary disadvantage of this approach is that it might require the national government either to redirect resources from other priorities to disaster risk management or to increase total expenditure through additional taxation or borrowing. The latter could compromise fiscal discipline. A further limitation of this approach is that the ability to access national funds might create a perverse incentive for provinces and municipalities to budget for disaster risk management activities from their resources. Perverse incentives can, however, be reduced through the design of the funding mechanism by requesting that provincial and municipal state organs provide matching funding.

The second option of zero funding is also a legitimate choice for the national government. However, it has far-reaching consequences. Firstly, it may prohibit

provincial governments and municipalities from complying with the Act and its focus on disaster risk reduction. It may also result in a lack of capacity to respond effectively to disasters. In the long run, the absence of comprehensive and pervasive disaster risk reduction measures in the provincial and municipal spheres may pressure the national budget when disasters occur.

Furthermore, the lack of adequate preventive measures and expenditures in one jurisdiction could well heighten the probability of disasters in neighbouring jurisdictions, thus creating negative externalities. Finally, it is a constitutional imperative to ensure that lives are safeguarded. Non-funding disaster risk management may be regarded as relinquishing that constitutional responsibility.

The Act assigns responsibility for the management of local disasters to municipalities. If municipalities cannot perform this function because of a lack of institutional capacity, then responsibility for managing the disaster is escalated to the provincial level. However, the relevant municipality is the state organ closest to the disaster and can often respond the fastest. Providing zero funding will thus create inefficiencies in the intergovernmental system by limiting the ability of provincial and municipal state organs to respond effectively to disasters.

7.3.2 Design and Structure Considerations

7.3.2

It is essential to contextualise the design and structure of the funding arrangements for the national disaster management framework. Distinguishing between two-time frames – the short term and the long term – is an important consideration in the design of funding arrangements. Any funding mechanism should be structured in such a manner that it is flexible enough to adapt to time changes. For example, the start-up costs and initial capital outlays required to implement the Act are incurred in the short term. In many instances, provincial and municipal state organs responsible for disaster risk management activities may be unable to fund these costs.

Long-term costs include the operational and sustainable costs involved in disaster risk reduction activities. These costs must be included in the budget once disaster risk management is integrated into routine planning and budgeting activities. In the case of provinces, most departments will have to prepare disaster risk management plans, which can be linked to normal strategic planning processes. In the case of municipalities, the Municipal Systems Act 2000 (Act No. 32 of 2000) consolidates disaster risk management planning as part of integrated development planning. Accordingly, funds allocated to disaster risk management planning are part of the funds allocated to IDP processes.

Phase-in provisions are included in the funding arrangements to bridge the short- and long-term gaps. These provisions are targeted at low-capacity, resource-poor municipalities, helping to guarantee the sustainable implementation of the Act.

The Act requires a paradigm shift from recovery and rehabilitation to disaster risk reduction. This has a profound influence on funding arrangements. In general, budgeting for disaster risk reduction activities imposes new expenditure pressures on the budgets of state organs. However, international experience has shown that having risk reduction measures in place substantially reduces the cost of a disaster

when it does occur. One of the main problems in South Africa is the lack of information on the costs associated with past disasters. Although the Act and the national disaster management framework emphasise disaster risk reduction, the reality is that it is difficult to convince stakeholders of the importance of disaster risk reduction measures in the absence of reliable cost estimates. The benefits of risk reduction measures cannot be evaluated against the cost of a disaster if both the direct and indirect costs of disasters are not quantified. Therefore, funding arrangements have to create positive incentives for stakeholders to undertake proactive steps towards disaster risk reduction.

Until minimum guidelines prescribed by the national disaster management framework are issued and costed, it won't be easy to design specific mechanisms detailing how funds should flow from one organ of state to another. It is recommended that organs of state or entities – particularly those regularly affected by disasters – analyse the severity and magnitude of past disasters and use this information to project the potential costs of such disasters. These projections will be the most reliable estimates of the likely costs of future disasters and should thus form the basis for disaster risk management budgeting.

7.3.3 Recommended Funding Arrangements

This section provides a general overview of the recommendations on funding arrangements for disaster risk management to cover the costs associated with the following activities:

7.3.3

i. start-up activities
ii. ongoing activities
iii. disaster risk reduction
iv. information and communication activities
v. response, recovery and rehabilitation activities
vi. training and capacity-building programmes.

Table 7.1 provides an overview of the recommended funding mechanisms for each of the five disaster risk management activities mentioned above. The following section discusses these in greater detail for the KPAs and enablers.

In general, the funding arrangements enable state organs to budget effectively for disaster risk reduction costs. However, the risk of perverse incentives must be minimised by requirements for matching funds from organs of state, as far as this is practicable. Apart from the centralised contingency fund, the only other central funding mechanism is a conditional grant to cover the start-up costs of establishing disaster management centres in the provincial and local spheres. The conditional grant should be a one-off transfer from the national government. However, in the case of low-capacity, resource-poor district municipalities, the conditional grant must include an amount to cover operational costs in the district for a maximum period of two years. Criteria for determining whether a particular municipality is low-capacity and resource-poor must be defined by the Department of Provincial and Local Government (DPLG).

able 7.1:Funding arrangements for disaster risk management		
Activity	**Funding source**	**Funding mechanism**
Start-up activities (KPA 1, Enabler 1)	National government	Conditional grant for local government – district and metropolitan municipalities, where necessary
		Conditional grant for provinces with counter-funding component[1]
		Budget of national departments
Disaster risk management ongoing operations (KPAs 2 and 3)	National and provincial government	Own departmental budgets
	New assignment to local government	Increase in the I (Institutional) component of the equitable share of local government
Disaster risk reduction (KPAs 2 and 3)	National departments	Own budgets
	Provincial departments	Own budgets but can be augmented by application for funding to the NDMC for special national priority risk reduction projects
	District municipalities	Own budgets but can be augmented by application for funding to the NDMC for special national priority risk reduction projects
	In the case of low-capacity, resource-poor municipalities[2]	Additional funding released from the NDMC targeted at these categories of municipalities
Response, recovery and rehabilitation and reconstruction efforts (KPA 4)	National government	Own budget for those departments frequently affected by disasters
		Access to central contingency funds
		Reprioritise within capital budgets for infrastructure reconstruction
	Provincial government	Own budget, particularly for those departments frequently affected by disasters
		Conditional infrastructure grants
		Access to central contingency fund once threshold is exceeded on a matching basis
		Reprioritise within capital budget for infrastructure reconstruction
		Provincial disaster relief recovery grant
	Local government	Access to central contingency fund once threshold is exceeded
		Conditional infrastructure grant, i.e. Municipal Infrastructure Grant (MIG)
		Municipal disaster relief and rehabilitation grant
Education, training and capacity-building programmes (Enabler 2)	All spheres of government	Own budgets and reimbursement through SETAs
Notes: i. *The suggested ratio for counter-funding is 85:15, i.e. 15 per cent of all start-up costs being funded by provincial government.* ii. *Low-capacity, resource-poor municipalities should be identified through the creation of a composite index that takes into account the operating income of municipalities and their capacity classification as determined by National Treasury.*		
Source: Partially adapted from FFC, Submission on the Division of Revenue 2003/04,		

7.4

7.4 Key Performance Area 1: Institutional Capacity for Disaster risk management and Enabler 1: Information Management and Communication

KPA 1 focuses on creating the institutional capacity within all spheres of government to give effect to the principle of intergovernmental cooperation for disaster risk management. National guidelines developed by the NDMC described the infrastructural requirements of provincial and municipal disaster management centres.

Enabler 1 focuses on establishing a comprehensive information management and communication system to ensure that all role players have access to reliable hazard and disaster risk information for effective disaster risk management and risk reduction planning. The national disaster management framework requires that the cost and funding of developing information management and communication system is included as an essential component in the start-up and upgrade and maintenance costs for disaster management centres. Provision in this regard should
7.4.1 be made for needs analysis, data cost, the ability to support the objectives of the key performance areas, allow for specialized and integrative functions that promotes collaboration and awareness.

7.4.1 Funding Options

Funding is required to maintain integrated institutional capacity for the effective implementation of disaster risk management policy and legislation. Funding is required for the following:

7.4.1.1
i. Start-up, upgrade and maintenance costs for the NDMC and provincial and national disaster management centres. The technology transition requires capable and efficient information and communication networks with all state organs and society.
ii. Improvement of ongoing operations of the NDMC through collaborative and incentive means.
iii. Regional and international cooperation and humanitarian assistance.

7.4.1.1 Start-up and upgrade costs for disaster management centres

s 7(2)(k), s 29(1), s 43(1)
Start-up and upgrade costs for disaster management centres can be funded through a conditional grant from the national government or through provincial and municipal budgets. Compelling arguments can be made for both options. However, alternative options should not only withstand legislative scrutiny but also meet the criteria in section 7.2 above.

7.4.1.1.1 Conditional grants

The Act has a built-in deadline of two years from its commencement for organs of state to comply with its provisions. The date of commencement set for national and provincial governments was 1 April 2004 and for municipalities 1 July 2004, mirroring the financial years of each of these spheres of government. The Act requires that provinces and metropolitan and district municipalities establish disaster management centres in their jurisdictions. Many municipalities are still without functional disaster management centres. In addition, the 4IR requires fast internet and communication systems, with the capacity for virtual meetings and training, something still lacking at most disaster management centres. Given the urgency and that disaster risk management is a national priority, it is appropriate to fund the start-up and upgrade costs from a conditional grant.

The theory of inter-governmental fiscal relations supports conditional grants as a funding mechanism. Conditional grants must provide provincial and municipal state organs with adequate resources to cover the start-up and upgrade costs of disaster management centres. Guidelines produced by the NDMC for the minimum infrastructural requirements for disaster management centres should form the basis

for the conditions attached to the grant. In this regard, these minimum guidelines must be costed to establish a reliable estimate of the total cost of the conditional grant to the national fiscus (see subsection 1.2.2.2 above).

A conditional grant will also ensure that regional disparities in infrastructure and response capabilities are standardised. A minimum level of uniformity in the institutional capacity and response capability across provinces and districts is likely to lessen the incidence of inter-jurisdictional spillover in the case of a disaster. In addition, if disaster management centres have the minimum capacity required to respond rapidly during the early stages of a disaster, the impact of the disaster can be contained, hence minimising the economic impact on neighbouring areas and the total cost of the disaster.

The conditional grant will allow municipalities to streamline existing fragmented response and recovery activities and to optimally exploit the advantages of the 4IR.

7.4.1.1.1.1 Provincial government conditional grants

To reduce the likelihood of perverse incentives in the system, conditional grants transferred to provinces must be on a matching basis or, in more common terms, require counter-funding. In this way, provinces will be incentivised to optimise existing infrastructure and reduce the costs of setting up their disaster management centres. A rough guideline for a matching grant is a ratio of 85:15, with provinces contributing 15 per cent of the amount required for start-up and upgrade costs. This percentage must be high enough to provide provinces with an incentive to optimise within their existing institutional capacities.

7.4.1.1.1.2 Local government conditional grants

In the past, conditional grants to local government have been used to:

i. Incorporate national priorities into the municipal budget.
ii. Promote national norms and standards.
iii. Address backlogs and regional disparities in municipal infrastructure.
iv. Effect transition by supporting capacity building and restructuring of municipalities.

