
GENERAL NOTICE

NOTICE 974 OF 2004

MINISTRY FOR PROVINCIAL AND LOCAL GOVERNMENT DISASTER MANAGEMENT ACT, 2002 (ACT NO. 57 OF 2002)

1. I, Fholisani Sydney Mufamadi, Minister for Provincial and Local Government, in terms of section 6(2) of the Disaster Management Act, 2002 (Act No. 57 of 2002), hereby publish particulars of the proposed national disaster management framework for public comment.
2. Comments must please be submitted in writing to –

The Director-General
Attention: Mr George Kilian
Department of Provincial and Local Government
Private Bag X804
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0001
3. Comments may also be faxed to facsimile number (012) 334 0810 at the above address, or sent by electronic mail to george.kilian@ndmc.pwv.gov.za
4. Comments must be received by no later than 30 July 2004.

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Abbreviations and acronyms

CBO	community-based organisation
DART	disaster assistance response team
DOC	disaster operations centre
ETQA	education and training quality assurer
FAO	Food and Agriculture Organization (United Nations)
FOG	field operations guide
GIS	geographical information systems
ICDM	Intergovernmental Committee on Disaster Management
ICRC	International Committee of the Red Cross
IDNDR	International Decade for Natural Disaster Reduction
IDP	integrated development planning
IFRCS	International Federation of Red Cross and Red Crescent Societies
IPCC	Intergovernmental Panel on Climate Change
ISDR	International Strategy for Disaster Risk Reduction (United Nations)
JOC	joint operations centre
LES	local government equitable share
MDMC	municipal disaster management centre
MEC	Member of the Executive Council (member of a provincial Cabinet)
METF	Medium-term Expenditure Framework
MIG	Municipal Infrastructure Grant
MINMEC	(Forum of) Ministers and Members of the Executive Council
NDMAF	National Disaster Management Advisory Forum
NDMC	National Disaster Management Centre
NDRFB	National Disaster Relief Fund Board
NGO	nongovernmental organisation
NQF	National Qualifications Framework
OCHA	Office for the Coordinator of Humanitarian Affairs
PDMAF	provincial disaster management advisory forum
PDMC	provincial disaster management centre
PRA	participatory rural appraisal
RDP	Reconstruction and Development Programme
SADC	Southern African Development Community
SALGA	South African Local Government Association
SAQA	South African Qualifications Authority
SETA	Sector Education and Training Authority
the Act	National Disaster Management Act, No. 57 of 2002
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNDMTP	United Nations Disaster Management Training Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WFP	World Food Programme
WHO	World Health Organisation
WMO	World Meteorological Organization

Introduction: A guiding framework for disaster management in South Africa

South Africa's disaster management context

South Africa faces increasing levels of disaster risk. It is exposed to a wide range of weather hazards, including drought, cyclones and severe storms that can 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 present both natural and human-induced cross-boundary risks, as well as 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, large numbers of people live in conditions of chronic disaster vulnerability – in underserved, ecologically fragile or marginal areas – where they face recurrent natural and other threats that range from drought to repeated informal settlement fires.

Severe floods in Cape Town's historically disadvantaged Cape Flats in June 1994 profiled the urgency for legislative reform in the field of disaster management, stimulating a consultative process which resulted in Green and White Papers in Disaster Management. These important discussion and policy documents afforded opportunity for consultation with multiple stakeholder groups and provided the platform for development of draft legislation in 2000 that was consistent with emerging international trends in disaster reduction.

Such sustained, committed and concerted efforts with regard to disaster management reform by the government and a wide range of stakeholders were reflected in the promulgation of the Disaster Management Act, No. 57 of 2002, on 15 January 2003.

The Act provides for:

- an integrated and coordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters, and post-disaster recovery
- the establishment of national, provincial and municipal disaster management centres
- disaster management volunteers
- 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 the approach taken by such a diversity of role players and partners.

The national disaster 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 management appropriate for the Republic as a whole' (section 7(1)).

In this context, the national disaster management framework recognises a diversity of risks and disasters that occur in southern Africa, and gives priority to developmental measures that reduce the vulnerability of disaster-prone areas, communities and households. Also, in keeping with international best practice, the national disaster management framework places explicit emphasis on the disaster risk reduction concepts of disaster prevention and mitigation as the core principles to guide disaster 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 management framework document

The national disaster management framework comprises six key performance areas (KPAs). Each KPA is informed by specified objectives and, as required by the Act, *key performance indicators* (KPIs) to guide and monitor its implementation.

The relevant funding and financial arrangements for the implementation of the Act are described in KPA 1 and incorporated into each respective key performance area.

Key performance area 1 focuses on establishing the necessary *institutional arrangements* for implementing disaster management within the national, provincial and municipal spheres of government and describes some of the mechanisms for funding disaster management. It specifically addresses the application of the principles of cooperative governance for the purposes of disaster 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. It also outlines the institutional arrangements for establishing the disaster management information system required by the Act.

Key performance area 2 addresses the need for disaster *risk assessment and monitoring* to set priorities, guide risk reduction action and monitor the effectiveness of our efforts. Although South Africa faces many different types of risk, *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. KPA 2 outlines the requirements for implementing disaster risk assessment and monitoring by organs of state within all spheres of government.

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

Key performance area 4 presents implementing priorities concerned with disaster *response and recovery and rehabilitation*. KPA 4 addresses requirements in the Act for an integrated and coordinated policy that focuses on rapid and effective response to disasters

and post-disaster recovery. When a significant event or disaster occurs or is threatening to occur, it is imperative that there must be no confusion as to roles and responsibilities and the procedures to be followed. KPA 4 describes measures to ensure effective disaster response, recovery and rehabilitation planning.

Key performance area 5 addresses disaster management priorities in *public awareness, education, training and research*. It addresses requirements to promote and support a broad-based culture of risk avoidance through strengthened public awareness and responsibility. KPA 5 describes mechanisms for the development of both non-accredited and accredited education and training for disaster management and associated professions and the incorporation of relevant aspects of disaster management in primary and secondary school curricula. It also addresses priorities and mechanisms for supporting and developing a coherent and collaborative disaster risk research agenda.

Key performance area 6 presents processes for *evaluation, monitoring and improvement* of disaster management as envisaged in the implementation of the Act. It introduces a range of mechanisms for measuring and evaluating compliance with the national disaster management framework and the Act. These include performance audits, self-assessments, peer reviews, reviews of significant events and disasters, and rehearsals, simulations, exercises and drills.

Key performance area 1: Institutional capacity for disaster management

Relevant sections of the Disaster Management Act
s 7(1), s7(2)(c-d), s 7(2)(l)

The Disaster Management Act, No. 57 of 2002, (hereafter referred to as ‘the Act’), requires the establishment of a National Disaster Management Centre (NDMC) responsible for promoting an integrated and coordinated national disaster management policy. The Act gives explicit priority to the application of the principles of cooperative governance for the purposes of disaster 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 key performance area addresses the mechanisms to be put in place to give effect to these requirements.

Outline

Section 1.1 discusses the establishment of effective arrangements for an integrated disaster management policy, direction for the execution of disaster management policies and plans, and funding of disaster management in South Africa.

Section 1.2 addresses the arrangements required for stakeholder participation and the engagement of technical advice in disaster management planning and operations.

Section 1.3 describes the arrangements for national, regional and international cooperation on disaster management.

Section 1.4 deals with the development of a communication and information management system.

1.1 Arrangements for integrated policy, direction and funding

1.1.1 Objectives

s 7(2)(m), s 63(1)(a)

- To establish effective institutional arrangements for the development and approval of an integrated disaster management policy.
- To provide clear direction for the execution of disaster management policy and planning.
- To set out the mechanisms for the funding of disaster management.
- To develop a national strategic implementation plan for the application of the requirements of the Act and the national disaster management framework.

1.1.2 Arrangements for integrated policy

1.1.2.1 Intergovernmental Committee on Disaster Management

s 4

The Intergovernmental Committee on Disaster Management (ICDM) must be established by the President and must consist of Cabinet members involved in disaster 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.

The ICDM must include Cabinet members holding the following portfolios:

- Agriculture and Land Affairs
- Defence

- Education
- Environmental Affairs and Tourism
- National Treasury
- Foreign Affairs
- Health
- Home Affairs
- Housing
- Provincial and Local Government
- Public Works
- Safety and Security
- Social Development
- Water Affairs and Forestry.

- s 7(2)(d) With regard to intergovernmental relations, the Minister may well want to expand the committee from time to time to include Ministers who carry other relevant portfolios, such as Science and Technology and Public Service and Administration, and who are responsible for agencies such as the National Intelligence Agency, the Independent Communications Authority of South Africa and Statistics South Africa.
- s 4(1)(b) The provincial sphere of government must be represented on the ICDM by a Member of the Executive Council (MEC) of each province, who has to be selected by the Premier of the province concerned and is involved in either disaster 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.
- s 4(1)(c) Organised local government must be represented on the ICDM by members of municipal councils, who have to be selected by the South African Local Government Association (SALGA).
- s 4(2) The ICDM has to be chaired by the Cabinet member designated by the President to administer the Act.
- The ICDM is accountable to Cabinet for:
- s 4(3)(a) • ensuring that appropriate mechanisms and institutional arrangements are in place to give effect to the principles of cooperative governance
- s 4(3)(b) • coordinating disaster 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.
- s 4(3)(c)(ii) The ICDM must advise and make recommendations to Cabinet on issues relating to disaster management and the establishment of the national disaster management framework.
- s 7(2)(d) Apart from addressing disaster management issues in meetings of the ICDM, the Minister may also choose to address disaster management issues in the Ministers and Members of the Executive Council (MINMEC) forum.
- 1.1.2.2 Policy-making process**
- s 5(3)(b)(i) Recommendations on issues relating to disaster management policy must be submitted to the NDMC for consideration before being submitted to the National Disaster Management Advisory Forum (NDMAF) and, thereafter, the ICDM.

To allow due consideration to be given to such recommendations, the NDMC must ensure that details of any financial, constitutional, human resource and interdepartmental implications are included in the recommendations prior to their submission to the NDMAF and the ICDM.

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

Figure 1.1 below sets out the process for the submission of policy recommendations for disaster management.

1.1.3 Arrangements for integrated direction

s 8 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 management. The Act also requires the establishment of a disaster management centre in each province and metropolitan and district municipality.

1.1.3.1 Location of the disaster management function and planning

The coordination of the disaster management function – through the various government departments at both national and provincial levels, within municipal administrations, and through integrated planning and programming – requires an unbiased overview. Effective coordination also demands that the necessary authority be granted to the various disaster management centres to give effect to their respective disaster management frameworks, including the requirement to ensure alignment of all disaster management-related activities with government policy.

The NDMC (as well as provincial and municipal disaster management centres) must at all times maintain an unbiased overview and must have the authority, backed by political will, to fulfil its objectives and responsibilities with regard to the improvement of

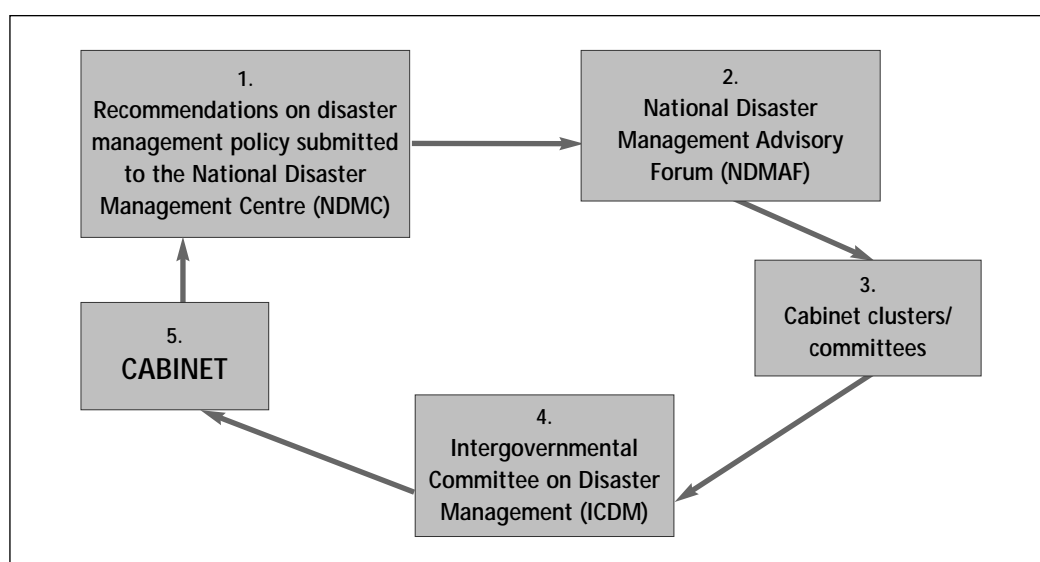


Figure 1.1: Disaster management policy-making cycle

disaster management planning, emergency preparedness, and response and recovery across the various organs of state and sectoral role players with individual responsibilities for disaster management. The efficiency with which a disaster management centre will be able to perform these functions will depend on its ability to fast-track decision making and minimise red tape.

s 15(1)(b), s 18,
s 25(3)(a–b),
s 60

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

s 3

If the NDMC and provincial and municipal disaster management centres are to achieve their objectives, they must have the necessary stature to exercise their responsibilities in an environment that is robust and seamless. This would be achieved by the establishment of a South African disaster management authority or similar entity.

s 3, s 4(1)

Until the establishment of such an authority or entity, an interim measure would be to locate the NDMC in a national department that is close to the highest level of decision making and which is able to cut across departments with individual responsibilities for disaster management. 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, Act No. 108 of 1996), the best alternative location for the NDMC is in the Presidency. This will not only demonstrate the level of the government's commitment to risk reduction and its integration into developmental initiatives, but also facilitate the fast-tracking of decision making and improved disaster management planning, emergency preparedness, response and recovery.

At the provincial level, provincial disaster management centres (PDMCs) also need to be located in a position that cuts across departments with individual responsibilities and is close to the highest level of decision making in the province. An interim measure in anticipation of the establishment of a South African disaster 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 management function at municipal sphere must be given careful consideration. Contrary to popular thinking in the past, disaster management is neither a line function nor an emergency service. Rather, it must be seen as a management function within the municipal arena. If municipal disaster management centres (MDMCs) are to fulfil their responsibilities, they need to be close to the highest level of decision making and should be able to cut across departments involved with disaster management. Until the establishment of a South African disaster management agency or entity, it is strongly recommended that the MDMC be located in the Office of the Executive Mayor.

1.1.3.2 National Disaster Management Centre

s 9, s 15

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

s 12(2), s 15(3)(a-c)	<p>The NDMC must exercise its powers and perform its duties:</p> <ul style="list-style-type: none"> • within the national disaster management framework • subject to the direction of the Minister responsible for the administration of the Act • in accordance with the instructions of the Director-General of the Department responsible for the administration of the Act.
s 15, s (10)(i), s 12(1)(a-b), s 11	<p>The Head of the NDMC is appointed by the Minister and is responsible for the exercise of the powers and the performance of the duties of the NDMC as described in section 15 of the Act, and takes all decisions with regard to the centre. The Head of the NDMC may, however, delegate or assign the functions of office to another official in the event that the Head is absent or otherwise unable to perform the functions of office. The delegation or assignment of powers and duties to another official should be undertaken by the Director-General of the Department.</p>
s 15(1)(d)	<p>The NDMC acts in an advisory capacity to the ICDM and provides the secretarial support for the ICDM and the NDMAF.</p>
s 15(1-3)	<p><i>Key responsibilities of the NDMC</i></p> <p>The Act requires the NDMC to:</p> <ul style="list-style-type: none"> • establish and maintain institutional arrangements that will enable implementation of the provisions of the Act • implement measures that will provide for the development of progressive disaster risk profiles to inform planning and implementation of risk reduction strategies • ensure the development, implementation and maintenance of risk reduction strategies, which will result in resilient areas, communities and individuals • guide the development of a comprehensive communication and information management system • facilitate the development of response and recovery plans to ensure 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 • assist with the establishment of mechanisms for creating public awareness to inculcate a culture of risk avoidance • make provision for training, education and research • develop, implement and maintain dynamic disaster management monitoring, evaluation and improvement programmes • make recommendations regarding the funding of disaster management and initiate and facilitate efforts to make such funding available.
	<p><i>Direction and operational capacity of the NDMC</i></p> <p>The minimum criteria for the establishment and optimal performance of the NDMC are outlined below.</p>
	<p><i>Head of the NDMC</i></p> <p>The performance of the duties of the NDMC will require sound managerial and financial acumen.</p>
s 12, s 15(1)(b), s 23	<p>The performance of the responsibilities of the Head of the NDMC will require excellent judgement and problem-solving and strategic decision-making skills. Inevitably, when a 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</p>

the economy, the lives of people, critical national infrastructure and property, and the environment.

s 7 The diverse and complex nature of the disaster 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.

s 10(2) Accordingly, the qualifications and experience of the incumbent must be commensurate with the requirements of the post.

Staffing

s 13(1)(a) The Head of the NDMC must have suitably qualified disaster management and other technical staff, including risk reduction specialists, risk scientists, planners and information scientists, to perform the duties relevant to the requirements of the national disaster management objective and disaster management programmes.