A conditional grant for disaster risk management effectively meets these criteria. In addition, it ensures that disaster risk management as a national priority is institutionalised within the local sphere.

Local government conditional grants must be disbursed to district municipalities to cover the start-up and upgrade costs involved in establishing and upgrading municipal disaster management centres. Given the existence of infrastructure for disaster risk management, metropolitan municipalities should cover upgrade costs for disaster management centres from their budgets.

Conditions for access to the grant must be linked to the minimum infrastructural requirements for the setting up municipal disaster management centres. However, given the heterogeneity of the local government sphere with regard to fiscal capacity, it is not practical to apply the principle of matching funding. Instead, the implementation of the conditional grant must be monitored through the reporting

cycle described in sections 71 and 72 of the MFMA, and through the statutory reporting requirements in the Division of Revenue Act, which is enacted annually.

The differentials in fiscal capacity across municipalities may pose problems for implementing the Act. In certain instances, district municipalities – particularly those in poor areas with little economic activity – may be unable to fund the ongoing operations of their disaster management centres. Therefore, it is recommended that the local government's conditional grant for disaster risk management includes a component for funding the ongoing costs in low-capacity and resource-poor district municipalities for a maximum of two years. The development of a plan for covering the ongoing costs beyond the two years must be a condition of this component.

The NDMC must construct a composite index based on trading income and the existing capacity classification by National Treasury to categorise these municipalities. Own revenue collected is a good indicator of fiscal capacity. District municipalities can be categorised according to their levels of own revenue, for example:

i. '**Class One'** category municipalities would be resource-poor district municipalities, with own revenue of less than R100 million.
ii. '**Class Two'** category municipalities would cover those district municipalities with their own revenue of R100 million to R300 million.
iii. '**Class Three'** category municipalities would include resource-rich district municipalities, with own revenue of over R300 million.

It is hoped that at the end of this phase-in period, municipalities will be able to cover the operating costs of their disaster management centres. The major advantage of a conditional grant is that it would enable 'Class One' category district municipalities to support their local municipalities in disaster risk management planning. The relevant PDMC must provide technical assistance to 'Class One' category municipalities and monitor their progress in implementing the Act.

7.4.1.2 The main drawback of introducing a conditional grant is that it might not be administratively efficient to create a new conditional grant to fund a one-off cost. However, given the tight deadlines by which provincial and municipal disaster management centres have to become operational, it is impractical to have a conditional grant transferred over a specified period of time.

7.4.1.2 Provincial and local government budgets

Another option for funding start-ups (for those municipalities without disaster management centres) and upgrade costs would be to leave it to provinces and municipalities to budget for these costs from their own resources. At the provincial level, funds for existing disaster risk management activities are already allocated through the provincial equitable share. Therefore, provinces may be able to allocate some resources to upgrade costs from these funds.

At the local level, metropolitan municipalities already accommodate their disaster management centres within existing institutional structures. However, upgrading disaster management centres might still be a challenge to meet all the minimum requirements for operating within a 4IR environment through their own budgets. It

is important to note that the upgrade costs for a metropolitan municipality may be affected by its specific geographical location. For example, a district municipality may require substantial investment in communication technology, such as a relay tower, to allow its MDMC to fulfil the responsibilities set out in the Act.

Depending on their financial positions, district municipalities may be able to fund some of the start-ups and upgrade costs of MDMCs. However, this solution has several drawbacks and is therefore not recommended. Firstly, because district municipalities may not be able to fund all of the start-up and upgrade costs of MDMCs, they may not meet the minimum requirements for MDMCs set out in guidelines issued by the NDMC. Secondly, there are disincentives for districts to fund all of the start-up costs because of the problem of free-riding: the presence of well-

7.4.1.3 equipped MDMCs is a positive externality for local municipalities, which benefit from the activities of the district municipality without contributing to any of the costs involved. Finally, the identification of competing local priorities and development initiatives may result in a smaller portion of the budget being allocated to disaster risk management.

7.4.1.3 Ongoing operations of the NDMC

Disaster risk management currently fall under the DPLG vote. Therefore, the costs associated for upgrading and running the NDMC must be funded from the DPLG vote.

The responsibilities of the NDMC in section 15 of the Act, including maintaining and upgrading integrated information management and communication system, must be costed. These cost estimates will form the basis of the disaster risk management budget in the DPLG vote.

The gap between the current operational capability and that required by the Act should also be estimated, and the NDMC must regularly update its action plan to comply with the legislation requirements. Funding for the action plan implementation can be included in the MTEF.

The budget of the NDMC must include an allocation for national priority risk reduction projects, which should be used when provincial or municipal state organs request funds for such projects. This national priority risk allocation creates

7.4.1.4 flexibility in the funding arrangements and encourages provinces and municipalities to focus on priority risks. In addition, the NDMC must develop and update a set of criteria for evaluating requests from provinces or municipalities and make these known to provinces and municipalities.

7.4.1.4 Funding for regional and international cooperation and humanitarian assistance

As a key player in southern Africa, South Africa is well-placed to provide technical advice on disaster risk management and humanitarian assistance in the event of a regional disaster. The costs associated with the maintenance of structures for regional cooperation and the provision of ongoing technical assistance must be funded from the NDMC's budget. The budgets of PDMCs in provinces that border

neighbouring countries must also have allocations for establishing and maintaining structures for interregional cooperation.

Concerning humanitarian assistance, the NDMC must have access to emergency funds in the case of regional disasters (see subsection 7.7.1.2 below).

National departments that deal with regional and international relief efforts must budget for humanitarian relief. The national Department of Social Development already budgets for disaster relief. The department's National Disaster Relief Board is in charge of administering the Disaster Relief Fund. These funds should also be used to assist organisations or persons in neighbouring countries affected by severe disasters.

7.4.2

The budgets of the NDMC and relevant organs of state must include allocations for membership or subscription fees aimed at fostering international cooperation and forging links with international organisations involved in disaster risk management.

7.4.2 Imperatives

The national government must fund the start-up costs for provincial and municipal disaster management centres through a one-off conditional grant. The conditions and sizes of the grants must be based on the guidelines for the minimum infrastructural requirements for disaster management centres. In addition, monitoring must occur through the mandatory reporting process prescribed by the Division of Revenue Act.

7.4.3

The NDMC's ongoing costs must be funded from the DPLG's budget, and must be included as indicative allocations over the full period of the next MTEF for the DPLG's vote.

7.4.3 Key Performance Indicators

i. The minimum requirements for upgrading provincial and disaster management centres have been costed.
ii. Conditional grants have been established and allocated to fund the start-up and/or upgrade costs of disaster management centres in provinces and municipalities.
iii. Conditions for access to grant funding are based on guidelines issued by the NDMC on minimum infrastructural and technological requirements for disaster management centres.
iv. The responsibilities of the NDMC as set out in the Act have been costed, and these cost estimates inform the budget for disaster risk management in the DPLG vote.
v. The NDMC budget makes provision for national priority risk reduction projects.
vi. The NDMC has rapid access to emergency funds for assistance in regional disasters.
vii. Monitoring processes are integrated with routine reporting cycles of state organs.

7.5

7.5 Key Performance Area 2: Disaster Risk Assessment

The Act requires all organs of state to determine levels of risk and assess their vulnerability to these risks in order to implement disaster risk reduction strategies

and better prepare for disaster response and recovery. Initial expenditure on disaster risk assessments can be offset by long-term benefits accruing from well-designed risk reduction measures.

7.5.1

7.5.1 Funding Options

Since disaster risk management is a concurrent national and provincial competence, national and provincial disaster risk assessments should be funded through the budgets of the relevant organs of state. Section 20 of the Act requires the NDMC to provide guidance to organs of state on ways of determining levels of risk and vulnerability. Similarly, section 33 enjoins the PDMC to provide guidance to organs of state on disaster risk assessments. The use of a standard format for disaster risk assessments will contribute towards reducing the variability of costs across the various organs of state. Costs involved in updating disaster risk assessments must be budgeted for on a regular basis.

Expenditure incurred in monitoring disaster risk must be part of the routine operation of the relevant organs of state and disaster management centres, and must be budgeted for accordingly.

At municipal level, there are two options with regard to funding disaster risk assessments. The first option allows for the initial disaster risk assessments to be included in the start- up costs of MDMCs. Thereafter disaster risk assessments can be funded through the local government conditional grant. The conditions of access to grant funding should be linked to national guidelines setting out the norms and standards for disaster risk assessments.

The benefits of this option are that disaster risk assessments are standardised across municipalities and the data produced at local government level are aligned with current and future information needs of the NDMC and PDMCs. In addition, with sufficient resources, district municipalities could provide their local municipalities with the technical support needed to integrate risk assessments in sectoral plans, thus facilitating disaster risk management planning. The costs associated with updating relevant hazard and vulnerability information should be budgeted for by the respective district municipalities.

The second option is to allow districts to fund the initial disaster risk assessments and any subsequent assessments and updates themselves. However, this can compromise disaster risk management planning. Without a comprehensive disaster risk assessment, disaster risk reduction planning becomes an ineffective tool. An unreliable risk assessment can result in resources being redirected from high-priority risks to low-priority risks. In addition, variations in the content, methodologies and quality of the initial disaster risk assessments could compromise the effectiveness of provincial and national level functions.

7.5.2

7.5.2 Imperatives

Disaster risk assessments must be funded through the recurrent budgets of national and provincial organs of state. The costs of initial disaster risk assessments

undertaken by municipal organs of state must be included in the start-up costs and
7.5.3 funded through the local government conditional grant.

7.5.3 Key Performance Indicators

i. The costs of disaster risk assessments are included in the budgets of national and provincial organs of state.
ii. The costs of initial disaster risk assessments are included in the local government conditional grant.
iii. The costs of disaster risk assessments have been estimated and are included in the budgets of MDMCs.

7.6

7.6 Key Performance Area 3: Disaster Risk Reduction

In terms of funding arrangements, this KPA can be separated into disaster risk management planning and disaster risk management implementation. The Act requires all spheres of government to develop disaster management frameworks that guide disaster risk management activities, including planning and implementing
7.6.1 disaster risk reduction projects and programmes.

7.6.1 Funding Options

Disaster risk management planning must be included in the strategic plans of national and provincial departments and the IDPs of municipalities. Sectoral plans must also include specific disaster risk management plans for the relevant departments within all municipalities. These planning processes must be funded through the budgets of the relevant organs of state. If disaster risk management planning is integrated into general IDP processes, then little or no additional budgetary allocation for disaster risk management will be required.

Organs of state must include risk reduction as part of a broader strategy to reduce the overall risk and fiscal exposure of their organisations. In addition, risk reduction activities, including preparedness, must be part of the operational activities of the various organs of state and must be reflected in their plans and budgets. In the case of national organs of state, risk reduction activities must be funded from the own budgets of the respective organs of state. Any new infrastructure developments should include the costs of structural mitigation measures. The same principles apply to provincial and municipal organs of state.

When additional expenditure is required to develop structural mitigation infrastructure, provincial and municipal organs of state must establish whether they could fund such projects from their own resources. If they lack funds to implement these projects, they must include the costs of structural mitigation infrastructure in their three-year capital plans. Municipalities must prioritise these projects in their IDPs.

Provincial organs of state must be able to access funding for projects involving structural mitigation infrastructure from the Provincial Infrastructure Grant. National Treasury, in conjunction with the NDMC, must develop criteria for

evaluating whether a project can be classified as mitigation infrastructure. Provinces must follow existing procedures for accessing the grant, including submitting business plans for each project. National Treasury may choose to attach a counter-funding condition to applications for structural mitigation infrastructure.

Section 19 of the MFMA requires that a municipality conduct a feasibility study before it can budget for a capital project. The feasibility study must include disaster risk assessment findings and recommendations for disaster risk reduction. If the project goes ahead, the cost estimate of mitigation infrastructure or measures should be included in the total cost of the project. Funds can be accessed either through the B component grant for basic services infrastructure, or through the P component grant for any additional funds required to reduce risks associated with existing infrastructure. The benefit of this option is that the conditionality of the grant can help to ensure that disaster risk reduction is integrated into infrastructure development, thus reducing the risk of disasters in the long term.

In the case of activities or projects aimed at preventing or reducing a national priority disaster risk, provincial and municipal organs of state may apply for additional funding from the NDMC. The NDMC may choose to place a limit on the funding available per project. The NDMC must develop clear and unambiguous criteria for evaluating applications for funding and distribute these to provinces and municipalities.

The NDMC and PDMCs are required to provide technical assistance in disaster risk management planning to municipalities. Technical assistance forms part of the routine activities of the NDMC and PDMCs and should therefore be funded through their budgets.

7.6.2

7.6.2 Imperatives

Cost expenditure on routine disaster risk management activities must be funded through the budgets of the relevant organs of state.

National departments must fund structural mitigation infrastructure from their own budgets. At provincial and local level, additional structural mitigation infrastructure must be funded through provincial and local government conditional infrastructure grants.

To increase the incentive to plan for risk reduction, the NDMC must have some discretion over the allocation of funds for projects aimed at reducing national priority risks.

7.6.3

7.6.3 Key Performance Indicators

i. Budgets in all spheres of government include the costs of routine disaster risk reduction measures and activities.
ii. Feasibility studies for capital projects include information drawn from disaster risk assessments and appropriate disaster risk reduction measures.
iii. Capital budgets clearly reflect the costs of disaster risk reduction.

7.7

7.7 Key Performance Area 4: Funding for Preparedness, Response and Recovery

Chapter 6 of the Act governs the funding arrangements for disaster response and recovery and rehabilitation and reconstruction. Section 56(3) requires that organs of state set aside a percentage of their budgets for post-disaster recovery efforts. Access to national funding is dependent on whether the organ of state affected by the disaster had taken sufficient risk reduction measures to reduce the severity and magnitude of the disaster.

7.7.1

7.7.1 Funding Options

The main activities within the broad scope of preparedness, disaster response and recovery include:

i. preparedness
ii. early warnings
iii. global and climate adaptation
iv. disaster response and recovery operations
v. relief measures
vi. rehabilitation and reconstruction.

National Treasury has established a disaster response funcing model based on three pillars namely:

i. Risk layering strategy for financing disaster response
ii. A robust and resilient economy, and
iii. High levels of transparency and openness in budget preparation

The risk layering strategy is overly reliant on budget reallocations for disaster response. Budget reallocations disrupt the budget process, are time-consuming and carry expensive opportunity costs. In most cases, budget reallocations are diverted from development projects resulting in developmental backlogs in the medium to long term. Therefore, organs of state at all governance levels should ensure sufficient budgets for potential disaster contingencies. Detailed risk assessments should provide organs of state with guidance on their contingency reserves. The World Bank illustrated the National Treasury's risk layering strategy as shown in Figure 7.2.

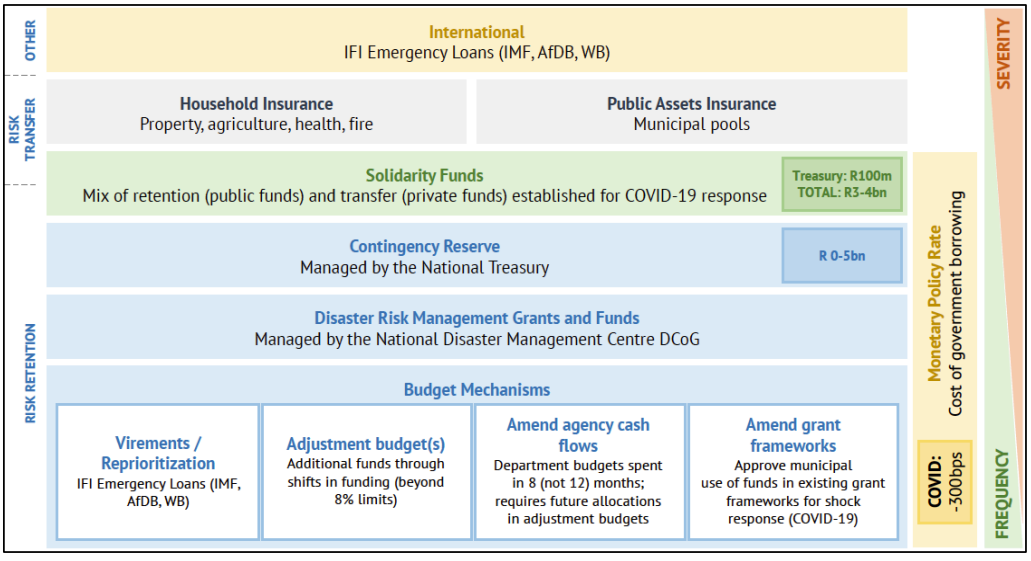

Fig 7.2: Risk layering financing instruments of National Treasury
Source: World Bank, 2022

7.7.1.1 Preparedness

In terms of the Act, section 53(j) states that municipal disaster management plans "*must facilitate maximum emergency preparedness*"'. The Act prescribes one of the means through which this can be done in section 58(1), which provides metropolitan or district municipalities with the option of establishing units of volunteers to participate in disaster risk management. The FFC has noted that there are costs involved in emergency preparedness, such as the costs of recruiting, training and mobilising volunteers. Strong arguments can be made for funding the costs associated with preparedness, including the recruitment and training of volunteers, through an increase in the equitable share. Alternatively, the costs may be funded through the budgets of municipal organs of state. However, a drawback of this option is that preparedness activities may be under- funded. In addition, municipalities may not have sufficient resources to fund the extra costs associated with preparedness.

7.7.1.2 Early warnings

Early warning is an integral part of risk monitoring and assessment and provides the trigger to activate contingency plans for disaster response. The development, implementation and dissemination of early warnings form part of routine planning processes undertaken by organs of state and must therefore be funded through their existing budgets. The NDMC plays a significant role in identifying and monitoring potential hazards and disseminating early warnings. These activities must be funded through the NDMC budget.

7.7.1.3 Disaster response and recovery operations

The importance of rapid response in the event of a disaster cannot be underestimated. Funds need to flow quickly to support response and recovery

efforts. Rescue efforts, provision of immediate basic services, emergency health services and critical infrastructure repair all form part of response and recovery.

7.7.1.3.1 Self funding

The fundamental principle underpinning provisions relating to funding in the Act is that all organs of state must budget for costs involved in disaster response and recovery. This principle places the onus for funding the initial costs associated with a disaster on the organs of state involved in response and recovery operations. Once budgets for response and recovery activities have been exhausted, the relevant organ of state may request financial assistance from national government. Financial assistance will only be provided after consideration of the disaster risk reduction measures taken prior to the onset of the disaster. National guidelines for the classification and declaration of states of disaster issued by the NDMC will help reduce the incentive for provincial and local governments to declare disasters with the intention of getting financial assistance from other spheres of government.

The Act entrenches this principle of self-funding by allowing the Minister designated to administer the Act to prescribe a percentage of the budget of a provincial organ of state or a municipal organ of state that will act as a threshold for accessing future funds from the central contingency fund. When prescribing thresholds for provincial and municipal organs of state, the correct base for calculating the budgetary allocations needs to be identified. The correct base and reasonable threshold percentage will help organs of state to sustain these budget allocations over time. Therefore, it is recommended that different threshold percentages be prescribed for different organs of state.

In the case of provincial organs of state, it is proposed that a percentage be developed for provinces based on their budgeted expenditure. Since provinces do not raise much of their revenue, they should fund disaster response and recovery operations from part of the equitable share.

Municipalities, on the other hand, raise a substantial part of their own revenue. The operating revenue is a good indicator of a municipality's relative fiscal capacity. Given the significant differences in revenue-raising capacity across municipalities, the threshold percentages should vary accordingly. It is therefore proposed that municipalities be categorised according to their own revenue. Information on own revenue per municipality can be accessed from National Treasury's annual Intergovernmental Fiscal Review. The proposed percentages are shown in Table 7.2

Table 7. 2: Proposed threshold percentages for provincial and local government budgets

Organ of state	Basis for calculating provision	Threshold percentage
Provincial departments	Budgeted expenditure	1.2
Metropolitan municipalities	Own revenue	0.5
Municipality with own revenue of over R300 million (excluding metros)	Own revenue	0.6
Municipality with own revenue of R100 million – R150 million	Own revenue	0.8
Municipality with own revenue of R1 million – R100 million	Own revenue	1.0

These thresholds must be viewed within the context of the magnitude and extent of a disaster. The thresholds must be reviewed at least every four years, depending on National Treasury guidelines.

In the case of a provincial disaster or accumulated disasters in a province over the year, the relevant provincial organs of state should be able to access funds from the provincial contingency fund once the threshold has been reached. Should additional resources be needed, then provinces should request financial assistance from national government. Section 16 of the PFMA can be used to release funds from the central contingency fund. In this situation, provinces should provide matching funding in the suggested ratio of 89:11. In other words, provinces will be required to fund 11 cents for every 89 cents released by national government. Some provinces have not set contingency reserves aside. In light of the new funding arrangements required by the Act, National Treasury must encourage provincial treasuries to allocate a minimum amount to contingency reserves.

Municipalities can be categorised in terms of their own revenue collected. Table 7.2 shows four categories of municipality, each category having a different threshold percentage. In order to ensure that municipalities make meaningful provision for disaster preparedness, response and recovery operations, municipalities with a lower amount of revenue collected have been assigned higher percentages. Metropolitan municipalities with large operating revenues should allocate at least 0.5 per cent of own revenues to disaster response and recovery activities.

Once municipalities have exhausted their thresholds, they should then be able to request financial assistance from their provincial governments. If the equitable share increases, then the basis for determination of the threshold percentages can be changed to the total revenue received by a municipality, in which case the suggested threshold percentages shown in Table 7.2 should change.

These thresholds are the minimum amounts budgeted for disaster response and recovery. National and provincial departments affected repeatedly by disasters may need to budget additional amounts for response and recovery. The DPLG should implement mechanisms within the existing reporting cycle prescribed by the Division of Revenue Act to moni- tor whether municipalities are adhering to the thresholds.

7.7.1.3.2 Access to the National Revenue Fund

Funding arrangements must include a mechanism for allowing the rapid release of funds when a national disaster is declared, while still ensuring that adequate controls are in place. Only the Minister responsible for administering the Act can authorise the release of emergency funds from the central contingency fund, and this responsibility cannot be delegated. A new mechanism needs to be developed to ensure that the Head of the NDMC can quickly and easily access funds from the National Revenue Fund for response and recovery operations.