Minimum infrastructural requirements

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

- 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 • a disaster operations centre for the facilitation of disaster management planning and operations and multidisciplinary strategic management of disaster operations
- an information management system
- s 16, s 17, s 22, s 23, s 26, s 27 • 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
- 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, emergency preparedness, response, recovery and all other aspects of disaster management, as well as providing communities with the mechanisms for obtaining access to assistance in the event of an emergency and for reporting important local information to the relevant disaster management centre
- s 15(1)(h), s 20, s 22 s 13 • a training, education and research facility
- adequate office accommodation and facilities for operational personnel.

The establishment of infrastructure must be in accordance with national guidelines, which are to be developed by the NDMC.

1.1.3.3 Roles and responsibilities of national organs of state

s 7(2)(e), s 19(b), s 19(d), s 25(1)(a–b), s 7(2)(a), s 7(2)(d), s 7(2)(f), s 2(1)(b), s 2 s 19, s 20, s 21, s 25, s 56 National departments must assess any national legislation applicable to their function in terms of section 2 of the Act and must advise the NDMC on the state of such legislation.

Based on the principle of auxiliary (using existing structures and resources), disaster 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 7(2)(m), s 25(1)(a)(iv) In terms of the Act, each national organ of state must determine its role and responsibilities in relation to disaster management and assess its capacity to adhere to the

s 7(2)(f)(iii) requirements of the Act, particularly with reference to setting priorities for risk reduction initiatives (see section 3.2. below), emergency preparedness, response and recovery. Such capacity must be supplemented, where necessary, by collateral support and the sharing of resources between organs of state, and by harnessing the capacity of the private sector and nongovernmental organisations (NGOs). The parameters of such assistance must be clearly defined in memoranda of understanding.

s 7(2)(d)(ii) Each national organ of state must appoint an individual who will act as its focal or nodal point for disaster management and who will also be its representative on the NDMAF. This individual will be responsible for:

- facilitating and coordinating the relevant department's disaster management arrangements and planning for risk reduction, response and recovery
- ensuring that such arrangements and plans are consistent with the national disaster management framework
- facilitating the alignment of the arrangements and plans with those of other organs of state and other institutional role players
- integrating the disaster management planning process with the integrated development planning (IDP) process (see subsection 3.4.3 below)
- regularly reviewing and updating disaster management plans

s 18 • 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.

1.1.3.4 Provincial Disaster Management Centres

The MEC of each province who is responsible for disaster management must establish institutional capacity for disaster management in the province. Such arrangements must be consistent with national arrangements and must provide the appropriate mechanisms to allow for the application of the principles of cooperative governance and to facilitate intergovernmental relations for the purposes of disaster management.

The PDMC is the primary functional unit for disaster management in each province. A key responsibility of the PDMC is to provide support to the NDMC and the metropolitan and district disaster management centres in the province. It must provide the link between national objectives and provincial and municipal disaster management activities and priorities.

In the event of a disaster occurring or threatening to occur, the PDMC must provide support and guidance to the relevant MDMCs. In addition, it must mobilise provincial infrastructure and resources to support municipal disaster management resources.

Key responsibilities of the PDMC

The PDMC must maintain a strategic overview of disaster management projects and programmes in the province. Key responsibilities in this regard include:

- ***Risk reduction***
The PDMC must:
 - ◆ submit a risk assessment for the province and disaster plans to the NDMC
 - ◆ identify provincial priorities for risk reduction

- ♦ facilitate the development and preparation of provincial plans for risk reduction and disaster response and recovery
 - ♦ 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 the province and neighbouring provinces and countries, and must enter into mutual assistance agreements for the purposes of disaster risk management
 - ♦ institute joint standards of practice for risk management in the province which are consistent with national standards.
- *Integrated development planning*
The PDMC is responsible for:
 - ♦ monitoring the inclusion of disaster management plans in IDP processes (see sub-section 3.4.3 below)
 - ♦ ensuring that IDP budgets make provision for disaster management
 - ♦ submitting IDPs to national government for approval.

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

- *Capacity building, training, education and research*
The PDMC must initiate and coordinate disaster management capacity building, education and training in the province, placing particular emphasis on the development of community awareness programmes and promoting the incorporation of such programmes into school curricula.
- *Communication and information management*
The PDMC must:
 - ♦ ensure the establishment of a strategic provincial emergency communication system that is compatible with emergency communication systems used nationally, to enable communication between essential and emergency services for the purposes of incident command and the management of joint operations
 - ♦ establish a system (including emergency communication mechanisms) for reporting, evaluating and disseminating early warnings on a 24-hour basis to ensure that threatened communities are able to respond appropriately and take risk-avoidance measures when a disaster occurs or is threatening to occur in their area
 - ♦ act as a provincial reporting centre (see section 1.4 below).

Information obtained from communities through municipal centres must be incorporated into disaster management plans and programmes.

Monitoring and evaluation

The PDMC must establish mechanisms to monitor and measure performance. It must evaluate all disaster management plans and initiatives by provincial and municipal organs of state.

Operational capacity of the PDMC

Arrangements must be made for establishing the operational capacity of PDMCs to enable the implementation of the Act in the provincial sphere. These arrangements must be consistent with those of the NDMC.

Infrastructural requirements

The infrastructural arrangements of PDMCs must accord with the national standard guideline, which is to be developed by the NDMC.

1.1.3.5 Municipal Disaster Management Centres

The council of each metropolitan and district municipality must establish institutional capacity for disaster management in its area. Such arrangements must be consistent with national and provincial arrangements and must provide the appropriate mechanisms to allow for the application of the principles of cooperative governance and to facilitate intergovernmental relations and community participation for the purposes of disaster management.

The MDMC is the primary functional unit for disaster management in metropolitan and district municipalities. A key responsibility of the MDMC is to provide support to the NDMC and the relevant PDMC. It must provide the direction for the implementation of disaster management policy and legislation and for integration and coordination of municipal disaster management activities and priorities in order to ensure that national and provincial objectives are achieved.

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 to the local municipalities in the case of district municipalities. In addition, it must mobilise municipal infrastructure and all other available resources to support local disaster management resources.

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

Key responsibilities of the MDMC

The key responsibilities of the MDMC must include:

- the establishment and maintenance of institutional arrangements that will enable the implementation of the Act
- the implementation of measures to develop progressive risk profiles to inform the IDP process of municipalities for the purposes of risk reduction
- the development, implementation and maintenance of risk reduction strategies that will result in resilient areas, communities and individuals
- the development and implementation of a comprehensive communication and information management system
- the development of response and recovery plans to ensure 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
- the development and implementation of mechanisms for creating public awareness to inculcate a culture of risk avoidance
- the facilitation and promotion of disaster management training, education and research in the municipality
- the implementation and maintenance of dynamic disaster management monitoring, evaluation and improvement programmes
- the making of recommendations regarding the funding of disaster management in the municipal area and the initiation and facilitation of efforts to make such funding available.

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

Integrated development planning

In view of the inextricable relationship between disaster and development, it is also imperative that the heads of MDMCs and those individuals assigned responsibility for disaster management in local municipalities serve on the relevant IDP structures.

Operational capacity of the MDMC

Arrangements must be made for establishing the operational capacity of metropolitan and district disaster management centres to enable the implementation of the Act in the municipal sphere. These arrangements must be consistent with those of the NDMC and PDMCs.

It is recommended that all municipal departments within metropolitan and district municipalities and all local municipalities identify appropriately qualified staff in their employ to serve as their disaster management focal or nodal points.

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

Infrastructural requirements

The infrastructural arrangements of MDMCs must be conducted in accordance with the national standard guideline to be developed by the NDMC.

s 7(1)(2)(k)

1.1.4 Arrangements for funding of disaster management

The provision of funding for disaster management is likely to constitute the single most important factor contributing to the successful implementation of the Act by national, provincial and municipal spheres of government.

The NDMC must act as a facilitator between organs of state and National Treasury to ensure that suitable funding for disaster management purposes is made available and the NDMC should monitor that these funds are correctly spent. This can be done through monitoring programmes that also provide technical assistance to organs of state.

The Act, with the exception of Chapter 6: Funding of post-disaster recovery and rehabilitation, does not provide clear guidelines for the provision of funding for disaster management. In order to give effect to the requirements of the Act, six key performance areas have been identified in the disaster management framework to guide the implementation of the Act. Concomitantly, funding from a range of sources for different aspects of disaster management will be required.

While funds will be derived from nationally collected revenue, it will also be necessary to leverage resources from the private sector and the international donor community. Possible sources of funding for disaster management functions and responsibilities include:

- own revenue in each sphere of government
- regular budget processes of national departments, provinces and municipal entities
- local government equitable share (including the institutional component of the LES)

- conditional grants (including funding streams for infrastructure, capacity building and restructuring)
- contingency reserve of national and provincial spheres of government
- private sector investment
- loans
- insurance
- local and international donors
- appeals and donations
- revenue-generating activities (to support special projects)
- special provision made by national government for post-disaster response and recovery, such as the Disaster Relief Fund and the Social Relief Fund administered by the Department of Social Development
- South African Qualifications Authority (SAQA) and the National Qualifications Framework (NQF)
- income from private commissions (for example, research), fees and subsidies
- pensions.

1.1.4.1 Funding requirements

Start-up costs

Funding for the establishment of disaster management centres in the provincial and municipal spheres of government, including the appointment of staff and the generation of an Indicative National Disaster Risk Profile, must be provided by national government.

The NDMC must negotiate with National Treasury for the provision of one-off grants for start-up costs.

Mechanisms and sources of funding

- Funding must be derived from conditional grants provided by national government, It must be targeted at municipalities with limited capacity to deal with disaster risks, and administered and monitored by the NDMC.
- Thereafter, municipalities must provide for additional start-up costs out of their own revenue, with matching funds from national government.

Operational costs

The NDMC must make provision for the development of a formula to calculate the amount of funding that national government will need to make available to assist with ongoing operational costs of disaster management centres, at least for the initial period of two years during the phasing in of the Act, after which the situation must be reassessed.

Operational and maintenance expenditure on infrastructure is one of the most effective means that organs of state have to mitigate the risks associated with disaster management. Therefore, the type of expenditure that is required to reduce disaster risk must be identified, and where possible conditional grants and the local government equitable share (LES) must be linked to incentives and requirements aimed at ensuring that organs of state maintain infrastructure at a suitable level. Most of this expenditure should be part of the day-to-day maintenance and operational expenditure of all municipalities. All municipalities must budget for this kind of expenditure.

Mechanisms and sources of funding

- Funding for operational costs should be incorporated into the equitable share. As there are plans to incorporate additional fiscal capacity into the equitable share, the funds made available for disaster management in the equitable share will take into account the different fiscal capacities of municipalities.
- Ongoing operational costs of district municipalities could also be covered by the institutional component of the local government equitable share.

Initiatives, programmes and projects for risk reduction

s 25, s 38
s 7(2)
s 56, s 57

The Act recognises that disaster risk reduction (including prevention and mitigation) is a key to effective disaster management. It specifies that the national disaster management framework must ‘place emphasis on measures that reduce the vulnerability of disaster-prone areas, communities and households’. Furthermore, it introduces incentives for engaging in risk reduction efforts, such as the provision that local and provincial requests to national government for financial assistance will be assessed against the extent to which the spheres instituted disaster risk reduction measures and the extent to which the disaster could have been avoided had risk reduction measures been taken. However, due consideration must be given to each case so as not to penalise municipalities for failing to address certain risks when they have been investing considerably in other risk reduction programmes and projects.

Although the Act places great emphasis on the prevention or reduction of disaster risks, there is currently no monitoring of risk reduction efforts nor has specific provision been made for the funding of risk reduction programmes and projects. To address this, the NDMC must coordinate a process to:

- investigate and identify appropriate funding sources and mechanisms to support mitigation efforts for priority disaster risks
- establish mechanisms for nationally assessing, prioritising and approving proposed risk reduction programmes and projects
- directly provide or facilitate access to appropriate financial and other technical support to allow implementation of approved projects and programmes (see KPA 3 below).

Mechanisms and sources of funding

- Municipalities or provinces must apply to national government for funding for specific projects (or should be asked to apply, if the NDMC identifies significant risks in their jurisdiction). These applications must be assessed against the Indicative National Disaster Risk Profile (see section 2.2 below). Funding for approved projects must be obtained through a process of negotiation between the NDMC, National Treasury and the relevant organs of state.
- Because long-term planning is possible for risk reduction, funding for risk reduction programmes and projects should be included in the budgets of the national departments administering risk reduction project or programme funds. In this context, and with respect to efforts that reduce vulnerability in disaster-prone households, government-supported social safety nets administered by the Department of Social Development, such as child grants and pensions, are viewed as critical vulnerability reduction funding instruments for poor households at greatest risk.
- In the case of provinces and municipalities, funding associated with developmental projects aimed at risk reduction must be provided for in terms of the IDP budgetary process.

s 56, s 57

Disaster response, recovery and rehabilitation

The objectives of emergency response are to save lives, prevent escalation of a significant event or disaster, and relieve suffering by meeting basic needs such as shelter, water, food and medical care. Emergency response includes measures taken during or immediately after a significant event or disaster in order to bring relief to people and communities affected by the event or disaster (see section 4.3 below).

Post-disaster recovery and rehabilitation include the repair or replacement of critical infrastructure that has been damaged or destroyed during a declared disaster, as well as planning and reconstruction efforts to reduce the risk of a similar disaster occurring. The cost of emergency response and recovery and rehabilitation can be very high, and frequently exceeds the resources of the organs of state affected (see KPA 4 below).

The Act specifies that the costs of repairing or replacing infrastructure that has been damaged or destroyed during a declared disaster should be borne by the organ of state responsible for its maintenance. Infrastructure projects require long lead times and can be budgeted for, and this should be the default position. However, there may be cases where the rehabilitation of permanent infrastructure has to be fast-tracked. In such cases the contingency reserve should be drawn upon.

Mechanisms and sources of funding

The mechanisms for the funding of response and recovery efforts must be established in accordance with the provisions of section 56 of the Act and subject to sections 16 and 25 of the Public Finance Management Act, No. 1 of 1999. It is anticipated that such funding will be sourced from the contingency reserve up to a pre-defined percentage threshold.

s 56(3)

The NDMC must by means of investigation and in consultation with the different spheres of government, the various categories of municipalities and National Treasury determine the percentage of each organ of state's budget or own revenue as a threshold for accessing funding from national government for response and recovery operations. In determining the financial threshold for different organs of state, consideration must also be given to assessing the threshold in relation to different risk conditions.

Disaster response

- The contingency reserve should set aside funding for immediate response to emergencies. The NDMC must apply for release of these funds through the Minister of Finance. The funds would then be allocated to provinces, municipalities, and national departments. These allocations must be made in accordance with the principle of threshold funding. In this regard:
 - ♦ Funding to national departments must be based upon expenditure incurred. Departments that are frequently involved in emergency response activities must estimate the required amount based upon past expenditure and must budget for these amounts. Once this amount is exceeded, an emergency appropriation from the contingency reserve could be requested.
 - ♦ Funding to a province must only be provided once the province has spent more than the financial threshold on accumulated disasters in that financial year. Funds could only be accessed from the contingency reserve once the financial threshold has been exceeded.
 - ♦ Funding to a municipality must only be provided once the municipality has spent more than the financial threshold on accumulated disaster in that financial year.

Funds could only be accessed from the contingency reserve once the financial threshold has been exceeded.

- The Department of Social Development administers the Disaster Relief Fund, which allocates funds to individuals and organisations. In terms of the Fund-raising Act, No. 107 of 1978, relief is given to survivors of a disaster declared in terms of the Act to enable them to cope with loss suffered during the disaster. Disaster relief is decided upon by the National Disaster Relief Fund Board (NDRFB) and the allocation of funds is determined by means of criteria that have been developed by the NDRFB.

Recovery and rehabilitation

- National departments, provinces and municipalities must submit requests for infrastructure rehabilitation funding to national government. A budget appropriation must then be requested based upon the sum of the approved claims.
- In circumstances where infrastructure funds can be spent within the current financial year, funds could be drawn from the contingency reserve.

Training and capacity building

Training and capacity building hold an essential key to the successful implementation and continued sustainability of disaster management, and funding should be provided by national government for each sphere of government to fulfil its role in this regard.

The NDMC must approach National Treasury during each Medium-term Expenditure Framework (MTEF) cycle to allocate funding for disaster management training and capacity building. Training and capacity building programmes must be developed in consultation with other relevant stakeholders. Funding for training should come from conditional grants and the NDMC should monitor whether municipalities are utilising a portion of these funds for disaster management training.

Mechanisms and sources of funding

- In the case of public awareness programmes and non-accredited training programmes, assistance must be made available by the NDMC and through donor funding.
- The NDMC must submit a request for a conditional grant for capacity building and training to national government.
- Accredited education and training programmes must be funded through the channels established by SAQA, that is through conditional grants.
- Funding for capacity building, training and public awareness programmes should be on the budget of the national Department responsible for administering the Act.