Section 76(j) of the PFMA allows National Treasury to make regulations governing payments from the National Revenue Fund. Accordingly, National Treasury must release new regulations permitting the withdrawal of a predetermined percentage from the National Revenue Fund for immediate response efforts in the case of a national disaster, and/or to fund rapid emergency interventions in neighbouring countries. This percentage must be determined by Parliament as a percentage of the central contingency fund and included in National Treasury regulations. This mechanism would allow the Director-General of National Treasury, on request from

the Head of the NDMC, to withdraw funds from the National Revenue Fund. The withdrawal request may not exceed the predetermined percentage. The instances when this mechanism can be used must be clearly defined and specified in National Treasury regulations.

Such a withdrawal would need to be ratified through a money Bill (as stipulated by section 77 of the Constitution) and attributed to the vote of the DPLG. It is proposed that the threshold percentage be set at 0.25 per cent of the central contingency fund. The advantage of this approach is that it would allow for the immediate release of funds for response operations. The Head of the NDMC would be accountable for the use of these funds to the Minister responsible for administering the Act, who in turn is accountable to Parliament. The funds authorised in terms of these regulations must be included in the adjustments budget to ensure budgetary integrity and fiscal transparency. In this way, the expenditure will be subject to Parliamentary scrutiny through the relevant portfolio committee.

Provinces may develop a similar mechanism to allow the Head of the PDMC to withdraw resources from the Provincial Revenue Fund for immediate response to a disaster. The Head of the PDMC would be accountable to the MEC responsible for administering the Act and any withdrawal should be passed through the provincial legislature. It is crucial that National Treasury separates the contingency reserve from the policy reserve in order for this mechanism to work.

7.7.1.4 Relief measures

The aim of relief measures is to provide immediate access to basic necessities for those severely affected by disasters. The National Disaster Fund, currently administered by the National Disaster Relief Board, disburses funds for emergency relief to communities.

These funds are budgeted for in the Department of Social Development's vote. Provincial departments of social services and poverty alleviation also provide relief to affected communities. Most municipalities have a mayoral discretionary fund aimed at providing relief to local communities. The current mechanisms seem adequate to fund the cost of relief. The challenge is to co-ordinate the inputs of these different spheres of government to ensure that relief measures flow rapidly to communities.

7.7.1.5 Rehabilitation and reconstruction

The Act places the onus for rehabilitation and reconstruction of infrastructure on the organ of state responsible for maintaining such infrastructure. However, rehabilitation is not only limited to infrastructure repair, it also includes rehabilitation of the environment and communities. Rehabilitation and reconstruction projects can be funded through:

i. own budgets
ii. conditional grants
iii. reprioritisation within existing capital budgets
iv. access to the central contingency fund.

The methods of funding rehabilitation and reconstruction are complementary rather than competing. Ideally, organs of state should fund their expenditure on rehabilitation and reconstruction from their budgets up to the threshold. The next alternative should be to reprioritise within their capital budgets. The use of funds from the contingency reserve should be considered only as a last resort.

7.7.1.5.1 Own budgets

Thresholds are applicable not only to response and recovery operations but also to rehabilitation and reconstruction. Depending on the extent of infrastructural damage, organs of state may be able to fund rehabilitation and reconstruction costs from their own budgets up to the threshold. Rehabilitation and reconstruction costs are generally high, so organs of state may need to fund these costs from a combination of sources, including own budgets, reprioritisation and the central contingency fund.

National organs of state frequently affected by disasters must fund most of their rehabilitation and reconstruction costs from their own budgets. National organs of state involved in rehabilitation must also set aside funds in their budgets to help with community rehabilitation projects.

Provincial organs of state frequently affected by disasters must also fund rehabilitation and reconstruction costs from their own budgets. The Minister may choose to increase the threshold for specific provincial organs of state. These organs of state need to calculate the cumulative costs of disasters and submit the estimates to the NDMC. The NDMC must compile a list of organs of state to which special thresholds apply.

7.7.1.5.2 Conditional grants

Rehabilitation and reconstruction costs can be funded at provincial level through the Provincial Infrastructure Grant. A condition of access to the grant must be evidence that risk reduction measures have been included in reconstruction projects in order to reduce future potential losses from disasters.

Municipalities can access funding through the Municipal Infrastructure Grant (MIG). The MIG formula differentiates between new and rehabilitated infrastructure in a ratio of 80:20. Since the MIG augments the capital budget as a whole and is not a project-by-project grant, it is possible for municipalities to use part of the allocation for post-disaster rehabilitation purposes.

7.7.1.5.3 Reprioritisation within existing capital budgets

Provincial and municipal organs of state are required to develop three-year capital plans setting out their capital expenditure over the medium term. Provinces, with the input of their MECs, can reprioritise their capital budgets in order to carry out the necessary rehabilitation and reconstruction projects. In effect, they can move existing commitments to the outer years of the MTEF and use the subsequently released resources to fund rehabilitation and reconstruction. The shifting of funds

between years and programmes must comply with the legislative provisions governing such transactions in the PFMA.

At municipal level, the same process can be followed as long as the municipal council approves the reprioritised budget. The council must consider whether reprioritisation of the budget will have substantial negative implications for service delivery in the long term. Any multi-year appropriations or shifting of funds must comply with the MFMA.

This option is likely to be the quickest way to release funds for rehabilitation and reconstruction.

7.7.1.5.4 Access to the central contingency fund

Access to the central contingency fund for rehabilitation and reconstruction should only be given for priority infrastructure (in accordance with criteria set by the NDMC) and used as a source of funding if other alternatives fail.

Organs of state must be able to access funds from the central contingency fund for rehabilitation and reconstruction. The reconstruction projects must be motivated on a case-by-case basis to ensure that requests are made solely for rehabilitation and reconstruction purposes. National organs of state will need to motivate their requests for funding to the NDMC. The NDMC may attach counter-funding requirements to certain projects.

Provincial departments, once their own funds are exhausted, may access funding from the central contingency fund for rehabilitation and reconstruction on a matching basis. It is proposed that the ratio for accessing such funds is set at 75:15. This ratio demands substantial counter-funding from provinces in order to reduce the perverse incentives associated with access to national funds. It also forces provinces to find alternative sources of funding.

Municipalities may gain access to the central contingency fund for the rehabilitation and reconstruction of assets required to provide the minimum level of basic services. Motivations for such projects must be done on a case-by-case basis and requests for funding submitted to the NDMC.

Upon receipt of requests for funding, the NDMC must analyse the requests, compile a list of projects and associated costs, and motivate a Section 16 release of funds under the PFMA to National Treasury.

7.7.1.5.5 Provincial disaster relief grant

Goverment Gazette no 42464

Government Gazette no 42464 provide a brief description of the framework for the provincial disaster relief grants set out in schedules of the Division of Revenue Bill. The following are key areas considered for each grant:

i. Strategic goal and purpose of the grant
ii. Outcome statements and outputs of the grant
iii. Priority outcome(s) of government that the grant primarily contributes to
iv. Conditions of the grant (additional to what is required in the Bill)
v. Criteria for allocation between provinces

vi. Rationale for funding through a conditional grant
vii. Past performance
viii. The projected life of the grant
ix. MTEF allocations
x. The payment schedule
xi. Responsibilities of transferring national department and receiving provincial departments
xii. Process for approval of business plans for the next financial year

7.7.1.5.6 Municipal disaster relief grant

The conditions for the municipal disaster relief grant is published in the Division of Revenue Bill. The following are key areas considered for each grant:

i. Strategic goal and purpose of the grant
ii. Outcome statements and outputs of the grant
iii. Priority outcome(s) of government that the grant primarily contributes to
iv. Conditions of the grant (additional to what is required in the Bill)
v. Criteria for allocation between municipalities
vi. Rationale for funding through a conditional grant
vii. Past performance
viii. The projected life of the grant
ix. MTEF allocations
x. The payment schedule
xi. Responsibilities of transferring national department and receiving municipalities
xii. Process for approval of business plans for the next financial year

The financial statements and annual reports will report against the Division of Revenue Act, Division of Revenue Amendment Act and their schedules, and the grant frameworks as gazetted in terms of the Act. Such reports must cover both financial and non-financial performance, focusing on the outputs achieved.

7.7.2 Imperatives

7.7.2 The dissemination of early warnings must be funded through the budgets of national, provincial and municipal organs of state as part of their routine disaster risk management activities.

Measures need to be implemented to ensure that disaster response and recovery operations are funded through the budgets of provincial and municipal organs of state up to the prescribed threshold. Once the threshold is reached, additional funding would need to be accessed through the central contingency fund, on a matching basis for provinces and unconditionally for municipalities. Regulations must be promulgated by National Treasury to allow immediate access to funds for response operations in the event of a national disaster. Provision must be made for the Head of the NDMC to have access to a predetermined percentage of the central contingency fund in such a case.

Funding mechanisms for relief measures need to be reviewed in order to reduce the time it takes for victims of disasters to gain access to relief assistance.

As far as possible, organs of state must fund rehabilitation and reconstruction projects from their own budgets and conditional grants.

Mechanisms for the rapid release of funds from the central contingency fund for the reconstruction of basic service infrastructure where such infrastructure is needed to safeguard lives and livelihoods must be developed.

7.7.3 Key Performance Indicators

7.7.3

i. The development, implementation and dissemination of early warnings are funded through the recurrent budgets of the relevant organs of state.
ii. The percentage of the budget of a provincial or municipal organ of state as a threshold for accessing additional funding from national government for response and recovery efforts has been established and implemented.
iii. Response and recovery efforts are funded through budgeted threshold allocations.
iv. A mechanism has been developed to ensure rapid access to national funds for disaster response.
v. Organs of state across all spheres of government have budgeted for threshold allocations.
vi. People, households and communities affected by a disaster have immediate access to relief measures.
vii. Financial thresholds for rehabilitation and reconstruction funding in the different spheres of government have been set.
viii. Rehabilitation and reconstruction efforts are funded through a combination of own budgets, reprioritisation, budgeted threshold allocations and conditional grants.

7.8 Enabler 1: Establish funding arrangements for Information Management and Communication

Section 16 and 17 of the Act promotes the use of an integrated and unified use of information and communication methods without the prescriptive financial measures that need to be considered for the funding arrangements to establish this provision. Section 16 and 17 provides a detailed provision statement that must comprise the establishment of an integrated and unfired information and communications platform.

7.8.1 Funding options

The main funding activities within the broad scope of establishing an integrated and unified information and communications systems includes:

i. Information and communications capabilities and resources
ii. Data and information products
iii. Information services
iv. Media and other relevant sources
v. Management and human resources
vi. Collaborative information and communication networks and systems

7.8.1.1 Funding focus to ensure a comprehensive information management and communication system is established.

The funding focus for the above should concentrate on the following:

i. Own budget and capital cost budgets
ii. National budget provision
iii. Reprioritized sector level budget
iv. National Treasury allocations and special funding
v. International grant funding

Collaborative budgeting cycle and its provision. Sustainability of the funding mechanism should be a mainstream factor to ensure that startup, upgrade and continuous improvement in the information and communications capability is maintained.

7.8.1.2 Funding provision for needs analysis, data cost, the ability to support the objectives of the key performance areas,

The funding focus for the above should concentrate on the following:

i. Own budget
ii. Reprioritized funding
iii. Inter-organizational funding allocations that support common data, information products and services.

The operational support costs for this item must ensure that data is stored and accessible to various stakeholders. Communications links to the platform should also be transversal in nature to minimize external costs and dependencies.

Funding for the establishment of specialized and intergrative functions that promotes collaboration and awarenessThe funding focus for the above should concentrate on the following:

i. Own budget
ii. Reprioritized funding
iii. Inter-organizational and external funding allocations Multi sectoral funding mechanism

This provision bears on the need for the information and communications provision to have specialized and integrating functions like media, satellite and other remotely available products and services that have national importance.

7.8.1.3 Funding the reception of data and information that will allow for early warnings and hazard specific information to be relayed to the vulnerable and affected communities.

The funding focus for the above should concentrate on the following:

i. Research Organisations
ii. Parastatal organization with key interests in disaster management and multi hazard services
iii. Private entities
iv. Non-Government Organisations
v. Non-Profit organizations

This aspect or component of the integrated information and communications systems should rely on the products and services from specialized organizations and entities that car able to produce, maintain and distribute information products and services with minimum cost to the receipting organizations.

7.8.2 Key Performance Indicators

i. Budgets in all spheres of government to include the costs of the different components of establishing an integrated and unified communications systems.
ii. Cost leverage instruments and agreements should be contained in this establishment agenda.
iii. Cost benefits analysis should inform acquisition at all stages.
iv. Economies of scale and capital cost estimates should be a part of the acquisition process.
v. Feasibility studies for new data, products and services should be considered.
vi. Sustainability of systems for large scale benefit should be included.

7.8

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

Education, training, public awareness and research are crucial to the success of disaster risk management and disaster risk reduction strategies. It is envisaged that education, training and research initiatives as well as broad-based public awareness programmes will be undertaken by a range of organs of state and other organisations.

7.8.1

7.9.1 Funding Options

The various initiatives within the scope of this enabler are broadly grouped as follows:

i. education and training
ii. integrated public awareness
iii. research programme and information and advisory services.

7.9.1.1 Education and training

The NDMC must make budgetary provision for the updating and implementation of the national needs and resources analysis (NETARNA) to determine the disaster risk management education, training and research needs of those involved in disaster risk management across sectors, levels and disciplines. It must also make provision for the regular updating of the national disaster risk management education and training framework.

National and provincial organs of state already have substantial budgets for the education and training of officials and policy makers. Where possible, the relevant organs of state should ensure that courses are accredited. In the case of programmes that are not accredited, organs of state must budget for this form of training.

Accreditation is a way of ensuring the quality of education and training interventions. In compliance with SAQA legislation and the NQF, service providers have to develop outcomes-based courses and materials. Expenditure on accredited education and training initiatives can be reimbursed from SETAs. This type of funding mechanism is well suited to recovering expenditure on accredited disaster risk management education and training initiatives.

Municipalities, particularly the resource-poor ones, are unlikely to participate in programmes that are not accredited, because they lack the necessary funds to budget for these types of programmes. In general, most of the education and training costs in municipalities have been funded through the Financial Management Grant (FMG).

The DPLG must ensure that the Municipal Systems Improvement Grant (MSIG) caters for accredited disaster management education and training. Municipalities

should be able to access funds for education and training in accordance with disaster risk management unit standards.

The NDMC must support issues relating to disaster risk management in existing and new education and training programmes established by the DPLG for municipalities and councillors.

7.9.1.2 Integrated public awareness strategy

The NDMC is responsible for strengthening integrated public awareness strategies to encourage a culture of risk avoidance in all organs of state and in communities. In addition, organs of state are required to formulate appropriate public awareness campaigns within the framework of the integrated public awareness strategy. The NDMC must budget for the development and implementation of current and new strategies.

Line departments involved in public awareness programmes must budget for the development, updating and implementation of programmes relevant to their functional areas. In addition, they must be able to access funds for specific programmes aimed at creating awareness around national priority disaster risks from the NDMC.

Municipalities must include public awareness campaigns in community participation processes. In this way, they will not require additional funds for these programmes. Municipalities should also forge links with CBOs, NGOs and the private sector in order to share costs for dedicated public awareness programmes that focus on priority risks.

7.9.1.3 Research programme and information and advisory services

The NDMC should regularly update and revise its research agenda and it should approach various other government departments, international donor organisations, private companies, research foundations and NGOs to fund disaster risk management research. The NDMC must also allocate a portion of its budget to research activities and routine post-disaster reviews. Technical line departments that are regularly affected by disasters must budget for research on priority risks and disaster risk reduction.

The content of the information management database must be electronically accessible to any person free of charge. The cost of information provision and advisory services should be kept to a minimum and funded through the budget of the NDMC.

7.9.2 Imperatives

7.8.2 The costs associated with accredited education and training short learning programs must be recovered through SETAs. This should be seen as the funding mechanism of choice. The costs of education at organisations of higher learning could be covered by individuals and organs of state at all governance levels as non-refundable or refundable bursaries. The NDMC should liaise with organisations of higher learning through a bursary steering committee to monitor bursary programs and prevent

dubble-dipping of funding. The costs associated with education and training programmes that are not accredited must be funded through the budgets of the relevant organs of state.

The cost of research must be funded through the budgets of disaster management centres and by the private sector, research foundations, NGOs and donors.

7.8.3

7.9.3 Key Performance Indicators

i. There is documented evidence of expenditure on accredited education and training programmes.
ii. Organs of state recover their expenditure on accredited education and training from the relevant SETAs.
iii. The conditions of the MSIG have been extended to cater for disaster risk management education and training programmes.
iv. All organs of state involved in public awareness budget for integrated public awareness programmes.
v. Partnerships between municipal organs of state and the private sector, NGOs and CBOs exist for the purpose of funding public awareness programmes and projects.
vi. Funds are available from government departments, international donor organisations, private companies, research foundations and NGOs for research programmes.
vii. NDMC successfully oversee disaster management bursary schemes

7.9

7.10 Guidelines and Regulations to be Disseminated

i. National guidelines and a composite index containing criteria for identifying low-capacity, resource-poor municipalities for the purpose of conditional grant allocations.
ii. National guidelines for evaluating applications for additional funding for projects and activities aimed at reducing priority disaster risks.
iii. National guidelines setting out the thresholds applicable to provincial and municipal organs of state for accessing additional funding from national government for response efforts.
iv. National guidelines containing criteria for classifying different types of infrastructure for the purposes of funding structural infrastructure mitigation projects.
v. National guidelines containing criteria for identifying priority infrastructure for the purposes of rehabilitation and reconstruction.
vi. National guidelines for mechanisms to roll out funding for the implementation of the national disaster management framework.
vii. Regulations by National Treasury to allow immediate access to funds for response operations in the event of a national disaster.

8 Appendix A: Glossary of Terms

Accreditation	The certification, usually for a particular period of time, of a person, a body or an institution, as having met specific requirements to fulfil a particular function in the quality assurance system set up by the South African Qualifications Authority (SAQA).
Audit	A way of measuring the quality of products, services or processes that have already been delivered or undertaken.
Capacity	A combination of all the strengths and resources available within a community, society or organisation that can reduce the level of risk or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personnel or collective attributes such as leadership and management.
Capacity building	Efforts aimed to develop human skills or infrastructures within a community or organisation needed to reduce the level of risk. It may also include the development of institutional, financial, political and other resources, such as technology, at different levels and sectors of the society.
Contingency planning	The forward planning process for an event that may or may not occur, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place to prevent or respond effectively to an emergency situation.
Criteria	Standards, rules, guides or tests against which a judgement or decision is based.
Development	A process for improving human well-being through reallocation of resources that may involve some modification to the environment. It addresses basic needs, equity and the redistribution of wealth.
Disaster	A natural or human-caused event, occurring with or without warning, causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope with its effects using only their own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of the disaster risk.
Disaster Operations Centre	A fully equipped dedicated facility within the disaster management centre of a particular sphere. Such a facility must be capable of accommodating any combination of emergency and essential services representatives, including all relevant role players and stakeholders identified in response and recovery plans for the purpose of multidisciplinary strategic management of response and recovery operations, when a local, provincial or national disaster occurs or is threatening to occur.
Disaster Risk Management	The systematic process of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to prevent or to limit (mitigation and preparedness) adverse effects of hazards.
Disaster Risk Reduction	The conceptual framework of elements considered with the possibilities to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.
Early Warning	Timely and effective information, through identified institutions, that allows individuals, households, areas and communities exposed to a hazard to take action to avoid or reduce the risk and prepare for effective response.
Early warning system	A system that allows for detecting and forecasting impending extreme events to formulate warnings on the basis of scientific knowledge, monitoring and consideration of the factors that affect disaster severity and frequency. Early warning systems include a chain of concerns, namely: understanding and mapping the hazard; monitoring and forecasting impending events; processing and disseminating understandable warnings to political authorities and the population; and undertaking appropriate and timely actions in response to warnings.
Education and training quality assurer	The body responsible for monitoring the quality of education and training and ensuring that learners are assessed to an agreed standard. Service providers of education and training have to be approved by an education and training quality assurer.
Elements at risk	Environmental, human, infrastructural, agricultural, economic and other elements that are exposed to a hazard, and are at risk of loss.
Entity	A governmental agency or jurisdiction, private or public company, partnership, non-profit organisation, or other organisation that has disaster risk management responsibilities.
Focal or nodal point for DRRM	An individual responsible for coordinating the disaster risk management responsibilities and arrangements of a national, provincial or municipal organ of state or a municipal entity. The term is also used to refer to an individual with similar responsibilities in an NGO or the private sector.
Geographic Information System (GIS)	Analyses that combine relational databases with spatial interpretation and outputs, often in the form of maps. A more elaborate definition is that of computer programmes for capturing, storing, checking, integrating, manipulating, analysing and displaying data related to positions on the earth's surface. Typically, GIS is used for handling maps. These might be represented as several different layers where each layer holds data about a particular kind of feature. Each feature is linked to a position on the graphical image of a map. Geographic information systems are increasingly being utilised for hazard

	and vulnerability mapping and analysis, as well as for the application of disaster risk management measures.
Global Positioning System (GPS)	A system that provides specially coded satellite signals that can be processed in a GPS receiver, enabling the receiver to calculate position, velocity and time.
Hazard	A potentially damaging physical event, phenomenon and/or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterised by its location, intensity, frequency and probability.
Hazard analysis	Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behaviour.
Human-made hazards	Disasters or emergency situations that are caused directly or indirectly by identifiable human actions, deliberate or otherwise.
Imperative	An obligation or a duty.
Joint Operations Centre (JOC)	The sphere within a response management system where the combined or joint tactical coordination and management of a significant event or disaster involving multi-agency operations takes place.
Learnership	A work-based learning programme, with the learner doing both practical work and theory. Learnerships relate to an occupation. A learnership leads to a qualification registered on the NQF.
Line function	The departments that implement government policy.
Mitigation	Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards on vulnerable areas, communities and households.
Monitoring	A system of checking and observing to ensure that the correct procedures and practices are being followed.
Moral hazard	A form of perverse incentive that may arise under conditions of asymmetric information between national government and provincial and local governments. This could create a situation where provincial governments and municipalities deliberately under-budget on certain activities (such as disaster risk reduction), relying on national government to bail them out in the form of disaster recovery assistance once a disaster has occurred.
Municipal entity	A company, co-operative, trust, fund or any other corporate entity established in terms of any applicable national or provincial legislation and which operates under the ownership control of one or more municipalities, and includes, in the case of a company under such ownership control, any subsidiary of that company. The term can also refer to a service utility.
Municipal Infrastructure Grant	The Municipal Infrastructure Grant is a conditional grant mechanism to fund infrastructure programmes. The MIG is managed by DPLG.
Municipality Disaster Relief Grant (MDRG)	
National organ of state	A national department or a national public entity functioning within the national sphere of government (defined in section 1 of the PFMA).
National Qualifications Authority (NQF)	An integrated national approach to education and training in South Africa. It specifies how different education and training standards and/or qualifications must be set and how courses will be accredited. It emphasises lifelong learning and facilitates access to, as well as mobility and progression within, education and training through the accumulation of credits in the learning process and, where appropriate, for work experience. It was established in accordance with the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995).
National Revenue Fund	A centralised fund into which all money (including taxes) received by the national government is paid, except money reasonably excluded by an Act of Parliament.
Natural hazards	Natural processes or phenomena, such as extreme climatological, hydrological or geological processes, that may constitute a damaging event. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.
Organ of state	Any state department or administration in the national, provincial or local sphere of government. It includes any functionary or institution exercising a power or performing a function in terms of the Constitution or a provincial constitution, or any functionary or organisation exercising a public power or performing a public function in terms of any legislation.
Own revenue	Income raised by a municipality from tariffs and taxes.
Perverse incentives	A reward that brings about the opposite effect from what the incentive was intended to produce.
Preparedness	Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.
Prevention	Actions to provide outright avoidance of the adverse impact of hazards and means to minimise related environmental, technological and biological disasters.
Primary agency or entity	The agency/entity tasked with primary responsibility for a particular disaster risk management activity.
Priority disaster risk	A risk identified as a priority through a scientific evaluative process in which different disaster risks are evaluated and ranked according to criteria determined by the broader socio-economic and