Monitoring, evaluation and improvement

The evaluation and monitoring of progress and achievements with regard to implementation of all the requirements of the Act and the national disaster management framework are essential components of disaster management.

Mechanisms and sources of funding

- All organs of state in the national, provincial and municipal spheres must provide for resources to perform self-assessments, disaster reviews, rehearsals and exercises within their normal budgetary processes.
- The NDMC must provide for resources to perform a national evaluation of disaster management programmes, official investigations and reviews of disasters and significant incidents, as well as national rehearsals and exercises.

- Resources for progress and annual reports should be provided for within the normal budgetary process.

1.1.4.2 The role of the NDMC in establishing funding arrangements

The NDMC must hold a consultative strategic planning workshop to establish a comprehensive funding regime for the implementation of the different categories of disaster management as outlined in the key performance areas of the national disaster management framework. The workshop must be convened within one month of the publication of the final disaster management framework in the *Government Gazette* and must include:

- identifying sources of funding (both public and private sector) for the implementation of the key performance areas of the national disaster management framework
- identifying the organs of state responsible for budgeting for these sources
- identifying the organs of state responsible for administering the funding
- identifying the mechanisms whereby stakeholders can access the funding
- identifying and establishing criteria for the release and allocation of national funding in respect of the various requirements outlined in the national disaster management framework.

A discussion document providing a funding framework and/or guidelines for consideration during the consultative strategic planning workshop must be distributed to all stakeholders prior to the workshop.

The NDMC is responsible for ensuring that strategic planning is done on a continuous basis in order to revise or create funding mechanisms to give effect to the national disaster management framework. Where necessary, it must initiate similar consultative workshops to address changes in the funding environment.

1.1.5 Strategic implementation plan for the implementation of the national disaster management framework

Subsequent to the consultative workshop to establish a funding regime for the implementation of the disaster management framework, the NDMC must convene a participative strategic planning meeting to establish a strategy for the implementation of the framework. The workshop must address the establishment of time frames for the application of all the requirements of the framework as well as quantifying budgets for the implementation of the requirements of the national disaster management framework and identifying and allocating responsibilities in respect of disaster management funding.

The workshop must be convened one month after the publication of the final disaster management framework in the *Government Gazette*.

1.1.6 Key performance indicators

- The ICDM has been established and meets at least four times a year.
- The NDMC has been established and operates effectively.
- PDMCs have been established and operate effectively.
- MDMCs have been established and operate effectively.
- A job description and key performance indicators for the position of Head of the NDMC have been developed.
- Each national organ of state has appointed a focal or nodal point for disaster man-

agement (an individual responsible for managing the national organ of state's disaster management responsibilities and arrangements).

- Adequate funding and budgetary arrangements for operational costs for policy making, direction and planning have been established and implemented.
- Financial thresholds for recovery and rehabilitation funding in the different spheres of government have been set by the NDMC.
- Funding for public awareness and non-accredited training programmes has been made available.
- Sources of funding for the implementation of the different categories of disaster management as outlined in the national disaster management framework, the organs of state responsible for budgeting for and administering the funding sources, and the mechanisms whereby funding can be accessed have been identified.
- Procedurally correct processes are followed.
- An accurate record-keeping system, including disaster management plans, plans for specific projects, minutes, reports, memoranda and correspondence, has been established and is maintained.
- A strategic planning meeting has been held and time frames for the delivery of the framework have been established and distributed to all stakeholders.

1.2 Arrangements for stakeholder participation, technical advice and planning

1.2.1 Objective

- s 7(2)(c)(i-ii),
s 7(2)(d)
- To establish inclusive mechanisms to provide for the active participation of all stakeholders, including technical experts and communities, in disaster management planning and operations.

1.2.2 Disaster Management Advisory Forums

1.2.2.1 National Disaster Management Advisory Forum

- s 5(3)(a-b)
- The primary purpose of the NDMAF is to provide a mechanism for relevant role players to consult one another and to coordinate their activities on disaster management issues.
- s 5(1-2)
- The NDMAF has to be established by the Minister responsible for administering the Act and must be chaired by the Head of the NDMC.
- s 5(1)
- The NDMAF must comprise a central nucleus of senior representatives of the relevant national departments whose Ministers serve on the ICDM, together with the heads of the nine provincial disaster management centres and municipal officials selected by SALGA. Membership of the forum must be supplemented by technical experts and other role players in disaster management designated by the Minister. 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 membership of the forum should remain fluid to accommodate changing needs in respect of technical inputs and specific expertise requirements.
- s 5(3)(b)(i)
- The NDMAF must make recommendations to the ICDM and act in an advisory capacity on matters pertaining to disaster management. The NDMAF is also required to support the programmes of the NDMC by providing technical expertise.
- s 5(3)(a-b)

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 should also play a role in:

- drafting disaster management plans
- promoting joint standards of practice
- developing the disaster management information system
- contributing critical information to the directory of institutional role players
- assisting with effective communication links
- advising and making recommendations on training and public awareness
- participating in the review of programmes and policy.

Meetings of the forum must take place at least quarterly, unless circumstances dictate that meetings be convened more frequently.

1.2.2.2 Provincial Disaster Management Advisory Forums

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

Although the establishment of provincial intergovernmental committees and advisory forums for the purposes of disaster management is not a legislative obligation, it is difficult to envisage how provinces would be able to effect the implementation of the Act and remain consistent with the requirements of the national disaster management framework in the absence of such structures. Accordingly, it is strongly recommended that provinces establish these mechanisms. However, in the event that a province elects not to do so, appropriate existing alternative structures must be identified for these purposes.

1.2.2.3 Municipal Disaster Management Advisory Forums

In terms of the Act, there is no obligation on a municipality to establish specific internal structures for disaster management. There is also no obligation on a municipality to constitute formal structures for the purposes of external stakeholder participation.

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

It is therefore difficult to perceive how the principles of cooperative governance, integrated and coordinated disaster management and stakeholder participation could be applied at the local level in the absence of appropriate structures and without the participation of key personnel from various departments within a municipality. It is equally difficult to grasp how disaster risk management planning and coordination would be effected without the appropriate institutional arrangements.

The primary responsibility for the coordination and management of local disasters rests with the local sphere. In terms of risk reduction, the local sphere is the first line of defence and, in the event of a disaster occurring or threatening to occur, the community is in reality the first responder. Thorough disaster risk management planning and effective coordination are key to saving lives and limiting damage to property, infrastructure and the environment. They are also necessary for the optimal utilisation of resources.

Apart from internal arrangements to allow for interdepartmental cooperation within the municipal sphere, the ideal mechanism for dealing with disaster risk management planning and coordination is the municipal disaster management advisory forum. The Act does make provision for municipalities to establish disaster management advisory forums. Such a forum should:

- give advice and make recommendations on disaster-related issues and disaster management
- contribute to disaster risk management planning and coordination
- establish joint standards of practice
- implement incident management systems

- gather critical information about the municipality’s capacity to assist in disasters and to access resources
- assist with public awareness, training and capacity building.

It is therefore strongly recommended that all metropolitan and district municipalities establish a municipal disaster management advisory forum for their area.

Disaster management committees

It is further recommended that all metropolitan and district municipalities establish an interdepartmental disaster management committee for their area and that all district municipalities establish disaster management committees in district management areas. In addition, local municipalities must establish their own disaster management committees and ensure the establishment of disaster management committees or forums in each municipal ward.

Alternative structures

s 7(2)(f)(i–ii) In the event that a municipality elects not to establish the aforementioned arrangements, appropriate alternative existing structures must be identified for the purpose of ensuring 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.

Whilst the Act makes provision for the establishment of disaster management centres in metropolitan and district municipalities, from a practical point of view, and in the case of municipalities where distance is a factor, consideration must also be given to the establishment of decentralised or satellite disaster management units, offices or centres.

1.2.3 Disaster management planning

s 19, s 25 The Head of the NDMC is primarily responsible for ensuring that disaster management plans are developed and implemented in a uniform and integrated manner. 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 management for the development and implementation of disaster management plans (see KPA 3 below).

s 5(3)(a), s 7(1),
s 7(2)(a–b),
s 7(2)(c)(iii),
s 7(2)(d–f) Planning for disasters and disaster management is a participative process involving a multitude of role players and stakeholders from across government sectors, disciplines and spheres, the private sector, NGOs, CBOs and communities. It will therefore be necessary to cluster stakeholders into planning groups relevant to the various activities associated with disasters and disaster management, that is, development of risk reduction strategies, hazard-specific contingency plans and operational plans, and guidelines for disaster response and recovery activities.

s 26(1), s 7(2)(e) Following the planning process, primary responsibility must be allocated to the lead functional organ of state or agency for each of the activities listed above. Responsibilities must also be allocated to those entities that play a secondary or support role in the various activities identified in the planning process.

s 7(2)(e) The entity allocated primary responsibility for an activity is the custodian of the relevant disaster management plans and accordingly is responsible for the submission of

such plans to the NDMC. This entity is also responsible for ensuring that plans remain relevant and are aligned with changes and new developments.

1.2.4 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 the purposes of integrated and coordinated planning.

1.2.5 Community participation

s 7(2)(f)(i–ii) The community is at the coalface of disaster management. It is from the conditions of risk that exist in communities that all other disaster management activities evolve. It is in the community where all the operational activities related to disaster management take place. All risk reduction planning, the development of projects and programmes and the allocation of responsibilities must be founded on the needs and priorities of communities. Risk reduction is a community-driven process.

Municipalities must involve local communities in the development of risk profiles; facilitate understanding of the concepts and values of risk reduction in communities; prioritise projects aimed at risk reduction in their IDPs; and facilitate community participation in training, preparedness planning and awareness programmes.

In the case of specific risk reduction projects, project teams must include community representation. Indigenous knowledge and input from traditional leaders must be included in all of the activities associated with ensuring informed, alert and self-reliant communities. Capacity building, training, education and research are therefore fundamental to this end.

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

The establishment of ward disaster management committees or forums is critical too. These forums must provide leadership, ensure community ownership of and participation in disaster management and awareness programmes, and facilitate preparedness in the local sphere.

s 15(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 the establishment of such units.

1.2.6 Participation of volunteers in disaster management

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

- units of volunteers

- general volunteers
- spontaneous volunteers.

1.2.6.1 Units of volunteers

s 58 In addition to the general provisions in the Act for the recruitment, training and participation of volunteers in disaster 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 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 management volunteers in the municipality. It includes individuals, groups or organisations that *already have* specialised skills, as well as those who undertake to be trained in specific skills in order to participate in this category.

1.2.6.2 General volunteers

s 15(1)(g), 30(1)(g),
s 44(1)(g) 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 to promote the recruitment, training and participation of volunteers in disaster management. This allows municipalities, especially those that choose not to establish a unit of volunteers, 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 1.2.6.1 above or serve as active volunteers on an ongoing basis. This category provides a general pool of volunteers who can be drawn on by the municipality to perform a variety of functions that may or may not require specialised skills. Volunteers in this category must be registered and must meet minimum criteria set down in accordance with the national standard guideline.

1.2.6.3 Spontaneous volunteers

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

1.2.7 Key performance indicators

- The NDMAF has been established and operates effectively.
- Provincial and municipal advisory forums or similar representative consultative bodies have been established.
- Mechanisms for the participation of stakeholders in disaster management planning and operations have been established.
- Heads of disaster management centres are represented on relevant IDP structures.
- Adequate funding and budgetary provisions have been made for the establishment and operational costs of the arrangements for stakeholder participation.
- Procedurally correct processes are followed.
- An updated register of stakeholders and volunteers has been established and is maintained.
- An accurate record-keeping system, which includes disaster management plans,

plans for specific projects, minutes, reports, memoranda and correspondence, has been established and is maintained.

1.3 Arrangements for national, regional and international cooperation

1.3.1 Objective

s 7(2)(c)(i–ii),
s 7(2)(d) To implement mechanisms to ensure an integrated and uniform approach to disasters and disaster management in South Africa and in southern Africa through the application of the principles of cooperative governance and to establish international links to foster cooperative arrangements.

1.3.2 Giving effect to the principles of cooperative governance

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

s 7(2)(d–f) Disaster 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 management is an intergovernmental process, with each sphere of government playing a unique role and applying a specific set of responsibilities in the process. However, the process requires collateral support to enable the sharing of resources fundamental to risk reduction and all facets of 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) Institutional arrangements must create the environment for cooperation and coordination. The approach must be systematic and inclusive, with the primary focus being on capacitating and building resilience in communities at risk. The emphasis must be on facilitating coordination among *existing* structures, organisations and institutions wherever possible and on harnessing *existing* skills and expertise.

Provinces and municipalities must assess their capacity in terms of risk reduction, as well as their ability to deal with disasters occurring or threatening to occur in their areas of jurisdiction. This capacity must be strengthened by municipal and provincial 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. The parameters of such agreements and memoranda must be clearly defined.

In creating institutional arrangements for cooperative governance, disaster management functions normally performed by the various sectors and disciplines in the national, provincial and municipal spheres should not be duplicated. Disaster management should

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

s 32, s 44(4), s 46

1.3.3 Cooperation between national, provincial and municipal spheres

s 4

The ICDM provides the political mechanism for the application of the principles of cooperative governance, by bringing together political representatives from the three spheres of government.

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. To streamline coordination, meetings of the NDMAF must be preceded by a meeting between the Head of the NDMC, the Heads of provincial centres and a representative of the SALGA disaster management working group.

Provincial and municipal centres must establish mechanisms to enable the sharing of expertise. They should also give consideration to the development of 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.

s 4, s 7(2)(c)(iii),
s 30(1)(c), s 39

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

- information sharing
- establishment of standards to ensure that the technology required for communication and information systems is compatible across the spheres
- compilation and sharing of directories of institutional role players across the spheres
- submission of disaster plans and annual reports to other spheres and neighbouring centres.

s 18, s 19, s 21, s 24,
s 25, s 36, s 38, s 39,
s 50, s 52, s 53

1.3.4 Mutual assistance agreements

s 7(2)(f)(iii)

In accordance with the Act, national departments, provinces and municipalities must establish their level of capacity to deal with risk reduction, disaster response and recovery. Where necessary, they must enter into mutual assistance agreements with their neighbours, the private sector, other organs of state and communities. Such agreements are legal documents, which must include details of financial arrangements, reimbursements and liability and must accord with the national standard guideline on mutual assistance agreements to be developed by the NDMC.

s 7(2)(c)(iii)

1.3.5 Regional cooperation

The White Paper on Disaster Management (published in 1999) states that disastrous events are not constrained by national boundaries. Measures taken in South Africa have the potential to increase or reduce risk in neighbouring countries. Similarly, threats in countries beyond South Africa's borders have the potential to increase or reduce risk in the country.

- s 7(2)(c)(ii) As specified in the Act, regional cooperation for the purposes of disaster management is essential, and the appropriate mechanisms must be initiated to establish a forum in which such cooperation can be achieved. Accordingly, it is proposed that a consultative process be undertaken to establish a Southern African Development Community (SADC) forum for the purposes of disaster management cooperation in the region. The forum should have the following objectives:
- sharing information on disasters and important risk reduction issues
 - creating opportunities for conducting research
 - 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
 - establishing strategic communication links and emergency telecommunication procedures and protocols
 - concluding bilateral and multilateral agreements with clearly defined protocols to provide for shared risk reduction interventions, emergency preparedness and cross-border disaster response and recovery operations
 - sharing expertise in disaster response and recovery, and establishing DARTs, as well as other relevant specialist teams, to assist in response and recovery efforts
 - ensuring the clear definition of responsibilities between the various regional and international role players in cross-border disaster response
 - promoting and facilitating the establishment of joint standards of practice across the region by:
 - ♦ developing standards for risk reduction
 - ♦ developing standards for disaster assessment
 - ♦ ensuring uniformity in standards for humanitarian assistance and mitigation interventions
- s 7(3)(c) ♦ developing standards for incident management systems and the establishment of regional disaster operations centres to ensure the effective coordination of disaster response and recovery management
- ♦ formulating accredited curricula for disaster management education and training
 - ♦ 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, No. 130 of 1998.

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

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

These arrangements can be effected by including representatives from neighbouring countries on PDMAFs.

1.3.6 International cooperation

- s 7(2)(c)(i) Increasingly, climatic changes and disasters originating from natural phenomena, environmental degradation and technological developments are becoming global problems,

requiring global strategies and solutions. It is essential therefore that disaster management in South Africa is informed by a global perspective. In order for South Africa to remain at the cutting edge of developments, to learn from international best practice and to be in a position to contribute to global thinking on disaster management, South Africa must support and actively participate in the strategies and efforts of the international community to reduce disaster risk. It must associate itself with selected international development protocols, agendas and commitments, such as the Millennium Development Goals outlined in the United Nations Millennium Declaration adopted at the UN Millennium Summit in September 2000 (A/RES/55/2).

A further aspect of South Africa's involvement in the international disaster 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 establish appropriate protocols to clarify procedures for requesting external assistance and to discourage ad hoc and unsolicited appeals for relief.

A final aspect of South Africa's activities in the international community is its capacity to provide assistance in the field of 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 provision of assistance and the mobilisation of resources in response to such requests must be facilitated by the NDMC.