	environmental context in which the risk is located. The process of determining these criteria should be consultative, and involve scientific, civil society and government stakeholders.
Private sector	Refers to everything which is privately owned and controlled, such as business, banks and insurance companies, the stock exchange and private schools.
Provincial organ of state	A provincial department or a provincial public entity functioning within the provincial sphere of government (defined in section 1 of the PFMA).
Public awareness	The processes of informing the general population, increasing levels of consciousness about risks and how people can act to reduce their exposure to hazards. Public awareness activities foster changes in behaviour, leading towards a culture of risk reduction.
Rapid onset disasters	A disaster caused by natural events, such as earthquakes, floods, storms, fires and volcanic eruptions. Although such events are more sudden, the impact can also be heightened by underlying problems associated with poverty.
Recovery	Decisions and actions taken immediately after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.
Relief	The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can include the provision of shelter, food, medicine, clothing, water, etc.
Resilience	The capacity of a system, community or society potentially exposed to hazards to adapt by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase this capacity for learning from past disasters for better future protection and to improve disaster risk reduction measures.
Response management system	Measures taken during or immediately after a disaster in order to assist and meet the life preservation and basic subsistence needs of those people and communities affected by the disaster. These measures can be of immediate, short-term or protracted duration.
Risk assessment (Disaster risk assessment)	A process to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.
Risk analysis	
Risk (Disaster risk)	The probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, disrupted economic activity or environmental damage) resulting from inter- actions between natural or human-induced hazards and vulnerable conditions. Conventionally risk is expressed as follows: Risk = Hazards x Vulnerability x Exposure.
Sector Education and Training Authority (SETA)	A body responsible for organising education and training programmes in a particular economic sector. SETAs must devise and implement skills development plans within their sectors.
Significant event	An event which does not necessarily justify the classification of a disaster but is of such a magnitude or importance that extraordinary measures are required to deal with it effectively. The term can also be applied to a situation where multiple single emergencies are occurring simultaneously within a given jurisdiction, placing undue demands on scarce resources. Together, these events may constitute a disaster. A significant event can also represent a new or unexpected shift in hazard, vulnerability or risk patterns, calling for closer investigation in order to better anticipate future changes in disaster risk.
Slow onset disasters	Disasters which result when the ability of people to support themselves and sustain their livelihoods slowly diminishes over time. Slow-onset disasters usually take several months or years to reach a critical phase.
South African Qualifications Authority (SAQA)	The body that oversees the development and implementation of the NQF. The South African Qualifications Authority establishes national standards bodies, standards generating bodies, and education and training quality assurers.
Statutory functionality	A person performing a function assigned to that person by national, provincial or municipal legislation.
Support organisation / agency / agent	The agency/entity tasked with secondary responsibility for a particular disaster risk management activity.
Technological hazards	Danger originating from technological or industrial accidents, dangerous procedures, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.
Threat	A physical event or process that contains the possibility of being damaging or causing harmful consequences or loss. A threat is less specific than a particular hazard or risk, but may be reclassified as a *'risk'* if it shifts from presenting merely the possibility of loss to a more certain probability of harm or damage. (See Risk.)
Unit standard	A nationally recognised and registered set of education and training outcomes and their associated assessment criteria, as well as other information, including technical information, required by SAQA. Unit standards have credits attached to them. One credit is accepted as being equal to 10 hours of learning.
Vulnerability	The degree to which an individual, a household, a community, an area or a development may be adversely affected by the impact of a hazard. Conditions of vulnerability and susceptibility to the impact of hazards are determined by physical, social, economic and environmental factors or processes.

Glossary sources	i. Ministry for Provincial Affairs and Constitutional Development. 1999. White Paper on Disaster Management Act. Pretoria. ii. Republic of South Africa. 2003. Disaster Management Act, 2002 (Act No. 57 of 2002). Pretoria: Government Printer. iii. Republic of South Africa. 1996. The Constitution of the Republic of South Africa, 1999 (Act No. 108 of 1996). Pretoria: Government Printer. iv. United Nations – International Strategy for Disaster Risk Reduction. 2004 Terminology on Disaster Risk Reduction (Working document). Geneva: United Nations. http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm

Appendix B: Summary of national disaster risk management framework

KPA 1: Integrated institutional and organisational capacity for disaster risk management

SUMMARY

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

OBJECTIVE

Establish integrated institutional capacity within the national sphere to enable the effective implementation of disaster risk management policy and legislation.

Table B.1: Integrated institutional and organisational capacity for disaster risk management

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION
B1.1 Arrangements for the development and adoption of an integrated disaster risk management policy.	• The ICDM has been established and meet at least quarterly. • The ICDM provides strategic direction for Disaster Risk Reduction and Response efficiently. • Mechanisms for developing and adopting disaster risk management policy have been established and put into operation.	1.1.1 1.1.2
B1.2 Establish arrangements for integrated direction and implementation of disaster risk management policy.	• The job description and key performance indicators for the position of the Heads of centres at national, provincial and municipal level the NDMC have been developed and implemented. • The Heads of centres with the required qualifications at all three governance levels have been appointed. • Centres at all three governance levels have been established and is fully operational. • Disaster risk management focal/nodal points have been identified by each organ of state at all three governance levels and responsibilities for disaster risk management have been assigned. • Roles and responsibilities of organs of state involved in disaster risk management have been identified, assigned and included in the job descriptions of key personnel and are being applied effectively. • Provincial and municipal disaster risk management centres have been established and are operating optimally. • Disaster risk management centres at all three governance levels have fully functional DOCs.	1.2.2 1.2.2 1.2.2 1.2.3 1.2.3 1.2.4, 1.2.5
B1.3 Establish arrangements for stakeholder participation and the engagement of technical advice in disaster risk management planning and operations.	• The NDMAF has been formally constituted and operates effectively. • Provincial and municipal disaster management forums or similar representative consultative forums have been established and are operating effectively. • Mechanisms for stakeholder participation in disaster risk management planning and operations have been established and are operating effectively. • Entities playing a supportive role in facilitating and coordinating disaster risk management planning and implementation have been identified and assigned secondary responsibilities • Heads of disaster management centres have full participation in integrated development planning processes and structures. • Ward and community structures have been identified and tasked with responsibility for disaster risk management. • A current register of disaster risk management stakeholders and volunteers has been established and is maintained. • Memorandums of understanding is developed and signed by organs of State and volunteer and NGO sources.	1.3.1 1.3.1.2, 1.3.1.3 1.3.2 . 1.3.2 1.3.2.2 1.3.3
B1.4 Establish arrangements for national, regional and international co-operation for disaster risk management.	• Primary responsibility for the facilitation and co-ordination of disaster risk and response management planning and implementation has been assigned. • Entities playing a supportive role in facilitating and co-ordinating disaster risk management planning and implementation have been identified and assigned secondary responsibilities. • Heads of disaster management centres have full participation in integrated development planning processes and structures. • Ward structures have been identified and tasked with responsibility for disaster risk management. • A current register of disaster risk management stakeholders and volunteers has been established and is maintained. • Mechanisms have been identified and implemented to ensure the application of the principle of co-operative governance. • Guidelines have been developed and disseminated for entering into partnerships and concluding mutual assistance agreements and memoranda of understanding. • A disaster risk management forum established for the purpose of co-operation with countries in the SADC region is operating effectively. • Mechanisms have been identified and established to enable South Africa to participate internationally in disaster risk management activities.	1.4.1, 1.4.2 1.4.3 1.4.4 1.4.5
Ensure that funding and funding mechanisms, information management and communication systems, and education and training strategies are in place for each of the imperatives in KPA 1.		

KPA 2: Disaster risk assessment

SUMMARY

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

Objective

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

Table B.2: Disaster risk assessment

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION
B2.1 Conduct disaster risk assessments to inform disaster risk management and risk reduction policies, planning and programming.	• A national standard for conducting comprehensive disaster risk assessments has been generated by the NDMC and applied by organs of state. • National guidelines for the application of a uniform disaster risk assessment methodology have been developed by the NDMC and applied by organs of state. • A national standard for assessing priority disaster risks has been generated by the NDMC and applied by organs of state. • National guidelines for assessing priority disaster risks in national, provincial and municipal spheres have been generated by the NDMC and applied by organs of state. • National guidelines for standardized indicators and indicator thresholds have been developed by the NDMC and applied by all disaster risk assessors. • Disaster risk assessment legislation, policies, standards and implementation guidelines by national organs of state and their provincial counterparts have been developed and applied. • Disaster risk assessments have been conducted and progressively integrated into the development plans of organs of state and other role players, with evidence of this seen in IDPs and annual reports submitted to the NDMC.	2.1.1 – 2.1.6 2.1.4, 2.1.7 2.1.7 2.1.7 2.1.1 2.1.1
B2.2 Generate a National Indicative Disaster Risk Profile.	• Mechanisms to consolidate, document, map and make accessible information on South Africa's priority disaster risks have been established by the NDMC. • Priority disaster risks of national significance have been identified and mapped by the NDMC. • Procedures to consolidate, map, update and make accessible information on South Africa's priority disaster risks have been established and documented by the NDMC. • An integrated inter-active web-based disaster risk platform is established and accessible by the public. • NDMC developed guidelines to organs of state, NGOs and the private sector on who is responsible for what risk assessment and to what detail.	2.2.1 2.2.1 2.2.1 2.2.2
B2.3 Monitor, update and disseminate disaster risk information.	• National and provincial departments with responsibilities for reducing and managing disaster risks specific to their functional areas have established clear and documented mechanisms for rapid accessing and updating of relevant hazard and vulnerability information and for rapidly making this information available to the NDMC. • National, provincial and municipal disaster management centres as well as all organs of state in all spheres of government have established and documented clear mechanisms for accessing, consolidating and updating relevant information on hazards, vulnerability and disaster occurrence from partners responsible for monitoring specific risks. • National, provincial and municipal disaster management centres as well as all organs of state in all spheres of government have established and documented clear mechanisms for disseminating disaster risk assessment and monitoring information for ongoing planning, as well as for managing conditions of heightened risk. • National, provincial and municipal disaster management centres have established and documented clear procedures for accessing, interpreting and disseminating early warnings of both rapid- and slow-onset hazards. • Organs of state determined acceptable risks for known hazards. • Organs of state provide evidence that they actively explored and implemented risk transfer mechanisms. • NDMC developed and maintain an integrated and real-time disaster risk monitoring and early warning capacity.	2.3.1 – 2.3.3 2.3.3 2.3.1, 2.3.3 2.3.3

B2.4 Monitoring, analyzing and disseminate disaster risk information	• Disaster risk assessments undertaken show documented evidence of:
	  • capacity building and skills transfer
	  • ground-truthing (that is, based on the actual situation 'on the ground' or verified by those being assed), through field consultations in the areas and with communities most at risk from the threats being assessed.
	  • consultation with appropriate governmental and other stakeholders about the design and/or implementation of the disaster risk assessment and the interpretation of the findings.
	• The methodology and results of the disaster risk assessment have been subjected to an independent technical review process and external validation prior to:
	  • the publication or dissemination of hazard, vulnerability or risk maps and/or reports for planning purposes
	  • the implementation of disaster risk reduction or other initiatives based on the disaster risk assessment results.
	• Disaster risk assessments undertaken show documented evidence of technical consultation with the appropriate disaster management centre(s) prior to implementation.
	• NDMC developed and maintain the capacity for real-time hazard monitoring.
	• NDMC develop and maintain a system for the integration of disaster risk monitoring into a single disaster risk platform, accessible to the public.
		2.4.1
		2.4.2
		2.4.2

	• NDMC developed and maintained a roster and network of experts for disaster risk data and information analysis.	

B 2.5 Conduct quality control	• Disaster risk assessments undertaken show documented evidence of:
	  • Community participation
	  • Stakeholder participation
	• An advisory committee with technical expertise has been established and actively advise the relevant sphere of governance
	• External validation of disaster risk assessments has been concluded
	• A roster of experts in disaster risk assessment has been developed with agreements from experts and relevant organisations.
		2.5.1
		
		2.5.2

Ensure that funding and funding mechanisms, information management and communication systems, and education and training strategies are in place for each of the imperatives in KPA 2.		

KPA 3: Disaster risk reduction

SUMMARY

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

OBJECTIVE

Ensure all disaster risk management stakeholders develop and implement integrated disaster risk management plans and risk reduction programmes in accordance with approved frameworks.

Table B.3: Disaster risk reduction

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION
B3.1 Ensure all stakeholders compile integrated and relevant disaster risk management plans.	• The national disaster management framework is updated at least every 10 years. • Provincial and municipal disaster management frameworks are consistent with the national disaster management framework and is updated and submitted to the NDMC within 2 years of the national framework update. • Disaster risk management planning guidelines have been developed, updated and disseminated by the NDMC. • Disaster risk management plans have been updated and submitted to the NDMC by all relevant national, provincial and municipal organs of state and municipal entities. • National, provincial and municipal disaster management plans are revised at least two-yearly, as evidenced in annual reports submitted to the NDMC • Issuing of Severe Weather Early Warnings should be disseminated in accordance with recommendations by the South African Weather Service, the authorative voice for the issuing of weather related warnings for South Africa.	3.1.1.1 3.1.1.2, 3.1.2 3.1.1.2 3.1.1
B3.2 Determine priority disaster risks and priority areas, communities and households.	• National DRR strategies and plans are aligned to priority risks as indicated in the risk assessment. • Provincial DRR strategies and plans are aligned to priority risks as indicated in the provincial risk assessment. • Municipal DRR strategies and plans are aligned to priority risks as indicated in the municipal risk assessment. • Provincial and municipal DRR plans are documented and submitted to the NDMC. Municipal DRR plans are incorporated in local IDPs. • Focused initiatives to reduce priority risks have been identified by national and provincial organs of state and documented in annual reports submitted to the NDMC and consolidated by the NDMC in its annual report to the Minister.	3.2.1 3.2.2 3.2.3 3.2.4 3.2.5
B3.3 Scope and develop disaster risk reduction plans, projects and programmes.	• Case studies and lessons learned in integrating disaster risk reduction measures with initiatives in the national, provincial and municipal spheres have been documented and disseminated by the NDMC. • Documentation, which is accessible to key stakeholders, demonstrates the effectiveness of disaster risk reduction measures for different risk scenarios. • The effectiveness of disaster risk reduction initiatives is monitored by the NDMC. • NDMC to coordinate plans and actions between organs of state to prevent unnecessary duplication of DRR programs.	3.3.1.8 3.3.1 – 3.3.3 3.3.3

B3.4 Include disaster risk reduction efforts into strategic integrating structures and processes.	• Mechanisms to disseminate experience from pilot and research projects that explore the vulnerability reduction potential, appropriateness, cost-effectiveness and sustainability of specific disaster risk reduction initiatives have been established. • Risk-related information has been incorporated into spatial development frameworks. • Projects and initiatives that include a focus on disaster risk reduction have been included in IDPs. • Guidelines for incorporating disaster risk management programmes and initiatives into the activities of other national organs of state and key institutional role players have been consultatively developed and implemented. • Regulations, standards, by-laws and other legal instruments that encourage risk-avoidance behaviour have been enforced by national, provincial and municipal organs of state and documented in annual reports to the NDMC.	3.4.1, 3.4.2 3.4.1 3.4.2 3.4.2 3.4.3
B3.5 Implement and monitor disaster risk reduction programmes and initiatives.	• Disaster risk reduction programmes, projects and initiatives have been implemented by national, provincial and municipal organs of state and other key role players. • Measurable reductions in small-, medium- and large-scale disaster losses have been recorded. • A measurable reduction in social relief in disaster-prone economically vulnerable communities has been recorded. • Case studies and best-practice guides in disaster risk reduction, facilitated by the NDMC, have been generated and disseminated. • There is evidence of the progressive application of disaster risk reduction techniques and measures by national, provincial and municipal organs of state, as reported in annual reports submitted to the NDMC.	3.5.1 3.5.2 3.5.3 3.5.4 3.5.5
Ensure that funding and funding mechanisms, information management and communication systems, and education and training strategies are in place for each of the imperatives in KPA 3.		

KPA 4: Preparedness, response and recovery

SUMMARY

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

OBJECTIVE

Ensure effective and appropriate disaster preparedness, response and recovery by:

i. Develop and maintain a well prepared, efficient response capacity.
ii. Implementing a uniform approach to the dissemination of early warnings.
iii. Develop and implement contingency plans for rapid response.
iv. Averting or reducing the potential impact in respect of personal injury, health, loss of life, property, infrastructure, environments and government services.
v. Implementing immediate integrated and appropriate response and relief measures when significant events or disasters occur or are threatening to occur.
vi. Implementing all rehabilitation and reconstruction strategies following a disaster in an integrated and developmental manner.

Table B.4: Disaster preparedness, response and recovery

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION

B4.1 Preparedness and preparedness planning
 	
Identify and implement mechanisms for the dissemination of early warnings.
	• Effective and appropriate early warning strategies have been developed and implemented and the information communicated to stakeholders to enable appropriate responses.
	• KPIs are applicable to disaster management centres at all governance levels and other organs of state with reference to own internal functions.
	  • Preparedness plans completed.
	  • Contingency plans for major hazards completed.
	  • Contingency plans approved and signed by all stakeholders including treasury.
	  • Exercises for response coordination completed as required.
		4.1.1
		4.1.2
		4.1.3
		4.1.4
		4.1.5

B 4.2: Assessment, classification and declaration of disaster	• Guidelines and uniform methods, including templates, for the assessment and costing of significant events or disasters have been developed. • Mechanisms for the rapid and effective classification of a disaster and the declaration of a state of disaster have been established.	4.2.1 4.2.2 4.2.3
B 4.3: Response coordination	• Disaster Management Centres at all governance levels, organs of state and other role-players have developed contingency plans • Disaster Operation Centres are equipped and staffed and capable to coordinate disaster response • An inter-operable communication system is developed • Guidelines and uniform methods, including templates, for the assessment and costing of significant events or disasters have been developed. • Mechanisms for conducting and updating disaster reviews and reporting, including mechanisms to enable assessments that will comply with and give effect to the provisions of sections 56 and 57 of the Act, have been developed and implemented. • Review and research reports on significant events and trends are routinely submitted to the NDMC and disseminated to stakeholders. • Debrief and review reports on actual disasters are routinely submitted. • NDMC developed and published guidelines for disaster debriefs and reviews • NDMC developed and published guidelines on what organs of state are responsible for what hazard impact. • The organs of state which must bear primary responsibility for contingency planning and the co-ordination of known hazards have been identified and allocated such responsibility. • Stakeholders which must bear secondary responsibility for contingency planning and the co-ordination of known hazards have been identified and allocated such responsibility. • Contingency plans for known hazards by national organs of state have been developed. • Response and recovery plans are reviewed and updated annually. • Field operations guides for the various activities associated with disaster response and recovery have been developed and are reviewed and updated annually. • A national standard response management system has been developed and is reviewed and updated annually. • Standard operating protocols or procedures and checklists have been developed and are understood by all stakeholders. • Regulations and directives for the management of disaster	4.3.1 4.3.2 4..3.3 4.3.4 4.3.4 4.3.5 4.3.6

	response and recovery operations have been developed and gazetted or published.	
B4.4: Disaster Relief	• Regulations for the management of relief operations have been developed and gazetted. • Progressive monitoring and annual reviews of regulations for the management of relief operations, based on lessons learned, are conducted.	4.3
B4.5 Ensure integrated rehabilitation and reconstruction activities are conducted in a developmental manner.	• Post-disaster project teams for rehabilitation and reconstruction have been established and operate effectively. • Mechanisms for the monitoring of rehabilitation and reconstruction projects have been established and regular progress reports are submitted to the NDMC. • The principle of "build back better" is the foundation of all rehabilitation and reconstruction plans and efforts.	4.5 4.5
4.6: Guidelines	• Guidelines as specified in 4.6 have been developed and circulated by the NDMC.	4.6
Ensure that funding and funding mechanisms, information management and communication systems, and education and training strategies are in place for each of the imperatives in KPA 4.		