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 management. It must, in liaison with the NDMC, forge links with national agencies that render relief assistance internationally, as well as with international agencies, organisations and institutions involved in disaster management, including:

- Food and Agriculture Organization (United Nations) (FAO)
- International Committee of the Red Cross (ICRC)
- Intergovernmental Panel on Climate Change (IPCC)
- International Federation of Red Cross and Red Crescent Societies (IFRC)
- Joint United Nations Programme on HIV/AIDS (UNAIDS)
- Office for the Coordinator of Humanitarian Affairs (OCHA)
- United Nations Children's Fund (UNICEF)
- United Nations Development Programme (UNDP)
- United Nations Disaster Management Training Programme (UNDMTP)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- United Nations Environment Programme (UNEP)
- United Nations High Commissioner for Refugees (UNHCR)
- United Nations International Strategy for Disaster Risk Reduction (ISDR)
- World Food Programme (WFP)
- World Health Organisation (WHO)
- World Meteorological Organization (WMO).

s 16(3) 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.

1.3.7 Key performance indicators

- All role players participate in arrangements for national, regional and international cooperation.
- Adequate funding and budgetary arrangements have been made for the operational costs required to give effect to the principles of cooperative governance and regional and international cooperation.
- Adequate funding and budgetary arrangements have been made to enable the NDMC to participate in disaster management forums and networks and to seek membership of relevant national, regional and international disaster management bodies.
- Procedurally correct processes are followed.
- Memoranda of understanding and mutual assistance agreements have been concluded.
- An accurate record-keeping system, which includes disaster management plans, plans for specific cross-border risks, minutes, reports, memoranda and correspondence, has been established and is maintained.

s 16, s 17

1.4 Information and communication management

1.4.1 Objectives

- To develop a comprehensive disaster management information system.
- To develop and establish integrated communication links with all disaster management role players in national, provincial and municipal spheres of government.

1.4.2 Disaster management information system

Disaster management is a collaborative process that involves all spheres of government, as well as NGOs, the private sector, a wide range of capacity-building partners and communities. It also requires capabilities to manage risks on an ongoing basis, and to effectively anticipate, prepare for, and respond to a diverse range of natural and other threats.

This capability depends on access to reliable disaster and risk information. It requires systems and processes that enable timely and appropriate decision making in times of emergency on the part of government officials and other role players as well as at-risk communities and households. It also depends on an informed public, able to take responsibility for managing and reducing known risks wherever possible.

s 17
s 32
s 46 Section 17 of the Act deals with the disaster management information system that must be put in place. Section 32 requires provincial disaster management centres to assist the NDMC with regard to communication links and information management systems and section 46 requires MDMCs to do the same.

Critical analysis and assessment of the implications of natural or human-made hazards depends on both spatial and non-spatial information. Such information assists in:

- identifying the processes responsible for the hazards, and their potential impacts

- planning appropriate preventive measures (preparedness)
- facilitating incident 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
- evaluating the appropriateness of risk reduction measures as well as response and recovery plans.

1.4.3 Communication system

s 16, s 32, s 46

In addition to dealing with the disaster management information system, sections 16, 32 and 46 of the Act deal with communication links that need to be created. Section 32 requires provincial disaster management centres to assist the NDMC with regard to communication links and section 46 requires MDMCs to do the same.

The communication system that must to be developed and put in place should contain at least the following:

s 16

- A directory of role players as provided for in section 16 of the Act.
- An integrated and compatible communication system with the following features:
 - ♦ Automated dialling and/or message delivery to communicate with designated small or large groups of people, including community members, volunteers and response teams.
 - ♦ The ability to communicate via all available communication media like standard landline telephones and cellular telephones connected to all available networks, as well as telephony-enabled radio systems. The system should be capable of sending messages to pagers (alpha and digital), e-mail and fax. All details of all calls should be logged and reports generated from this information.
- A personal communication system that includes communications to support advisory forums, planning processes and response and recovery operations in the national, provincial and municipal spheres.

The communication system must also make provision for the ongoing identification and engagement of innovative and meaningful locally-based communication and early warning methods, especially in remote, technologically isolated areas. These modes of communication must include the use of volunteers from local communities, the employment of indigenous knowledge and practices as well as cooperation with NGOs and CBOs.

It is critical that the communication system be designed to accommodate a two-way communication capability to enable the transmission of information *to and from* stakeholders. This applies to the establishment of communication links with disaster management centres to enable those affected by disaster risks as well as other role players and stakeholders involved in disaster management to *receive, transmit and disseminate* information.

1.4.4 Responsibility for establishing a communication system

The NDMC must provide the central backbone to enable the establishment of strategic emergency communication links in the country as well as the disaster management information system. Provincial and municipal disaster management centres are responsible for assisting the NDMC to develop and maintain such systems in as far as they

apply to their areas of responsibility. Provincial and municipal systems must be compatible with the national system and must be in line with the requirements as developed by the NDMC.

The establishment of a system that enables communication between essential and emergency services for the purposes of incident command and management of joint operations must receive high priority. Such a system must be compatible with disaster information management systems across the spheres.

The NDMC must establish a system for the receipt, evaluation and dissemination of early warnings on a 24-hour basis. This must include the establishment of effective emergency communication mechanisms to ensure that threatened communities are able to respond appropriately and take risk-avoidance measures when a disaster occurs or is threatening to occur in their areas.

1.4.5 Key performance indicators

- The disaster management information system has been established and supports the key performance areas outlined in the national disaster management framework.
- The disaster management information system supports stakeholder needs in the national, provincial and municipal spheres.
- Functional communication links and systems to support all the activities described in the key performance areas have been established.

1.5 Guidelines to be developed

- National guidelines for the minimum infrastructural requirements for disaster management centres.
- National guidelines for mutual assistance agreements.
- National guidelines outlining the criteria for the registration of volunteers.
- National guidelines for both communication links and a suitable information management system.

Key performance area 2: Risk assessment and monitoring

<p>Relevant sections of the Disaster Management Act</p> <p>s 20, s 33, s 47</p>	<p>The Disaster Management Act’s requirements for priority setting with respect to disasters likely to affect South Africa, and its emphasis on risk assessment to guide national, provincial and municipal risk reduction efforts, are set out in sections 20, 33 and 47. This key performance area outlines the requirements for implementing disaster risk assessment and monitoring by organs of state within all spheres of government.</p>
<p>s 17(1)(a–b), s 20(1)(i–iii)</p>	<p><i>Outline</i></p> <p><i>Section 2.1</i> introduces the process involved in carrying out a disaster risk assessment. <i>Section 2.2</i> addresses processes for generating an Indicative National Disaster Risk Profile. <i>Section 2.3</i> describes requirements for monitoring, updating and disseminating risk information. <i>Section 2.4</i> looks at measures to ensure quality control in risk assessment and monitoring. <i>Section 2.5</i> outlines the resources required for implementing disaster risk assessment and monitoring.</p> <p>2.1 Disaster risk assessment</p> <p>2.1.1 Objective</p> <p>To establish a uniform approach to assessing disaster risks that will inform risk management planning and reduction undertaken by organs of state and other role players.</p>
<p>s 20(1)(a), s 33(1)(a), s 47(1)(a)</p>	<p>2.1.2 Disaster risk</p> <p>South Africa faces many different types of risk on a daily basis. These include health risks, environmental risks, financial risks and security risks. However, <i>disaster risk</i> 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.</p> <p>Disaster risk refers to the chance that there will be a harmful impact of some kind due to the interaction between natural or other hazards and conditions of vulnerability.</p> <p>2.1.3 Risk assessment</p> <p>Risk assessment is the first step in planning an effective risk reduction programme. It examines the likelihood and outcomes of expected hazard events, including the vulnerability conditions that increase the chances of loss.</p>
	<p>Risk assessments, supported with good monitoring systems, are essential prerequisites for:</p> <ul style="list-style-type: none"> • effective disaster management and risk reduction planning • sustainable development planning • identifying potential threats that can undermine a development’s success and sustainability, making it possible for appropriate risk reduction measures to be incorporated into the project design prior to implementation • shaping focused risk reduction programmes for specific threats

- identifying high-risk periods and conditions
- activating emergency preparedness and response actions.

s 20(1)(a–d)

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

Risk assessment planning requires identification of key stakeholders, as well as consultation with them about the design and/or implementation of the assessment and the interpretation of the findings.

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

- prior to the implementation of any national risk reduction, preparedness or recovery programme
- as an integral component of the planning phase for large-scale housing, infrastructure or commercial/industrial developments of national significance
- as an integral component of the planning phase for nationally significant initiatives that affect the natural environment
- when social, economic, infrastructural, environmental, climatic or other indicators suggest changing patterns of risk that increase the likelihood of nationally significant disaster impacts.

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

2.1.4 Situations requiring risk assessments

Risk assessments must be undertaken to:

- ensure that development initiatives maximise their vulnerability reduction outcomes
- anticipate and plan for known threats or disasters to prevent losses and limit endangering impacts.

2.1.4.1 Maximising vulnerability reduction outcomes

s 7(2)
s 20(1)

With respect to implementation of the Act, a risk assessment must be undertaken when one or more of the vulnerability reduction criteria listed in Table 2.1 (overleaf) are considered priorities in any nationally initiated project or programme.

2.1.4.2 Undertaking risk assessments for specific known threats or disasters

A risk assessment is required at national level to guide risk reduction efforts for specific known threats or disaster events and processes that:

- due to their scale and magnitude are likely to affect more than one province
- are of recurrent high and medium magnitude, occur in most provinces and may require national support and/or intervention
- 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 provincial level
- affect neighbouring countries and have consequences for South Africa (for example, unplanned cross-border movements and events that require humanitarian or other relief assistance).

Table 2.1: Situations requiring risk assessments

Key vulnerability criteria	Examples of where risk assessments must be done
Increased <i>sustainability</i> 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.
<i>Reduction of potential harmful consequences</i> 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 <i>understanding of a rapidly changing risk</i> for improved risk management planning	In a flood-prone estuarine area that has recently experienced considerable population growth and is facing increased coastal erosion.
<i>Increased robustness of development initiatives</i> in poor communities and areas	In an informal settlement characterised by recurrent ‘small’ and ‘medium-size’ disaster losses that undermine assets and livelihoods.
<i>Management of high-risk periods and conditions</i> 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 <i>support for at-risk activities, services, areas, communities and households following an ‘alert’</i>	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.

2.1.5 Steps involved in a risk assessment

s 19(e)

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

- analysing potential hazards and/or threats
- 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)
- determining the level of risk for different situations and conditions
- helping to set priorities for action.

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

- How frequently can one expect an incident or disaster to happen?
- Which areas, communities or households are most at risk?
- What are the likely impacts?
- What are the vulnerability or environmental and socio-economic risk factors that increase the severity of the threat?
- What capabilities or resources exist to manage the risk?
- Is the risk becoming more serious?

- Is the risk undermining development progress in the areas, communities and households it affects?
- If so, is the management of the risk a development priority?
- In the areas and communities affected by the risk, are there any other significant risks?

2.1.6 Undertaking a risk assessment

There are many different methods for carrying out risk assessments. These vary, depending on the type of hazard being assessed, the characteristics of the area, infrastructure, service or business concerned, the urgency of the assessment, and the availability of relevant hazard and vulnerability information.

However, the general process for assessing disaster risk always involves three basic steps:

- Identify and describe the risk.
- Analyse the risk.
- Evaluate the risk.

2.1.6.1 Step 1: Identify and describe the risk

1. Identify and describe a *specific hazard* with respect to its frequency, magnitude, speed of onset, area affected and duration.
2. Describe and quantify, where possible, *the vulnerability* of people, infrastructure (including homes and dwellings), services, economic activities and natural resources exposed to the hazard.
3. Estimate the *likely losses* resulting from the hazard's action on those that are vulnerable to indicate likely consequences or impacts.

2.1.6.2 Step 2: Analyse the risk

1. Identify relevant capacities, methods and resources already *available to manage the risk*.
2. Assess the *effectiveness of these*, as well as gaps, inconsistencies and inefficiencies in government departments and other relevant agencies.
3. Estimate the *level of risk* associated with a specific threat to determine whether the resulting risk is a priority or not. Estimating the level of risk is done by matching the *likelihood* of a hazard event with its *expected impact or consequences*. This process allows different threats to be compared for the purpose of priority setting.

2.1.6.3 Step 3: Evaluate the risk

The risk analysis helps prioritise disaster risks when there are multiple threats to assess. However, when several threats are assessed at the same level of risk, limited resources and budgets require that they be prioritised even further. This process, called 'risk evaluation', is necessary because it is not possible to address all risks at the same time (see section 3.2 below).

One useful approach for comparing different types of risks evaluates the *seriousness, manageability, urgency and growth* of a particular risk to determine whether it ranks higher as a priority than other risks (see Table 2.2).

Table 2.2: Evaluating the risk	
Evaluation criteria	Evaluation questions
Seriousness	How severe will the disaster be if no risk reduction measures are taken? Can we live with this?
Manageability	How difficult is it to reduce the risk? What are the costs compared to the benefits of risk reduction?
Urgency	How critical is it to tackle this risk now, given its frequency and impacts?
Growth	How quickly is this risk increasing (for example, as a result of rising population vulnerability or more extreme weather events)?

Each of these can be further evaluated in terms of ‘High’, ‘Medium’ and ‘Low’ to compare several different threats that have been assessed to have the same level of risk.

2.1.7 Community-based risk assessment

s 7(2)(f)(ii), s 7(2)(j),
s 20(2), s 20(1)(a),
s 47(1)(a)(i–iii),
s 33(1)(i–iii), s 33(2),
s 47(2)

In accordance with the Act’s intent to increase local capacity to minimise the risk and impact of disasters, risk assessment efforts must actively include the participation of vulnerable communities and households, including physically isolated 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 relating to disaster management. In addition, the active engagement of special needs groups, such as women, children and the elderly, improves the quality of the assessment findings and increases the likelihood of community ownership in any risk reduction interventions that may follow.

2.1.8 Sourcing additional information when undertaking a risk assessment

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

1. Do an audit of past significant events and events classified as disasters. A review of previous small and medium-size events as well as declared disasters, where relevant, can identify areas and communities most at risk and help focus more detailed risk assessment efforts. A review of newspaper articles may facilitate this.
2. Consult with community members and traditional leaders in areas affected by past events for information on 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.

3. 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.
4. Consult with specialist research commissions, universities and the private sector and obtain existing or past research reports.
5. Check with the appropriate Ministries for information or relevant research that may have already been carried out or commissioned.
6. Consult with the (re-)insurance industry.

2.1.9 Selecting risk assessment methods and approaches

s 20(1)(a)(i–ii)

There is a wide range of 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). Table 2.3 provides examples of different types of risk and appropriate risk assessment methods.

Table 2.3: Types of risk and risk assessment methods

Types of risk	Possible risk assessment methods	Expertise
Potential flood risk in a developed estuarine area	<ul style="list-style-type: none"> • Flood hydrology and hydraulics • Ecological and environmental assessment 	<ul style="list-style-type: none"> • Environmental and hydrological specialists
Potential cholera risk in an isolated area known to be cholera-prone	<ul style="list-style-type: none"> • Epidemiological risk assessment • Environmental health assessment • Groundwater evaluation 	<ul style="list-style-type: none"> • Public and environmental health specialists
Potential fire risk in a large informal settlement	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Urban development facilitators/planners • Fire prevention specialists • Social scientists
Potential wind storm or tornado risk in a rural area	<ul style="list-style-type: none"> • Consultation with local leadership • History of past events • Historic climatology and seasonal analysis 	<ul style="list-style-type: none"> • Indigenous knowledge • Community facilitators • Climate scientists
Drought risk in a rural community	<ul style="list-style-type: none"> • PRA/livelihoods analysis/focus group interviews • Historic rainfall information, history of drought and impacts • Remote-sensed information on vegetation and cloud cover 	<ul style="list-style-type: none"> • Rural development facilitators • Agricultural specialists • Public health specialists • Climate scientists

2.1.9.1 National standard for assessment of priority risks

The national disaster management framework gives priority to the establishment of a uniform approach to disaster management and the provision of a national standard to guide the assessment of priority risks. This is necessary for managing cross-boundary risks and for 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. In the interim, prior to the development of such a national standard:

- all proposed risk assessments planned by national and provincial organs of state must be reviewed by the NDMC prior to commissioning of the assessments
- all proposed risk assessments planned by metropolitan municipalities must be reviewed by the NDMC and the appropriate PDMC prior to commissioning of the assessments
- all proposed risk assessments planned by district municipalities must be reviewed by the appropriate PDMC prior to commissioning of the assessments
- all proposed risk assessments planned by local municipalities must be reviewed by the appropriate MDMC prior to commissioning of the assessments.

For guidance on selecting the most effective risk assessment team or method, see section 2.4 (below) on ensuring quality control.

2.1.10 Consolidation and classification of disaster risk information

s 20(1)(a)(i–ii)

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. An internationally recognised classification of hazards that should be used is given in Table 2.4. This classification is provided by the UN's International Strategy for Disaster Reduction (ISDR).