Enabler 1: Information management and communication

SUMMARY

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

OBJECTIVE

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

Table B.5: Enabler 1: Information management and communication

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION
B 5.1: Establishing an information management and communication system	• A disaster risk management information and communication system for all spheres of government has been established and implemented. • The disaster risk management information and communication system supports the KPAs and enablers in all spheres of government. • Provincial and municipal information management and communication systems are fully compatible with the national system and are part of a single integrated network. • Data needs have been defined by the NDMC. • Data sources have been identified by the NDMC. • Data collection and capturing methodologies have been developed and implemented. • The responsibilities of the respective data custodians have been defined and assigned. • Agreements with identified data custodians have been negotiated to ensure availability, quality and reliability of data. • An integrated disaster risk platform with interactive geo-spatial data and maps is available and updated	5.1.1 5.1.2 5.1.3 5.1.4
B5.2: Information management and communication for KPIs	• An integrated information management and communication system has been designed and implemented to support: • integrated institutional capacity • disaster risk assessment • disaster risk reduction programmes and plans • response and recovery operations	5.2
B5,3: Information management and communication for Enablers	• An integrated information management and communication system has been designed and implemented to support: • integrated institutional capacity education, training, public awareness and research • funding mechanisms and financial controls.	
B5.4: Specialised system functionalities	• A uniform document management system has been developed and implemented and is used by all role players. • A comprehensive, uniform and easily updateable resource and capacity database has been developed and implemented and is used by all role players. • A modelling and simulation application has been developed and is used by all role players. • An integrated monitoring and evaluation system has been developed and implemented and is used by all role players. • A uniform programme and project management tool has been developed and is used by all role players involved in disaster risk management programmes and projects. • A QMS has been developed and implemented, and designated individuals in relevant national, provincial and municipal organs of state have been assigned responsibility to administer the system. • NDMC appointed specialized professionals responsible for information management and communication. • Arrangements are made and implemented for the temporary delegation of specialists from line departments.	
B5.5: Information dissemination and display	• Information dissemination programmes and channels of communication between all spheres of government, organs of state, communities and the media have been established. • Disaster risk management information is easily accessible for all at no additional charge. •	
B5.6 Develop an integrated information management and communication system for disaster risk management.	• A disaster risk management information and communication system for all spheres of government has been established and implemented. • The disaster risk management information and communication system supports the key performance areas and enablers in all spheres of government. • Provincial and municipal information management and communication systems are fully compatible with the national system and are part of a single integrated network.	5.6, 5.6.1 5.6, 5.6.1 5.6, 5.6.1
B5.7 Create awareness, promoting a culture of risk avoidance and establishing good media relations.	• Information dissemination programmes and channels of communication between all spheres of government, organs of state, communities and the media have been established. • Disaster risk management information is easily accessible for all at no additional charge.	5.7 5.7
Ensure that funding and funding mechanisms and, where relevant, education and training initiatives are in place for each of the imperatives in Enabler 1.		

Enabler 2: Education, training, public awareness and research

SUMMARY

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

OBJECTIVE

Promote a culture of risk avoidance among stakeholders by capacitating all role players through integrated education, training and public awareness supported by scientific research.

Table B.6: Education, training, public awareness and research

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION
B6.1 Conduct a national education, training and research needs and resources analysis.	• The NETaRNRA serves as the foundation for the development of a national disaster risk management education and training framework. • The NETaRNRA informs the development of appropriate education and training programmes that not only build on existing strengths but are responsive to southern Africa's changing disaster risk management needs.	6.1.1 6.1
B6.2 Develop a national disaster risk management education and training framework based on the national education, training and research needs and resources analysis.	• A national disaster risk management education and training framework has been developed and directs the implementation of all disaster risk management education and training in South Africa. • All disaster risk management education and training standards and qualifications comply with the requirements of the SAQA Act, 1995 (Act No. 58 of 1995) and the guidelines prescribed in the NQF. • A technical advisory body has been established. • An accreditation and registration system has been established to ensure that all education and training providers and facilitators are registered and accredited.	6.2, 6.2.1 6.2 6.2.2 6.2.2
B6.3 Design disaster risk management education programmes that form part of the formal education system and are in line with the national education, training and research needs and resources analysis, the national education and training framework and the requirements of the SAQA and the NQF.	• Curricula for various NQF levels within different disciplines have been developed and applied in line with the NETARNA needs analysis. • Aspects of disaster risk management are included in the curricula of all relevant tertiary disciplines as well as relevant primary and secondary school programmes. • Various quality professional courses, workshops, seminars and conferences, focusing on issues of disaster risk and response through a multidisciplinary approach, are held. • Approved service providers have been registered and are offering education and training services and products. • There is widespread use of education and training materials. • Qualified facilitators, instructors and presenters have been accredited. • An education and training quality assurer has been appointed.	6.3.1, 6.3.2 6.3.1 – 6.3.3 6.3.4 6.3.5 6.3.5 6.3.5 6.3.5
B6.4 Ensure that new and existing disaster risk management training programmes are in line with the national education, training and research and resources needs analysis, the national education and training framework and the requirements of the SAQA and the NQF.	• Ongoing training interventions, including short courses, workshops, seminars and conferences, are available to stakeholders. • Training programmes have been developed and implemented. • Facilitators, instructors and presenters have become qualified and have been accredited. • Approved service providers have been registered and are offering training services and products. • Widespread community-based disaster risk and response management training (in line with national training standards) is taking place. • Disaster risk management learnerships have been developed and are operational. • The ETQA is fully functional	6.4.1, 6.4.4, 6.4.7, 6.4.8 6.4.1, 6.4.2, 6.4.7 6.4.5, 6.4.8 6.4.8 6.4.4 6.4.6 6.4.8

B6.5 Create awareness, promote a culture of risk avoidance and establish good media relations.	• An integrated national public awareness strategy based on the National Indicative Disaster Risk Profile and the NETARNA has been developed and implemented. • Disaster risk reduction is the focus of all disaster risk management awareness programmes. • Awareness of disaster risk management is promoted at schools and in communities known to be at risk. • Awareness of disaster risk management is widespread, and risk-avoidance behaviour is integrated into the day-to-day activities of all stakeholders. • There is widespread evidence of balanced media reports and coverage on hazards, disasters and disaster risk management issues. • Articles on disaster risk and response management are regularly published in the media. • Good relationships with media representatives have been established and are maintained. • Disaster risk reduction is included as a standard agenda item for consideration at executive meetings of all role players and stakeholders.	6.5.1 6.5.1 6.5.2 6.5.1 – 6.5.3 6.5.3 6.5.3 6.5.3 6.5.4
B6.6 Establish research programmes and information and advisory services.	• A strategic disaster risk research agenda has been established. • Research institutions participate in the national research programme on an organised basis. • A link between scientific research and policy exists (evidence-based policy and policy-oriented research). • Regional and international exchange, cooperation and networking occur on a regular basis. • Disaster risk management research contributes to technology development. • All stakeholders have access to a comprehensive research database. • All stakeholders have access to a comprehensive advisory service.	6.6.1 6.6.1 6.6.1 6.6.1 6.6.1 6.6.2 6.6.3
B6.7: Guidelines	• Guidelines as specified in 6.7 has been developed and implemented	
Ensure that funding and funding mechanisms and information management and communication systems are in place for each of the imperatives in Enabler 2.		

Enabler 3: Funding

SUMMARY

The provision of funding for disaster risk management is likely to constitute the single most important factor contributing to the successful implementation of the Act by national, provincial and municipal spheres of government.

The Act, with the exception of Chapter 6 on funding of post-disaster recovery and rehabilitation, does not provide clear guidelines for the provision of funding for disaster risk management. In order to give effect to the requirements of the Act, four key performance areas and three enablers have been identified in the disaster risk management framework to guide the implementation of the Act. Accordingly, funding from a range of sources should support the different aspects of disaster risk management outlined in the key performance areas and enablers.

Enabler 3 builds on the recommendations made by the Financial and Fiscal Commission on funding arrangements in its Submission on the Division of Revenue 2003/04, and describes the disaster risk management funding arrangements for organs of state in the national, provincial and local spheres of government.

OBJECTIVE

Establish mechanisms for the funding of disaster risk management in South Africa.

Table B.7: Funding

IMPERATIVES	KEY PERFORMANCE INDICATORS	SECTION
B7.4 Determine funding arrangements for the establishment of institutional arrangements, including an information management and communication system for disaster risk management, for the effective implementation of the Act.	• The minimum requirements for provincial and disaster management centres have been costed. • Conditional grants to fund the start-up costs of disaster management centres in provinces and municipalities have been established and allocated. • Conditions for access to grant funding are based on guidelines issued by the NDMC on minimum infrastructural requirements for disaster management centres. • The responsibilities of the NDMC as set out in the Act have been costed and these cost estimates inform the budget for disaster risk management in the DPLG vote. • The NDMC budget makes provision for national priority risk reduction projects. • The NDMC has rapid access to emergency funds for assistance in regional disasters. • Monitoring processes are integrated with routine reporting cycles of organs of state.	7.4.1.1 7.4.1.1, 7.4.2 7.4.1.1, 7.4.2, 1.2.2.2 7.4.1.2 7.4.1.2 7.4.1.3 7.4.2
B7.5 Establish funding arrangements for disaster risk assessment.	• The costs of disaster risk assessments are included in the budgets of national and provincial organs of state. • The costs of initial disaster risk assessments are included in the local government conditional grant. • The costs of disaster risk assessments have been estimated and are included in the budgets of municipal disaster management centres.	7.5.1, 7.5.2 7.5.1, 7.5.2 7.5.1, 7.5.2
B7.6 Establish funding arrangements for disaster risk reduction.	• Budgets in all spheres of government include the costs of routine disaster risk reduction measures and activities. • Feasibility studies for capital projects include information drawn from disaster risk assessments and appropriate risk reduction measures. • Capital budgets clearly reflect the costs of disaster risk reduction. • Preparedness actions are funded through the recurrent budgets of all relevant organs of state.	7.6.1 7.6.1, 7.6.2 7.6.1 7.6.1.1
B7.7 Establish funding arrangements for disaster, preparedness, response and recovery.	• The percentage of the budget of a provincial or municipal organ of state as a threshold for accessing additional funding from national government for response and recovery efforts has been established and implemented. • Response and recovery efforts are funded through budgeted threshold allocations. • A mechanism has been developed to ensure rapid access to national funds for disaster response. • Organs of state across all spheres of government have budgeted for threshold allocations. • People, households and communities affected by a significant event or disaster have immediate access to relief measures. • Financial thresholds for rehabilitation and reconstruction funding in the different spheres of government have been set. • Rehabilitation and reconstruction efforts are funded through a combination of own budgets, reprioritisation, budgeted threshold allocations and conditional grants.	7.7.1.2 7.7.1.2, 7.7.2 7.7.1.2, 7.7.2 7.7.1.2, 7.7.2 7.7.1.3, 7.7.2 7.7.1.4 7.7.1.4, 7.7.2
B7.8 Establish funding arrangements for Information management and communication	• Funding focus to ensure a comprehensive information management and communication system is established. • Funding provision should ensure that start-up, upgrade and maintenance costs for information and communication systems are established in the disaster respective management centres. • Funding provision for needs analysis, data cost, the ability to support the objectives of the key performance areas, • Funding for the establishment of specialized and integrative functions that promotes collaboration and awareness. • Funding the reception of data and information that will allow for early warnings and hazard specific information to be relayed to the vulnerable and affected communities.	

B7.9 Establish funding arrangements for disaster risk management education, training, public awareness and research.	• There is documented evidence of an increase in expenditure on accredited education and training programmes. • Organs of state recover their expenditure on accredited education and training from the relevant Sector Education and Training Authorities. • The conditions of the Municipal Systems Improvement Grant have been extended to cater for disaster risk management education and training programmes. • All organs of state involved in public awareness budget for integrated public awareness programmes. • Partnerships between municipal organs of state and the private sector, non-governmental organisations and community-based organisations exist for the purpose of funding public awareness programmes and projects. • Funds are available from government departments, international donor organisations, private companies, research foundations and non-governmental organisations for research programmes.	7.8.1.1 7.8.1.1, 7.8.2 7.8.1.1 7.8.1.2 7.8.1.2 7.8.1.3, 7.8.2