Table 2.4: Classification of hazards	
Natural hazards	Examples
Geological	Landslides, rockslides, liquefaction, subsidence
Biological	Epidemic diseases affecting people or livestock, veld fires, plant infestations
Hydrometeorological	Floods, debris flows, tropical cyclones, storm surges, severe storms, drought, desertification
Natural hazards	Examples
Technological	Industrial pollution, nuclear activities, toxic waste, dam failure, transport accidents
Environmental degradation	Land degradation, deforestation, loss of biodiversity

Vulnerability should be assessed as social, economic, political, environmental or physical (infrastructural). As vulnerability factors are often the major drivers of disaster risk, rather than external hazard processes, it is critical to identify these during a risk assessment. This provides important insights for developing vulnerability reduction interventions that lower the levels of disaster risk.

2.1.11 Key performance indicators

- National guidelines by the NDMC for assessing priority disaster risks in national, provincial and municipal spheres have been generated.
- A national standard for assessing priority disaster risks has been generated.
- Relevant risk assessment legislation, policy and implementation guidelines by national organs of state and their provincial counterparts have been developed and applied.
- There is documented evidence of progressive integration of risk assessment into development planning of organs of state and other role players in IDPs and annual reports submitted to the NDMC.

s 17(1), s 17(2)(a-c),
s 17(2)(f)

2.2. Generating an Indicative National Disaster Risk Profile

2.2.1 Objective

To establish capability within the NDMC to generate an Indicative National Disaster Risk Profile and to maintain the profile's dynamic character by updating it at least annually.

2.2.2 Consolidating information across sectors and government spheres

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

Risk assessment information generated by national and provincial departments, municipalities and research commissions must be consolidated by the NDMC to provide an Indicative National Disaster Risk Profile. This risk profile must provide maps that represent priority risks affecting South Africa, as well as consolidated information on recorded losses for specific threats in individual provinces. It is expected that uniform assessment information on priority risks will be available from the Indicative National Disaster Risk Profile within five years of the commencement of the Act.

In this context, geographical information systems (GIS) represent a powerful tool for spatially representing hazard, vulnerability and consolidated risk information. The NDMC must, however, ensure that the information represented in GIS format is scientifically validated and sufficiently robust for inclusion in the profile.

The process of auditing and compiling existing information must be inclusive. The NDMC must contact specialist research units, private sector partners and government departments for relevant scientific reports on hazard and vulnerability patterns. It must also consult with NGOs, CBOs and traditional authorities on historic and changing patterns of risk.

The profile will need to take into account the unevenness in the quality of available hazard and vulnerability information in South Africa and the dynamic nature of the risks they describe. In this context, information provided at national scale will not fully represent risk conditions at provincial or municipal levels. However, establishment of the profile may lead to more detailed risk investigations being done at provincial and municipal levels.

2.2.3 Key performance indicators

- Mechanisms to consolidate, map and make accessible information on South Africa's priority risks have been established by the NDMC.
- Priority threats 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 risks have been established and documented by the NDMC.

2.3 Monitoring, updating and disseminating risk information

2.3.1 Objective

s 17(1)(a-d) To establish an effective risk monitoring system for priority risks.

2.3.2 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 government departments must have monitoring systems in place that are relevant to their specific functional responsibilities.

These systems form the basis for sounding timely warnings of, or alerts for, impending threats. They are also essential for monitoring the effectiveness of ongoing risk reduction efforts. Risk monitoring systems involve:

- hazard tracking
- vulnerability monitoring
- disaster event tracking.

2.3.2.1 Hazard 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.

2.3.2.2 Vulnerability monitoring

Vulnerability monitoring systems are systems that track the ability of 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.

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

2.3.2.3 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-size informal settlement fires may represent an early warning of accumulating risks, which may result 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 management reports, and records of Social Services and the South African Red Cross Society.

2.3.3 Updating a comprehensive risk assessment

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

Disaster risk is dynamic. It is driven by a combination of hazard and vulnerability processes, including changing patterns of land-use, infrastructure development/maintenance, urban growth and settlement densification. Similarly, household size and composition, health status and level of livelihood security affect household potential for loss. Some risks, particularly those triggered by climate processes, must be reviewed seasonally prior to the rainy season or hot summer months. Other risks, such as riverine flood risk, require extensive flood hydrology investigations, and may be undertaken once during a 20-year period. 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 with responsibilities for reducing and managing specific risks must review the Indicative National 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.

2.3.4 Responsibility for monitoring and updating 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:

- accessing and updating relevant hazard and vulnerability information on risks specific to their functional areas
- making this information available to the NDMC.

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

- establish clear mechanisms for accessing, consolidating and updating relevant hazard, vulnerability and disaster occurrence information from specialist government and nongovernmental partners responsible for monitoring specific risks, including fire, coastal threats, drought and epidemics
- develop and implement clear mechanisms for disseminating risk assessment and monitoring information for ongoing planning, as well as for managing conditions of heightened risk
- establish clear procedures for accessing, interpreting and disseminating timely weather information, particularly when this is associated with potentially endanger-

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

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

2.3.5 Key performance indicators

s 17(1)(a)

- 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.

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

- National, provincial and municipal disaster management centres have established and documented clear mechanisms for accessing, consolidating and updating relevant hazard, vulnerability and disaster occurrence information from partners responsible for monitoring specific risks, including fire, coastal threats, drought and epidemics.
- National, provincial and municipal disaster management centres have established and documented clear mechanisms for disseminating 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 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.

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

2.4 Ensuring quality control

2.4.1 Objective

To ensure that risk assessments undertaken for priority risks are robust and can reliably inform risk reduction planning.

2.4.2 Who should carry out risk assessments?

Risk assessments almost always require specialist input. This applies to both the process of characterising the hazard conditions that can trigger loss, as well as understanding the vulnerability factors that increase the severity of the impact.

s 56(4)(a–c),
s 57(a–c)

There are many research institutions, government departments and private companies in South Africa with expertise in assessing and managing different risk types. However, when working with technical specialists, the commissioning organ of state must define terms of reference that specify *feedback, consultation and capacity-building requirements* 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 risk assessment findings which then inform planning decisions.

In South Africa, disaster risks are more significantly shaped by social, economic and environmental conditions than by external threats. It is therefore critical that *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.

Field consultation increases the accuracy of the 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, it is critical that the assessment process includes respectful pre-assessment consultation with the affected communities prior to the arrival of external assessment teams, to build a cooperative partnership.

2.4.3 Measures to establish the accuracy of risk assessments

Two mechanisms can be used to ensure the accuracy of the risk assessment undertaken to inform national, provincial and metropolitan area planning:

- establishment of a technical advisory committee
- external validation or external peer review of methods and findings.

2.4.3.1 Technical advisory committee

A technical advisory committee, comprising nationally recognised specialists in the hazards, vulnerabilities and risks being assessed, is particularly necessary when complex risk assessments are being carried out. This applies to large metropolitan risk assessments, provincial risk assessments and national 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.

2.4.3.2 External validation process for methods and findings

At a minimum, all assessments carried out at national, provincial and municipal levels should be externally validated with respect to 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, where 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.

2.4.4 Key performance indicators

- Disaster risk assessments undertaken show documented evidence of:
 - ◆ capacity building with respect to the commissioning authority
 - ◆ ground-truthing (that is, based on the actual situation ‘on the ground’ or verified by those being assessed), through field consultations in the areas and with communities most at risk from the threat(s) being assessed
 - ◆ consultation with appropriate governmental and other stakeholders about the design and/or implementation of the assessment, as well as the interpretation of the findings.
- There is documented evidence in disaster risk assessments undertaken of external validation prior to:
 - ◆ the publication or dissemination of hazard, vulnerability or risk maps and/or reports for planning purposes
 - ◆ the implementation of risk reduction or other initiatives based on the assessment results.

s 7(2)(f)(i–iii)

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

- Disaster risk assessments undertaken show documented evidence of technical consultation with the appropriate disaster management centre(s) prior to implementation (see subsection 2.1.9.1 above).

2.5 Resources

A broad range of funding sources is foreseen to support risk assessment activities, including an Indicative National Disaster Risk Profile, ongoing risk monitoring and quality control. The resources to support these activities are outlined in subsection 1.1.4 above.

2.6 Guidelines to be developed

- National guidelines and a national standard for assessing priority disaster risks in national, provincial and municipal spheres.

Key performance area 3: Disaster management planning and implementation

Relevant sections of
the Disaster
Management Act

s 25, s 38, s 52

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 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.

Outline

Section 3.1 introduces disaster management planning as a strategic priority.

Section 3.2 describes priority setting with regard to risk reduction initiatives.

Section 3.3 outlines approaches for scoping and developing risk reduction plans, projects and programmes.

Section 3.4 addresses the integration of risk reduction initiatives into other strategic integrating structures and processes.

Section 3.5 focuses on the implementation of risk reduction activities.

Section 3.6 highlights the resources required for disaster management planning and implementation.

s 7(1)(a), s 19(a–f)

3.1 Disaster management planning: a strategic priority

3.1.1 Objective

To ensure that coherent and relevant disaster management planning is undertaken by national, provincial and municipal organs of state, municipal entities and other institutional role players.

3.1.2 Disaster management frameworks and disaster management plans

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

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

3.1.2.1 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 management by all organs of state and other institutional role players. This includes NGOs, the private sector and institutions of higher learning. With specific reference to district municipalities, the disaster management framework is the integrating

instrument for consolidating the disaster management plans of individual municipalities within the district.

Each disaster management centre in the respective spheres 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:

- establish foundation institutional arrangements for disaster management, including formal consultative processes that provide for participative planning
- consultatively define an appropriate vision and approach to disaster management for the area concerned

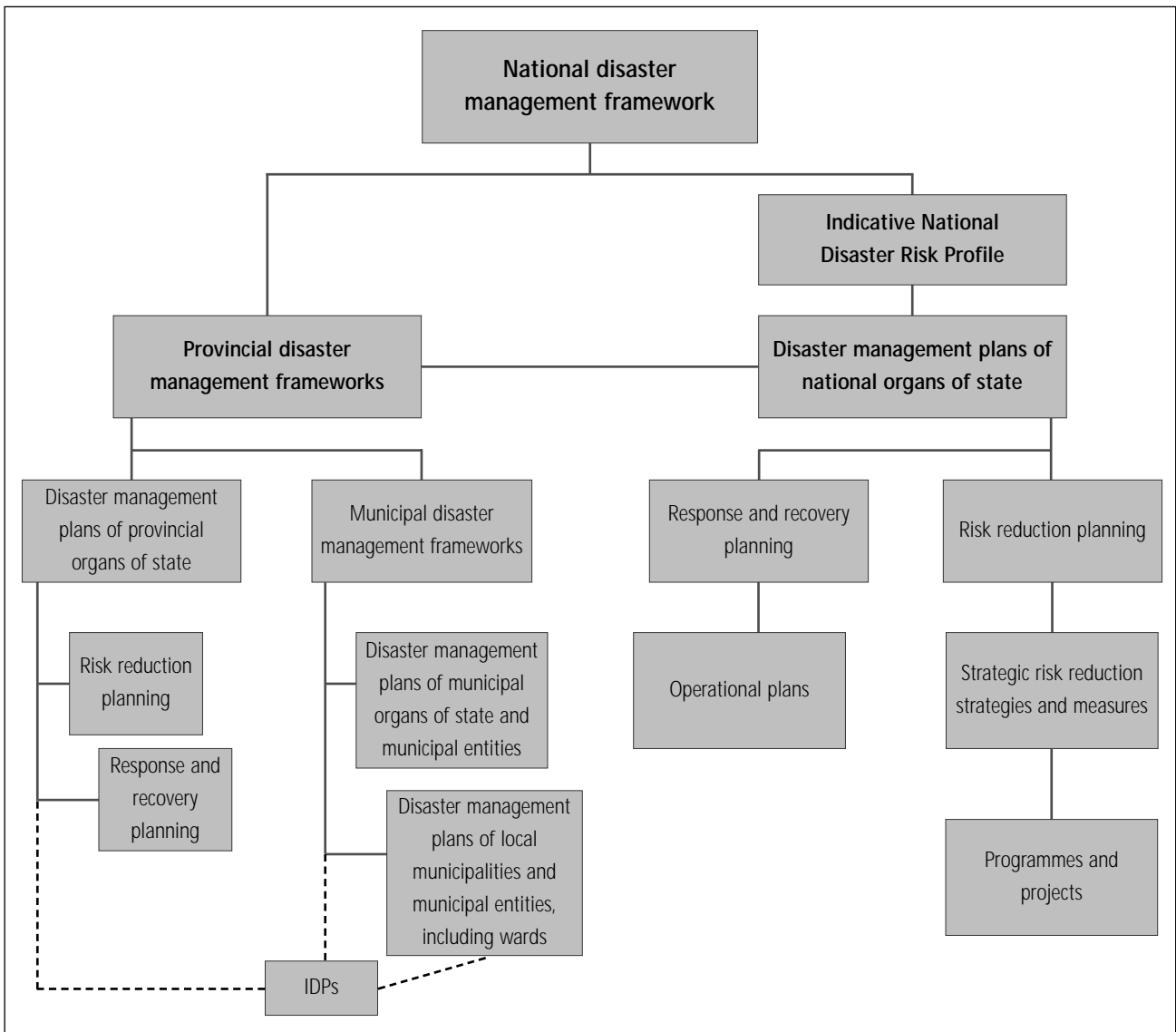


Figure 3.1: National, provincial and municipal disaster management frameworks and disaster management plans across the spheres of government.

- define processes for undertaking appropriate risk assessments for the areas in which they will be implemented
- specify arrangements for risk reduction planning and contingency planning, including response and recovery planning
- establish an integrated supportive disaster risk information system
- identify processes for building public awareness capabilities, as well as supporting relevant training, education and research initiatives
- define supportive funding arrangements for implementing disaster management.

3.1.2.2 Minimum requirements for disaster management plans

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 management are required to prepare and complete disaster management plans. Although the Act specifies clear requirements for completed disaster management plans, it is also recognised that:

- there is considerable unevenness in disaster management planning capacity and experience, especially across newly established district municipalities
- national and provincial organs of state engaging seriously with disaster management for the first time will need to undertake careful consultation before developing a comprehensive disaster management plan.

To address this wide range of disaster management planning capabilities, the national disaster management framework provides for a phased approach to disaster management planning and implementation. It comprises three progressive steps from a Level 1 Disaster Management Plan to a Level 3 Disaster Management Plan. Guidelines specifying the requirements for each level must be made available by the NDMC.

Level 1 Disaster Management Plan

A Level 1 Disaster Management Plan applies to national or provincial organs of state and municipal entities that have not previously developed a coherent disaster management plan. It focuses primarily on establishing foundation institutional arrangements for disaster management, putting in place contingency plans for responding to known priority threats, identifying key governmental and other stakeholders and developing the capability to generate a Level 2 Disaster Management Plan.

Level 2 Disaster Management Plan

A Level 2 Disaster Management Plan applies to national, provincial and municipal organs of state that have established the foundation institutional arrangements, and are building the essential supportive capabilities needed to carry out comprehensive disaster management activities. It includes establishing processes for a comprehensive disaster risk assessment, identifying and establishing formal consultative mechanisms for development of disaster risk reduction projects and introducing a supportive information system and emergency communications capabilities.

Level 3 Disaster Management Plan

A Level 3 Disaster Management Plan applies to national, provincial and municipal organs of state that have established both the foundation institutional arrangements for disaster management and essential supportive capabilities. The plan must specify clear institutional arrangements for coordinating and aligning the plan with other governmental initiatives and plans of institutional role players. It must also show evidence of informed risk assessment and ongoing risk monitoring capabilities as well as relevant developmental measures that reduce the vulnerability of disaster-prone areas, communities and households.

s 19 The framework foresees that within one year of the commencement of the Act, all national, provincial and municipal organs of state will have submitted to the NDMC at a minimum, Level 1 Disaster Management Plans. Within two years of the commencement of the Act, all national, provincial and municipal organs of state will have submitted at a minimum, Level 2 Disaster Management Plans. Within four years of the commencement of the Act, all national, provincial and municipal organs of state will have submitted Level 3 Disaster Management Plans.

s 19 National, provincial and municipal organs of state must specify which one of the three specified Disaster Management Planning Levels is most appropriate for their respective capabilities, experience and functional responsibilities. They must also indicate proposed steps that will allow progress to more advanced planning levels.

Disaster management plans developed by municipalities must be incorporated into IDP, funding and implementation processes.

3.1.3 Strategic integrating role of disaster management centres

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:

- s 19 • The NDMC must:
 - ♦ guide the development of disaster management plans and align these to ensure a coherent and uniform national approach to disaster management
 - ♦ consult the ICDM and the NDMAF with regard to the development of standard guidelines to inform uniform disaster management planning and implementation.
- s 28(1-2) • The PDMC must:
 - ♦ ensure that the provincial disaster management framework is consistent with the national framework and the broader development goals, priorities, strategies and objectives specified for the province
 - ♦ align the disaster management plans of provincial organs of state and those of their respective district and metropolitan municipalities and other role players
- s 37(1-2) • The PDMAF (or, in the absence of an advisory forum, an appropriate alternative consultative forum in the province) with regard to the development of disaster management plans as well as guidelines.
- s 42(1) • The MDMC must:
 - ♦ ensure that the municipal disaster management framework is consistent with the national framework and the provincial framework of the province concerned, as well as the priorities, strategies and objectives specified in the municipality's integrated development plan
- s 48(1)(a)(i) • align the municipality's disaster management plans with those of other organs of state and other institutional role players
- s 51(1)(1-2) • consult the MDMAF (or, in the absence of an advisory forum, an appropriate alternative consultative forum in the municipality) with regard to the development of disaster management plans as well as guidelines.

3.1.4 Key performance indicators

- s 28(1–2), s 42(1) • Provincial and municipal disaster management frameworks that are consistent with the national disaster management framework have been submitted to the NDMC.
- s 19(a–f) • Disaster management planning guidelines have been developed and disseminated by the NDMC.
- s 28(1–3), s 42(1–3) • Disaster management plans, including specification of the particular level of management plan (specified in subsection 3.1.2.2 above), have been submitted to the NDMC by all relevant national, provincial and municipal organs of state and municipal entities.
- All relevant national, provincial and municipal organs of state have submitted, at a minimum, Level 2 Disaster Management Plans to the NDMC.
- All relevant national, provincial and municipal organs of state have submitted, at a minimum, Level 3 Disaster Management Plans to the NDMC.
- National, provincial and municipal disaster management frameworks and plans are revised at least two-yearly, as evidenced by annual reports submitted to the NDMC.

s 7(1) 3.2 Setting priorities for disaster management planning

3.2.1 Objective

- s 7(2) To establish a coherent approach to priority setting with regard to disaster management planning for organs of state and other institutional role players.

3.2.2 Identifying priorities to focus risk reduction planning

- s 7(1–2) Although South Africa faces a broad range of risks, it is not possible, given resource constraints, to address all potential threats at once. Effective disaster management planning by all organs of state as well as other role players requires careful identification of priority risks and the most vulnerable areas, communities and households to these risks.

The process of identifying priority risks is critically informed by the risk assessment findings obtained by taking the steps described in KPA 2 (see subsections 2.1.5 and 2.1.6 above).

3.2.2.1 Identifying national priority risks

National disaster priority setting is informed by three important considerations:

- s 7(2), s 39(2)(b–e) • the expected magnitude for specific disaster types (also referred to as ‘impact’, ‘severity’ or ‘consequences’ of a disaster)
- the expected frequency of specific types of disaster (also referred to as ‘the probability’ or ‘likelihood’ of a disaster)
- 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, they are relevant as a national disaster management planning priority only when a risk assessment and/or ongoing risk monitoring processes indicate that:

- a disaster event or process affects more than one province or exceeds the capabilities of a single province to manage it effectively
- the same type of disaster event or process occurs repeatedly 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 risk management priorities must focus on averting or limiting the impact of the following disaster risks:

- Wide-area events that, due to their scale and magnitude, are likely to affect more than one province. These include extreme weather processes, such as cyclones and severe droughts as well as riverine floods.
- Recurrent high- and medium-magnitude events that 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.
- Low-frequency/rare high-magnitude disaster risks with potential for severe loss and which require levels of specialist support possibly not available within a province. These include nuclear accidents, earthquakes, major transport disasters and maritime disasters such as severe oil spills.
- Disaster risks that 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.

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

3.2.2.2 Identifying provincial and municipal priority risks

s 7(2)

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

- a specific disaster risk affects more than one municipality or district municipality or exceeds the capabilities of a single district municipality to manage it effectively
- a disaster risk results in the same type of disaster event occurring repeatedly and at different times in more than one municipality or district municipality with significant cumulative impacts on lives, property and the natural environment, but that are not necessarily classified as provincial disasters.

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

- Wide-area events that, due to their scale and magnitude, are likely to affect more than one district municipality. This includes extreme weather processes, such as cyclones and severe droughts as well as riverine floods.
- Recurrent high- and medium-magnitude events that 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.
- Low-frequency/rare high-magnitude disaster risks with potential for severe loss and which require levels of specialist support possibly not available within a province. These include nuclear accidents, earthquakes, major transport disasters and maritime disasters such as severe oil spills.
- Disaster risks that affect neighbouring provinces and countries and have consequences for the province. These include unplanned cross-border movements as well as those events that require humanitarian or other emergency response and relief assistance.

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

3.2.3 Identifying the most vulnerable areas, communities and households

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

Not all areas, communities and households face the same risks. National disaster management planning priority is explicitly placed on those areas, communities and households that are exposed to natural or other threats, and have the least capacity to resist and recover from the resulting impacts. These are called at-risk areas, communities or households.

3.2.3.1 Priorities for focusing disaster risk protection efforts

s 7(1), s 19(e), s 20(c)

For disaster 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:

- strategic infrastructure or lifeline services whose damage or disruption in disaster events would result in serious and widespread consequences
- critical economic, commercial, agricultural and industrial zones or sites whose damage or disruption would have serious and widespread consequences
- fragile natural ecosystems and environmental assets that offer protective environmental services and which, if damaged or destroyed in a disaster event, would result in serious natural and economic losses
- communities in areas exposed to extreme weather and/or other natural and technological hazards and which are therefore likely to sustain serious human and property losses in the event of a disaster
- poor and underserved rural and urban communities, including informal settlements, especially those located in fragile ecological areas, that sustain repeated losses from recurrent small, medium, and large disaster events, and that lack insurance coverage to facilitate recovery
- 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.

3.2.4 Strategic planning: focus on risk reduction

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

In keeping with the Act's emphasis on vulnerability reduction and the use of international best practice in this regard, strategic planning must focus efforts on reducing disaster risks. This includes the identification of strategies and measures that lessen the likelihood of harmful losses by *avoiding endangering hazards or reducing vulnerability*, as well as those that increase capacity *to prepare for and enable timely emergency response and recovery*.

Disaster management involves a wide range of role players, especially since it requires both developmental efforts that reduce the risk of disasters as well as strengthened capabilities for preparedness, response and recovery. In this context, the disaster management plans of different organs of state will necessarily differ in their emphasis on disaster prevention and mitigation or on more operational emergency response issues, depending on their respective functional areas.

3.2.4.1 Core risk reduction principles of disaster prevention and mitigation

All disaster management plans must give explicit priority to the core principles of disaster prevention and disaster mitigation. Internationally, disaster prevention, mitigation and preparedness are often referred to as 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 risk reduction, in which vulnerabilities and 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 *risk reduction measures*, because both minimise the risk of disasters.

Disaster prevention

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

Many disasters can be prevented through effective land-use planning, basic public works and effective municipal services that factor in the frequency and severity of natural or other hazards as well as human actions. Examples include:

- replanting indigenous grasses or trees on a recently burned slope near roads or dwellings to stabilise the soil and prevent damaging land subsidence
- locating critical rail, road and telecommunications structures behind a coastal ‘set-back’ line in areas exposed to storm surges to prevent disruption to critical services during violent summer or winter storms
- careful siting of storm-water drainage and its ongoing maintenance, along with protection of natural wetlands, to prevent destructive flooding during heavy rain.

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

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 itself (for example, a fire break that stops a fire 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 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.

3.2.4.2 Operations planning: emergency preparedness, response and recovery

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

s 25(1)(a)(iii),
s 25(1)(a)(vi),
s 27(1–3), s 35(1),
s 38(1)(a)(iii),
s 38(1)(a)(vi)

s 39(2)(j–k),
s 52(1)(a)(iii),
s 52(1)(a)(vi),
s 53(2)(j), s 53(2)(f)

Emergency preparedness

Emergency preparedness contributes to risk reduction through measures taken in advance to ensure effective response to the impact of hazards, including timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Emergency preparedness enables organs of state and other institutions involved in disaster management, the private sector, communities and individuals to mobilise, organise, and provide relief measures to deal with an impending or current disaster, or the effects of a disaster.

Emergency preparedness differs from prevention and mitigation, as it focuses on activities and measures taken in advance of a specific threat or disaster.

Emergency preparedness actions include:

- planning for seasonal threats, such as heavy rainfall, flooding, strong winds, veld or informal settlement fires, and communicable disease outbreaks
- anticipating and planning for the potential dangers associated with large concentrations of people at sporting, entertainment or other events
- establishing clear information dissemination processes to alert at-risk communities of an impending seasonal threat, such as a potential outbreak of cholera during the rainy season
- specifying evacuation procedures, routes and sites in advance of expected emergencies, including the evacuation of schools in areas exposed to flash-floods
- defining in advance clear communication processes and protocols for different emergency situations, including the dissemination of an early warning for an impending extreme weather threat to isolated or remote communities.

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

Disaster response

Disaster response or disaster relief refers to 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 be of an immediate, short-term or protracted duration (see KPA 4).

Disaster recovery

s 25(1)(a), s 25(3),
s 38(1)(a)(iii),
s 52(1)(a)(iii)

Disaster recovery (including rehabilitation and reconstruction) focuses on the decisions and actions taken after a disaster to restore lives and livelihoods, services, infrastructure and the natural environment. In addition, by developing and applying risk reduction measures at the same time, the likelihood of a repeated disaster event is reduced.

Disaster recovery includes:

- rehabilitation of the affected areas, communities and households
- reconstruction of damaged and destroyed infrastructure
- 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 risk reduction actions. Following a disaster event, there are usually high levels of awareness about the risk factors that increased its impact. These present opportunities to introduce

risk reduction efforts consultatively with the affected communities and key stakeholders in order to reduce the likelihood of future loss (see KPA 4).

3.2.5 Key performance indicators

- National priority risks have been identified and mapped by the NDMC.
- Specific provincial priority risks have been identified and mapped by provincial disaster management centres, as evidenced in annual reports.
- Specific municipal priority risks have been identified and mapped by MDMCs, as evidenced in annual reports to the NDMC.
- Specific priority areas, communities and households within provincial and municipal spheres have been identified and mapped, as evidenced in annual reports submitted by provincial and municipal disaster management centres to the NDMC.
- Focused initiatives to reduce priority risks have been identified by national and provincial organs of state, as evidenced 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 risk reduction plans, projects and programmes

3.3.1 Objective

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

To identify a broad range of effective developmental initiatives that reduce priority risks in the most vulnerable areas, communities and households.

3.3.2 Eight key planning points for risk reduction projects or programmes

s 19(a–b),
s 19(e), s 20(1)(a–c)

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

3.3.2.1 Planning point 1: Use risk assessment findings to focus planning efforts

Risk reduction efforts must be informed by a reliable risk assessment. This is essential for providing insights into the frequency, seasonality, severity and spatial extent of recurrent threats. It also provides detailed information on the social, environmental and economic vulnerability factors that increase losses.

3.3.2.2 Planning point 2: Establish an informed multidisciplinary team with capacity to address the risk and identify a lead agency/primary role player to facilitate the initiative

Risk reduction planning must be multidisciplinary and must draw on appropriate expertise. Risk management is highly multidisciplinary, as it requires both technical expertise on hazard processes as well as understanding of the complex social and economic conditions that drive risk in vulnerable communities.

3.3.2.3 Planning point 3: Actively involve the communities or groups at risk

Disaster reduction planning must always involve constructive consultation between at-risk groups and/or communities and external service providers. Risk reduction initia-

tives are more effective when they are discussed and implemented collaboratively with those affected, as this allows them to draw on local knowledge and expertise.

3.3.2.4 Planning point 4: Address multiple vulnerabilities wherever possible

Multiple vulnerabilities can be addressed by:

- improving socio-economic conditions and building community cohesion
- ensuring the continuity of protective environmental services
- increasing resilience and/or continuity of public services and infrastructure to better respond to expected external shocks.

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

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

Disaster risk is extremely dynamic and is driven by many rapidly changing environmental, atmospheric and socio-economic conditions. This requires that plans are not only robust enough to manage anticipated and expected threats but also sufficiently adaptive to minimise the impacts of unexpected events or processes.

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

Effective risk reduction planning efforts must apply the precautionary principle of ‘do no harm’. This is because well-intentioned risk reduction projects can inadvertently increase disaster loss potential by reconfiguring and accelerating risk processes. The likelihood of negative consequences is reduced if a careful risk assessment actively informs the planning process, a competent multidisciplinary team is established, and mechanisms for transparent community consultation are put in place.

3.3.2.7 Planning point 7: Avoid unintended consequences that undermine risk-avoidance behaviour and ownership of risk

The risk reduction planning process must anticipate and manage unintended consequences that increase risk. Well-intentioned risk reduction programmes that ‘deliver’ external services to at-risk 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 risk by reinforcing the expectation of external support and transferring individual and/or household risk on to governmental and humanitarian assistance agencies.

3.3.2.8 Planning point 8: Establish clear goals and targets for risk reduction initiatives, and link monitoring and evaluation criteria to initial risk assessment findings

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

3.3.3 Research

- 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)
- 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).
- 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 subsection 5.5.2.1 below.)

3.3.4 Monitoring effectiveness and disseminating results

- 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 reduction projects, programmes and initiatives planned and implemented, including those aimed at reducing vulnerability and loss for defined priority risks. This information must be further consolidated by the NDMC in its annual report to the Minister, and communicated accessibly via the NDMC’s website.

3.3.5 Key performance indicators

- Mechanisms for documenting and disseminating experience in incorporating risk reduction measures and initiatives within national, provincial and municipal spheres have been introduced through the NDMC.
- Methodologies to monitor the effectiveness of risk reduction initiatives have been developed through a consultative process facilitated by the NDMC, and have been implemented.
- Documentation, which is accessible to key stakeholders, demonstrates the effectiveness of risk reduction measures for different risk scenarios.
- Guidelines for incorporating disaster management programmes and initiatives into the activities of other national organs of state and key institutional role players have been consultatively developed and implemented.
- Funding mechanisms and eligibility criteria for the provision of grants by the NDMC for initiatives targeted at reducing national priority risks have been established.

3.4 Inclusion of risk reduction efforts in other structures and processes

3.4.1 Objective

To achieve incorporation of risk reduction efforts into strategic integrating structures and processes.

3.4.2 Integration of risk reduction with spatial development planning

- s 39(2)(a), s 53(2)(a)
- Disaster risk is driven by both hazard and vulnerability factors reflected in spatial development frameworks. In addition, risk assessment findings, along with 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 risk reduction planning. They must also ensure that verified risk information is incorporated into spatial development plans and maps.

3.4.3 Incorporation of risk reduction planning into integrated development planning¹

s 53(2)(a) As disaster 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 (see section 1.2.5 above). Effective adaptive risk reduction interventions are best planned and implemented as development initiatives through IDP mechanisms and phases. See Table 3.1 for the various risk reduction planning activities to be undertaken during the different IDP phases.

s 7(2)(h),
s 20(1)(a-d) In addition, national, provincial and municipal organs of state must also test and evaluate specific risk reduction initiatives before these are undertaken more broadly through IDPs. This is to foster innovation and cross-sectoral linkages at a small or local scale. It also provides for assessment of the vulnerability reduction potential, appropriateness, cost-effectiveness and sustainability of previously untested risk reduction strategies prior to a more widespread programme roll-out or ‘scaling-up’.

Table 3.1: Incorporation of risk reduction planning into integrated development planning

IDP phase	Emphasis for risk reduction planning
Phase 1: Analysis	<ul style="list-style-type: none"> • Risk identification, analysis and evaluation processes
Phase 2: Strategies	<ul style="list-style-type: none"> • Development of priority risk reduction strategies, goals and objectives • Identification of specific projects and initiatives to reduce risks • Establishment of a provisional financial framework for implementing risk reduction projects
Phase 3: Projects	<ul style="list-style-type: none"> • Formulation of appropriate task teams for defined projects • Definition of project outputs, indicators, roles and responsibilities • Incorporation of sectoral planning requirements
Phase 4: Integration	<ul style="list-style-type: none"> • Harmonisation of risk reduction projects with broader financial, policy and legal frameworks • Consultation with the IDP representative forum • Incorporation of projects into five-year financial plans, capital investment programmes and municipal action plans
Phase 5: Approval	<ul style="list-style-type: none"> • Provision of feedback by the municipal council on draft plans and projects and approval • Adoption of the risk reduction elements incorporated into the approved IDP
Phase 6: Monitoring and implementation	<ul style="list-style-type: none"> • Implementation of approved risk reduction initiatives • Implementation of monitoring by IDP forum and disaster management centre and feedback to disaster management advisory forum or similar body

1. Based on Botha, J. *How to prepare a risk reduction plan: a municipal guide* (Draft) (Cape Town, AFRICON, March 2004).

Focused pilot projects are particularly applicable when investigating ways to:

- 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)
- protect a specific at-risk group (for example, establishing evacuation procedures for school children attending schools in areas repeatedly exposed to fire, flood or extreme weather systems)
- 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)
- integrate risk reduction with relief or recovery actions, to identify opportunities for changing the underlying drivers of risk as well as possible unintended consequences (for example, the spatial reconfiguration of informal settlements to provide fire breaks after large fires)
- investigate new approaches to promoting risk-avoidance attitudes and behaviour (for example, exploring a system of community or household incentives for ‘well-managed’ risks for frequently occurring loss conditions rather than creating dependence on external relief).

3.4.4 Risk-avoidance enforcement mechanisms

s 20(1)(a–d)

Critical components of effective risk reduction are regulations, standards, by-laws and other legal enforcement instruments that discourage risk-promotive behaviour and minimise the potential for loss. National, provincial and municipal organs of state must assess the disaster management component of their 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.

Within provincial and municipal spheres, this may involve:

- amendment of urban planning standards
- amendment of land-use regulations and zoning
- amendment of minimum standards for environmental impact assessments
- introduction of standards for ‘risk-proofing’ lifeline services and critical facilities from known priority risks
- introduction of by-laws to implement extraordinary measures to prevent an escalation of a disaster or to minimise its effects.

3.4.5 Key performance indicators

- Mechanisms to disseminate experience from pilot and research projects that explore the vulnerability reduction potential, appropriateness, cost-effectiveness and sustainability of specific risk reduction initiatives have been established.
- Risk-related information has been incorporated into spatial development frameworks.
- Risk reduction-related projects and initiatives have been included in IDPs.
- 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. Implementation of risk reduction programmes

3.5.1 Objective

To generate disaster reduction programmes and initiatives that successfully reduce vulnerability in at-risk areas, communities and households.

3.5.2 Effective implementation of 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 3.3.2 above must also be applied when implementing risk reduction programmes and initiatives. The monitoring processes and evaluations for risk reduction initiatives specifically targeted at at-risk communities must include both qualitative and quantitative vulnerability reduction outcomes.

In addition, projects should demonstrate close compliance 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 in their annual reports documented accounts of the disaster reduction projects, programmes and initiatives planned and implemented. This includes reports documenting effectiveness of risk reduction pilot projects and research initiatives, as well as those that aim to reduce vulnerability and loss for defined priority risks.

3.5.3 Measurable reductions in small-, medium- and large-scale disaster losses

s 17(1)(a), s 17(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 risk reduction initiatives undertaken. They are also required to report on disasters that occurred within their specific areas of jurisdiction. 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 risk assessment processes. Significant changes in frequency and severity, type or location of occurrences must also be reported, including systematic accounts of recorded loss.

3.5.4 Reduced need for social relief in disaster-prone economically vulnerable communities

s 7(2)(a),
s 36(1)(e–g),
s 50(1)(e–g)

While effective social relief is an important component of emergency response and recovery, the Act explicitly gives priority to vulnerability reduction in disaster-prone areas, communities and households. Annual reports generated by the national Department of Social Development and its provincial counterparts must include an account of the number of households receiving social relief assistance. This information must be further differentiated by location, date, disaster type and amount provided. An important benchmark for monitoring the effectiveness of risk reduction initiatives in the most vulnerable communities will be changing demands for social relief assistance.

3.5.5 Generation and dissemination of case studies and best-practice guides in disaster reduction

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

The promotion of a ‘culture of prevention’ is practically enabled by access to examples of best practice in risk reduction. In addition to the adoption of measures outlined in subsections 3.3.3 and 3.5.3, the NDMC must develop as a component of its education, training and capacity building strategy, mechanisms for disseminating information on best practice in disaster reduction for South Africa. This includes the development of learning materials and support guides for different risk scenarios and contexts, and their introduction into formal and non-formal teaching environments. (See KPA 5 below.)

3.5.6 Progressive application of risk reduction strategies, techniques and measures by national and provincial organs of state, 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 organs of state and municipal entities, the NDMC must develop monitoring indicators for tracking the application of 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.

3.5.7 Key performance indicators

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

3.6 Resources

s 7(2)(k)

A broad range of funding sources, including funding for IDPs, is foreseen to support the development of and implementation of disaster management plans, including risk reduction initiatives. The resources required include support for start-up and operational costs, as well as those that facilitate risk reduction projects, programmes and activities (see subsection 1.1.4 above).

The broad range of possible risk reduction interventions affords access to resources from different government departments through co-financing initiatives. Additional resources for focused projects and pilot initiatives may be generated from public-private partnerships, including those with the private sector, NGOs, teaching and learning institutions, and bilateral and multilateral international partnerships.

Resources may also be mobilised from grants made available through the NDMC for initiatives targeted at the reduction of nationally defined priority risks.

3.7 Guidelines to be developed

- National guidelines specifying the requirements for each progressive level of disaster management plan, from a Level 1 Disaster Management Plan to a Level 3 Disaster Management Plan, that must be developed by national, provincial and municipal organs of state.
- National guidelines for uniform disaster management planning and implementation.
- National guidelines for the inclusion of disaster reduction programmes and initiatives in the activities of other national organs of state and key institutional role players.

Key performance area 4: Disaster response and recovery, and rehabilitation and reconstruction

Relevant sections of
the Disaster
Management Act

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

Outline

Section 4.1 addresses the requirements for establishing effective preparedness and early warning strategies.

Section 4.2 focuses on procedures and guidelines in respect of disaster assessments, the classification of disasters, and the declaration of states of disaster.

Section 4.3 outlines mechanisms to ensure integrated response and recovery plans.

Section 4.4 focuses on relief measures following a significant event or event classified as a disaster.

Section 4.5 deals with rehabilitation and reconstruction processes following a significant event or event classified as a disaster.

Section 4.6 outlines the resources required for disaster response and recovery and rehabilitation and reconstruction.

4.1 Preparedness and early warning

4.1.1 Objectives

- To institute a uniform approach to the establishment of effective early warning strategies, which will enable:
 - ♦ rapid and effective actions by essential and emergency services
 - ♦ threatened households, communities and areas to respond timeously and appropriately.
- To avert or reduce the potential impact in respect of health impacts, personal injury, loss of life, property, infrastructure or environments.

4.1.2 Responsibilities of the National Disaster Management Centre

s 7(2)(b), s 7(2)(e–f),
s 20

The NDMC is responsible for ensuring the technical identification and monitoring of hazards and must facilitate the development of standard early warnings by national organs of state tasked with primary responsibility for a specific hazard.

The NDMC must prepare and issue hazard warnings of national significance in a timely and effective manner and ensure that the warnings are disseminated to those communities known to be most at risk, including those in isolated and/or remote areas.

Warnings must include information and guidance that will enable those at risk to increase their safety and take risk-avoidance measures to reduce losses (see section 1.4.4 above).

s 20(1)(a)(iv)

The NDMC must identify and establish strategic intersectoral, multidisciplinary and multi-agency communication mechanisms, including emergency communication systems accessible to communities at risk, for the purposes of disseminating warnings. Communication mechanisms must include protocols to ensure appropriate institutional reactions to early warnings. They must also include protocols governing reporting by essential and emergency services to MDMCs of significant events which occur or are threatening to occur. This is necessary to track developments so that timely and effective actions can be taken in the event of a situation deteriorating. MDMCs must in turn further disseminate the information to provincial centres and the NDMC.

s 20(1)(a)(iii),
s 17(2)(g)

The NDMC must provide support to provincial and municipal disaster management centres to implement programmes in communities at risk to make them aware of the hazards to which they are exposed and the specific actions they should take to reduce the impact. Programmes of this nature must take into account and add value to indigenous knowledge (see section 5.1 below).

4.1.3 Key performance indicators

- An effective early warning system has been developed and implemented.
- Mechanisms to enable strategic intersectoral, multidisciplinary and multi-agency communication mechanisms, including emergency communication systems accessible to communities at risk, have been identified and progressively developed and implemented.

4.2 Disaster assessment, disaster classification and declaration of a state of disaster

4.2.1 Objective

To establish clear guidelines for the procedures that have to be followed to ensure immediate and appropriate response and relief actions when significant events or disasters occur or are threatening to occur.

4.2.2 Disaster assessment

s 23(1)(a),
s 23(2)(a–b)

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

s 25(1)(a)(iii–iv)

National organs of state tasked with primary responsibility for dealing with disasters as a result of a particular hazard must prepare operational guidelines for *initial* assessments in respect of the extent of the area affected and the *damage* to critical infrastructure, lifeline facilities, property and the environment.

s 25(1)(vi)	Those agencies tasked with primary responsibility for coordinating specific activities associated with disaster response and relief, such as emergency medical care, search and rescue, evacuation, shelter and humanitarian relief, must prepare operational guidelines for initial assessments of the immediate needs of those affected.
s 15(1)(h) s 26(1)	Provincial and municipal disaster management centres must ensure that the information contained in the guidelines is also disseminated to the relevant role players in communities and/or areas at risk. The dissemination of the guidelines must be complemented by training and capacity building 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 to the NDMC. It is critical that these assessments show evidence that due consideration has been given to the implications of sections 56 and 57 of the Act.
	4.2.3 Disaster classification and 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.
s 15(1)(f)(iii) s 27	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.
	4.2.4 Key performance indicator
	<ul style="list-style-type: none"> • National guidelines for disaster assessment have been developed.
	4.3 Integrated response and recovery plans
	4.3.1 Objective
	To establish mechanisms to ensure integrated response efforts when significant events and/or disasters occur or are threatening to occur.
	4.3.2 Responsibility for response and recovery
	There are three aspects to consider in the allocation of responsibility for response and recovery plans.
s 25(1)(a)(vi), s 7(2)(c)(iii)	Firstly, responsibility for the development of contingency plans for specific known rapid-onset hazards must be addressed. The responsibility for this must be allocated to a specific organ of state. For example, flood response and recovery would involve the combined efforts of many stakeholders, but the primary responsibility must be allocated to a specific organ of state with the other stakeholders assuming secondary responsibilities. In the case of riverine floods, for example, the Department of Water Affairs and Forestry could bear primary responsibility. In the case of drought, the Department of Agriculture could be the primary agency, and in the case of extreme weather events, the NDMC could assume primary responsibility.

Responsibility for responding to slow-onset events rests with the organ of state allocated primary responsibility for establishing and coordinating multidisciplinary efforts to minimise potential loss.

Secondly, the operational plans and guidelines of the various response agencies that contribute to field operations must be considered when allocating responsibility for response and recovery plans. 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.

Thirdly, responsibility for the coordination of response and recovery efforts in the case of a rapid-onset event which is occurring or threatening to occur must be established.

Incidents and emergencies handled on a daily basis 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 which occur or are threatening to occur, an incident management system must be implemented to ensure a systematic approach to the effective application of facilities, personnel, equipment, resources, procedures and communication. An incident management system provides for a participative approach to the management of the event, clear allocation of responsibilities, and mechanisms for strategic, tactical and operational direction. (See section 1.4 above.)

4.3.2.1 National standard incident management system

The NDMC must initiate the development of regulations for the implementation of a national standard incident management system. The system must identify specific roles and responsibilities for each activity associated with response and recovery measures included in the operational plans of the various agencies. It must also provide for 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 the 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 for the purposes of enhancing capacity.

Each agency identified in the incident management system must establish standard operating protocols for coordinating response and recovery operations and for ensuring government/business continuity. The standard operating protocols must be consistent with the requirements of relevant legislation, regulations and standards.

The incident management system must include common terminology for the identification of stakeholders responsible for direction, control and coordination of an event at the operational, tactical and strategic levels as well as for the title used for each level. For example, the tactical level (field operations) from where the *incident/event* is being coordinated could be referred to as the joint operations centre (JOC). Where *strategic intervention* is also required, for example in the case of a significant event, the head of the disaster management centre will activate the disaster operations centre (DOC) located in the centre of the relevant sphere.

The system must take into account conditions in South Africa where frequent significant events occurring on a daily basis require extraordinary measures but do not neces-

sarily justify the declaration of a local state of disaster.

s 11

The system must provide for a mechanism to track escalation of incidents and facilitate the reporting of 'trigger' indicators. 'Trigger' indicators must be clearly identified and must be reported to the disaster management centres in the various spheres. 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 that require a predetermined level of response.

4.3.2.2 Activation and mobilisation

Mechanisms for activation and mobilisation of resources as well as the deployment and application of volunteers must be clearly set out in operational plans.

4.3.2.3 Delegation of responsibilities

Response and recovery plans must make provision 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 in the event that the particular disaster management centre itself is affected and unable to continue to operate.

4.3.2.4 Emergency communication system

In view of the critical role of *interagency* communication in the management of incidents, significant events and events classified as disasters, the NDMC must give priority attention to the development of an emergency communication system for this purpose (see section 1.4 above).

4.3.2.5 Media relations

Responsibilities and protocols for media liaison, including press releases and media interviews, in the event of a national disaster occurring or threatening to occur must be determined by the NDMC (see section 5.2 below).

4.3.3 Key performance indicators

- The organs of state that must bear primary responsibility for contingency planning and the coordination of known hazards have been identified and allocated such responsibility.
- Stakeholders that must bear secondary responsibility for contingency planning and the coordination 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 (FOGs) for the various activities associated with disaster response and recovery have been developed and are reviewed and updated annually.
- A national standard incident management system has been developed and is reviewed and updated annually.

4.4 Relief measures

4.4.1 Objective

To ensure that relief operations following significant events and/or events classified as disasters are coordinated and equitably distributed.

s 7(2)(f)(iii)

4.4.2 Guidelines for relief measures

The NDMC must initiate the development of national guidelines to standardise practice and regulate the management of relief operations.

The guidelines must include the regulation of:

- responsibilities for the release of appeals for donations
- standards of relief (in keeping with international standards)
- duration of relief efforts
- acceptance of international assistance
- South Africa's assistance to other countries.

4.4.3 Key performance indicators

- National guidelines for the management of relief operations have been developed and implemented.
- Progressive monitoring and annual reviews of guidelines for the management of relief operations, based on lessons learnt, are conducted.

4.5 Rehabilitation and reconstruction

4.5.1 Objective

To ensure that all rehabilitation and reconstruction strategies conducted following a disaster are implemented in an integrated and developmental manner.

4.5.2 Responsibility for rehabilitation and reconstruction

s 20

In order 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 own terms of reference and key performance indicators and must report on progress to the NDMC.

4.5.3 Key performance indicators

- 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.

4.6 Resources

A broad range of funding sources is foreseen for the purposes of disaster response, recovery and rehabilitation. These are described in subsection 1.1.4 above.

4.7 Guidelines to be developed

- National guidelines for disaster assessment.
- Field operation guides for the various activities associated with disaster response and recovery.
- National guidelines for the management of relief operations.

Key performance area 5: Public awareness, education, training and research

Relevant sections of
the Disaster
Management Act

s 20(2), s 15

Sections 20(2) and 15 of the Disaster Management 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 management. This key performance area addresses the development of an integrated public awareness strategy, including effective use of the media, as well as the development of education and training for disaster management and associated professions and the incorporation of disaster management in school curricula. It also outlines mechanisms for the development of a disaster risk research agenda.

Outline

Section 5.1 introduces the steps involved in developing an integrated public awareness strategy and promoting a culture of risk avoidance.

Section 5.2 describes the role of media relations and publicity in creating awareness of disaster management.

Section 5.3 discusses the promotion of non-accredited education and training for disaster management and associated professions.

Section 5.4 addresses the development of accredited education and training for disaster management and associated professions.

Section 5.5 focuses on research programmes and the provision of information and advisory services.

Section 5.6 highlights the resources required for the implementation of a public awareness strategy, and education, training and research programmes.

5.1 Creating awareness and promoting a culture of risk avoidance

5.1.1 Objective

s 20(2) To promote a culture of risk avoidance among stakeholders.

5.1.2 Development of an integrated public awareness strategy

An integrated public awareness strategy to promote a culture of risk avoidance among all role players and across all departments in the three spheres of government must be developed and implemented nationally. 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 risk and vulnerability reduction.

To achieve this objective, a disaster management public awareness and information service must be established by the NDMC. This service will be a critical interface between the disaster management information system, the emergency communication system, all organs of state involved in disaster management and the general public. (See sections 1.4 and 4.1 and subsections 4.3.2.4 above.)

The development of a user-friendly public-access website with relevant information on disasters, risks and key institutional role players is a critical component of such an

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

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

- organised and planned awareness programmes aimed at communities, officials, politicians and other stakeholders, using the media, posters, videos, competitions and publications
- rewards, incentives, competitions and recognition schemes to enhance awareness of and participation in risk reduction activities
- dissemination of information to all role players, especially those at risk, through the use of communication links and early warning systems (see section 1.4. and KPA 4 above).

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

5.1.3 Responsibility for an integrated public awareness strategy

The NDMC must plan, organise and initiate a national public awareness strategy that is informed by robust risk assessment findings and consultation with relevant stakeholders. Each organ of state in all three spheres of government must plan, organise and implement an awareness creation strategy that is relevant to its functional area of responsibility and aligned with the national awareness strategy.

The NDMC and national and provincial organs of state must formulate appropriate public awareness programmes that are aligned with the national strategy. Communities, NGOs and the private sector must be consulted about the design of such programmes. The use of volunteers to assist with the roll-out of awareness creation programmes should be encouraged to ensure ownership of, and participation in, public awareness programmes.

5.1.4 Key performance indicators

- An integrated national public awareness strategy has been developed and implemented.
- Risk reduction is the focus of all disaster management awareness creation programmes.
- Awareness of disaster management is widespread, and risk-avoidance behaviour is integrated into the day-to-day activities of all stakeholders.
- Risk reduction is included as a standard agenda item for consideration at executive meetings of all role players and stakeholders.

5.2 Media relations, publicity and publications

5.2.1 Objective

To ensure positive media coverage and publicity to increase public awareness and understanding of disaster management.

5.2.2 Role of the media

Communication about disaster risk reduction, emergency preparedness, response and recovery activities is important to ensure that information is passed on to communities and those involved in 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 (see subsection 4.3.2.5 above).

Informed publicity about disaster management initiatives and achievements will increase public awareness and support. In order to achieve this, national, provincial and municipal disaster management centres must establish and manage ongoing relations with relevant local and national media.

Organised promotions and positive reinforcement of risk reduction programmes through the media must be initiated in order to ensure public participation in, and support for, such programmes. The objectives, benefits and major activities of risk reduction programmes must be communicated to all role players and specifically to communities that are directly affected by disaster risks.

5.2.3 Responsibility for media relations

Each organ of state and disaster management centre at national, provincial and municipal levels must assign responsibility for managing media relations to a specific functionary or office.

5.2.4 Monitoring and evaluation

The following has to be monitored on a regular basis:

- positive and negative publicity
- effectiveness of media communications, especially in communities at risk.

5.2.5 Key performance indicators

- There is widespread evidence of positive media reports and coverage on disasters and disaster management issues.
- Regular articles on disaster management are published in the print media.
- Good relationships with media representatives have been established and are maintained.

5.3 Non-accredited education and training for disaster management and associated professions

5.3.1 Objective

To create non-accredited education and training programmes for disaster management and associated professions, which must be incorporated into regular training programmes.

5.3.2 Non-accredited education and training programmes

5.3.2.1 Government officials and policy makers

Training programmes for government officials and policy makers must include modules on planning, hazards, prevention, risk reduction and preparedness.

5.3.2.2 Community-based training

Education and training programmes for communities must focus on risk awareness, risk reduction and preparedness. 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 management.

5.3.2.3 Schools

Efforts should be made to seek linkages with existing awareness creation programmes in schools, such as the Safe Schools Project in the Western Cape, for the purposes of disseminating information on disaster management and risk avoidance. The creation of programmes in schools, focusing on relevant and appropriate aspects of disaster management, must be encouraged.

5.3.2.4 Training of volunteers

Special training programmes must be developed for people interested in volunteering their services. These programmes should address issues such as risk reduction, vulnerability assessments and greater awareness of risks and hazards, as well as general preparedness and response (see subsections 1.2.5 and 1.2.6 above).

5.3.2.5 Training of trainers and facilitators

Training programmes must facilitate the development of trainers and facilitators in the field of disaster management.

5.3.2.6 Learnerships

Disaster management learnerships must be developed and promoted. These should include mentorship programmes that involve the transfer of skills from experienced officials to young inexperienced learners.

5.3.2.7 Experimental learning

Emphasis should be placed on experimental learning (learning by trial and error) in training programmes to ensure that skills are developed during training interventions.

5.3.2.8 Uniformity of learning materials

Service providers should be encouraged to use similar learning materials to ensure uniform application of training objectives and guidelines. At the same time, innovation and adaptation of materials should be encouraged by means of an annual review of learning methodologies and learning materials.

5.3.3 Responsibility for a national non-accredited education and training programme

The NDMC is responsible for planning, organising and initiating a national non-accredited education and training programme on disaster management. This initiative

must include a mechanism for the registration of approved facilitators and service providers through a national vendor register.

National, provincial and municipal organs of state must plan, organise and implement non-accredited education and training programmes relevant to their respective areas of responsibilities in consultation with local communities.

NGOs and private sector institutions should be encouraged to plan, organise and implement non-accredited education and training programmes on disaster management for clients, suppliers, service providers and the general public.

5.3.4 Monitoring and evaluation

The NDMC must establish a vendor register to regulate the quality and standards of non-accredited education and training programmes. It must also appoint an independent body to serve as an education and training quality assurer (ETQA) to approve course materials as well as facilitators, presenters and other service providers. It is suggested that the Disaster Management Institute of Southern Africa be appointed the ETQA.

5.3.5 Key performance indicators

- Quality materials for short courses are available.
- There is ongoing development of scheduled short courses, workshops, seminars and conferences.
- There is widespread use of non-accredited education and training materials.
- Facilitators, instructors and presenters have become qualified and have been accredited.
- Approved service providers have been registered and are offering education and training services and products.
- An ETQA has been appointed.

5.4 Accredited education and training for disaster management and associated professions

5.4.1 Objective

To create accredited education and training programmes for disaster management and associated professions as part of the education and training system.

5.4.2 Accredited education and training programmes

5.4.2.1 National Qualifications Framework, South African Qualifications Authority and Sector Education and Training Authority

All education and training standards and qualifications must comply with the requirements of the South African Qualifications Authority Act, No. 58 of 1995, and the guidelines prescribed in the NQF.

It is advisable that a technical advisory board be established to assist the NDMC and the appropriate Sector Education and Training Authority (SETA) to uphold the required standards of disaster management training across all functional/professional areas.

An accreditation and registration system must be established to ensure that all training undertaken by specialist agencies, trainers, training institutions, NGOs, the private sector and the public sector complies with the minimum standards established for disaster management education and training.

Where possible, short and/or modular courses must be designed and structured in such a way that participants are awarded credits, which could contribute towards a formal qualification.

The training of municipal councillors and officials must take place in accordance with the national education and training frameworks in the Skills Development Act, No. 97 of 1998, the Skills Development Levies Act, No. 9 of 1999, and the South African Qualifications Authority Act. The provisions contained in these Acts will have a direct bearing on the qualifications and career paths of officials involved in disaster management.

5.4.2.2 Integration of risk reduction education into primary and secondary school curricula

Risk reduction education must be integrated into primary and secondary school curricula. Schools should be regarded as focal points for raising awareness about disaster management and risk reduction.

5.4.2.3 Training for disaster management professionals

Specific education and training programmes that will enhance a professional career path in disaster management must be developed and implemented by tertiary institutions in accordance with approved unit standards.

5.4.2.4 Training for practitioners in professions associated with disaster management

Aspects of disaster management must be integrated into the existing education and training programmes of professions associated with risk reduction, such as policing, defence, health, engineering, town planning, architecture and environmental science.

5.4.3 Responsibility for the development of accredited education and training programmes

The NDMC must engage with the national Department of Education to ensure the integration of appropriate and relevant aspects of disaster management into primary, secondary and tertiary curricula.

The NDMC, in conjunction with the Standards Generating Body for Public Administration and Management, must develop and amend appropriate unit standards for disaster management in consultation with tertiary institutions.

The NDMC must engage with educational and tertiary institutions and relevant accreditation bodies to motivate for the incorporation of disaster management in educational programmes of all associated professions.

5.4.4 Monitoring and evaluation

The NDMC must establish a register of all accredited disaster management programmes and institutions offering education and training in disaster management and related fields.

The NDMC must also establish a register of all accredited facilitators, presenters, instructors, educators and institutions offering non-formal disaster management programmes, as well as a register of non-formal accredited disaster management course materials.

5.4.5 Key performance indicators

- There is widespread availability of and participation in accredited education and training programmes.
- Accredited course materials are widely available and used.
- There is widespread availability of and participation in non-accredited short courses and modules.
- Qualified facilitators, instructors and presenters have been accredited.
- Approved service providers offering education and training programmes through an appropriate SETA have been registered.

5.5 Research programmes and information and advisory services

5.5.1 Objectives

- To create additional applied knowledge and information on disaster risk through an organised national research programme.
- To provide access to disaster management and related information to all stakeholders and role players.
- To provide an organised and value-added advisory service to all stakeholders.

5.5.2 Establishing mechanisms for research, information provision and an advisory service

5.5.2.1 Research

s 17(2)(m) The NDMC, through a process of consultation, must develop a strategic disaster management research agenda to effectively inform disaster management planning and implementation in southern Africa.

There are many existing and ongoing research initiatives taking place in the region that provide important insights into disaster management. In order to develop a focused research agenda, the NDMC must facilitate:

- s 15(1)(i)
- consultation and engagement between the communities of disaster risk scientists and disaster risk reduction professionals in southern Africa to identify priorities for collaborative research and development, as well as mechanisms for implementing such initiatives
 - a process for auditing existing research initiatives and programmes to identify those that add value to an understanding of disaster management processes and trends and provide insights into effective risk reduction strategies and measures
 - 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 management research
 - the development of an integrated disaster management research agenda and programme, along with mechanisms for publishing and disseminating research results.

- s 15(1)(d) **5.5.2.2 Information provision**
- In order to provide a comprehensive information service, the NDMC must undertake the following:
- develop an information database
 - establish a library or resource centre on disaster management
 - make provision for easy access to the information database.

- s 22 **5.5.2.3 Advisory service**
- An effective advisory service must encompass the following:
- Technical advice should be provided to national, provincial and municipal spheres of government by other specialist stakeholders.
 - National, provincial and municipal disaster management centres must create the capacity to act as information repositories of, and conduits for, disaster management information in their respective areas.
 - Consultants must be registered to ensure that acceptable standards of consulting services are rendered in line with the national disaster management framework.

- s 19, s 20 **5.5.3 Responsibility for information and advisory services**
- The NDMC is responsible for providing comprehensive information and advisory services to stakeholders.

All national organs of state must participate in the gathering and provision of information relating to disaster management in their respective functional areas for inclusion in a national information database.

5.5.4 Monitoring and evaluation

The NDMC must monitor and evaluate all research projects under its management to ensure that the national research objectives are met.

5.5.5 Key performance indicators

- s 15(1)(i)
- A strategic disaster risk research agenda has been established.
 - Research institutions participate in the research programme on an organised basis.
 - All stakeholders have access to a comprehensive database.
 - All stakeholders have access to a comprehensive advisory service.
- s 15(1)(c–d),
s 15(1)(i)

5.6 Resources

All organs of state in the national, provincial and municipal spheres must be provided with resources and funds to develop and implement a public awareness strategy and programmes aimed at fostering a culture of risk avoidance. The NDMC must act as a national coordinator of such a strategy and programme. The NDMC must approach National Treasury to allocate funding for public awareness programmes to promote disaster management throughout the country.

Each national, provincial and municipal organ of state must provide the necessary resources for media relations, publicity and publications and must make budgetary provision for these activities.

All organs of state in the national, provincial and municipal spheres must provide their own resources and funds to develop and implement non-accredited education and training programmes on disaster management within their respective areas of responsibility.

As training and capacity building in all spheres of government is essential for the successful implementation and sustainability of disaster management, specific funding should be provided by national government for each sphere of government to fulfil its role in this regard.

National Treasury must be approached to allocate funding for the purposes of training and capacity building in the field of disaster management. It is essential that this funding be utilised for the development of formal training and capacity building by the Department responsible for administering the Act in consultation with relevant stakeholders. The funding must also be used to promote an educational focus on disaster management in tertiary institutions as well as in schools.

Funding must be made available for disaster management-related research projects.

The NDMC must provide the resources for the creation and maintenance of comprehensive information and advisory services. National organs of state should be responsible for their respective contributions to the creation of a comprehensive information database. (See also subsection 1.1.4 above.)

5.7 Guidelines to be developed

- National guidelines for the design and development of public awareness programmes related to risk-avoidance behaviour.
- National guidelines for the design and content of short courses, workshops and conferences that fall within the ambit of non-accredited education and training.
- National guidelines for the development and accreditation of course materials for accredited education and training programmes.
- National guidelines for the accreditation and registration of trainers.
- National guidelines for the registration of disaster management training institutions and organisations.

Key performance area 6

Monitoring, evaluation and improvement

Relevant sections of the Disaster Management Act

s 21, s 34, s 48, s 56(4)(a–g), s 57(a–e)

Sections 21, 34 and 48 of the Disaster Management Act require the monitoring and evaluation of disaster management plans and strategies as well as the measurement of performance and progress of disaster management initiatives. This key performance area focuses on processes for evaluation, monitoring and improvement of disaster management and disaster management plans and addresses a range of mechanisms for measuring, evaluating and reporting on compliance with the Act and the national disaster management framework. It also emphasises the importance of conducting and reporting on *routine* reviews of significant events and disasters for the purposes of risk assessment, risk reduction planning and assessing effectiveness and compliance in terms of sections 56(4)(a–g) and 57(a–e) of the Act.

Outline

Section 6.1 introduces the processes involved in performance audits, self-assessments and peer reviews.

Section 6.2 focuses on the mechanisms required for monitoring incidents and significant events, disaster reviews and reporting.

Section 6.3 introduces guidelines for rehearsals, simulations, exercises and drills to evaluate the effectiveness of disaster management planning.

Section 6.4 deals with the review and improvement of disaster management planning and programmes.

Section 6.5 addresses the requirements for progress reporting.

Section 6.6 highlights the resources required for effective monitoring, evaluation and improvement.

6.1 Performance audits, self-assessments and peer reviews

6.1.1 Objective

s 21, s 56, s 57

To plan and conduct disaster management audits, reviews and assessments to evaluate effectiveness and compliance with the requirements of relevant legislation, particularly sections 21, 56 and 57 of the Disaster Management Act, and the national disaster management framework.

6.1.2 Guidelines for measuring performance

s 7(2)(m), s 21, s 56, s 57

An audit of the disaster management function to measure and evaluate effectiveness and compliance with the Act and the national disaster management framework must be carried out at least once every six months by organs of state involved in disaster management in the national, provincial and municipal spheres. An audit must involve a practical, on-site assessment and an analysis of the disaster management plans and programmes of the respective organs of state (see subsection 3.1.2 above), and must be conducted by means of a standard evaluation checklist, which takes into account the implications of sections 21, 56 and 57 of the Act. This will enable the national, provincial and municipal disaster management centres to report in an integrated manner on the status of disaster management in their respective spheres. These consolidated status reports must be

used to inform the relevant stakeholders in the national, provincial and municipal spheres of government about progress made with regard to the implementation of the Act.

Random checks or audits to evaluate compliance with the Act by organs of state involved in disaster management may be carried out from time to time by the NDMC. Such audits should be performed by an NDMC-appointed team consisting of experts in the various relevant disciplines (for example, safety risk management, security and health services). The auditors must make use of an appropriate evaluation checklist. Ad hoc audits may be performed at the request of the NDMC, a province or a municipality.

With regard to self-assessments, the key performance indicators outlined in the national disaster management framework provide all organs of state with the mechanisms to perform self-assessments of their programmes, plans and strategies.

Peer reviews must be conducted by multidisciplinary evaluation teams comprising specialists from different sectors and disciplines. The peer review process enables a better understanding of the roles of those working in disaster management and the cooperative arrangements required between different organs of state in the respective spheres. In order to facilitate coordination between different role players involved in the review process, the respective disaster management centres must be notified of when reviews are to be held and must be given feedback once the reviews have been completed.

6.1.3 Responsibility for performance audits, self-assessments and peer reviews

s 21, s 34, s 48

The NDMC must monitor progress made by organs of state involved in disaster management with regard to the preparation and review of disaster management plans. In achieving this objective, it must perform audits of organs of state in the national, provincial and municipal spheres at least once every six months to ensure compliance with the Act. Ad hoc audits of organs of state in the national, provincial and municipal spheres may be carried out at the discretion of the NDMC to ensure compliance with legislative requirements in respect of disaster management.

National departments must conduct audits at provincial and municipal levels at least twice a year to ensure adherence to policy and legislation pertaining to disaster management.

National organs of state must undertake self-assessments of their respective disaster management plans at least twice a year. Copies of all assessment reports must be submitted to the NDMC.

Provinces and organs of state in the provincial sphere must perform self-assessments and peer reviews at least twice a year. Copies of the assessment and review reports must be submitted to the NDMC.

Municipalities and organs of state in the municipal sphere must conduct self-assessments and peer reviews at least twice a year. Copies of the assessment and review reports must be submitted to the relevant municipal and provincial disaster management centres as well as the NDMC.

6.1.4 Key performance indicators

- s 21 • The results of self-assessments and peer reviews have been consolidated and made available in reports.
- s 34 • Results of audits by provincial and municipal disaster management centres have been consolidated and made available in reports.
- s 15(1)(b), s 21(a–b), s 56, s 57 • Results and reports of audits by the NDMC are compliant with and take into account the implications of sections 21, 56 and 57 of the Act.
- Results and reports of audits by provincial and municipal disaster management centres show that due consideration has been given to the implications of sections 56 and 57 of the Act.

6.2 Monitoring of incidents and significant events, disaster reviews and reporting

s 20, s 21, s 33, s 34, s 47, s 48, s 56, s 57, s 24, s 36, s 50 s 7(2)(h)

In order to assess effectiveness and measure compliance with the provisions of sections 20, 21, 33, 34, 47 and 48 of the Act, to give effect to sections 56 and 57 of the Act, and to learn from previous experience to improve performance, reviews must be conducted *routinely* after all significant events and events classified as disasters. Such reviews are in addition to the reports required in terms of sections 24, 36 and 50 of the Act and must be fully documented as they will not only provide the information against which to assess the application of the principles of sections 56 and 57, but will also serve as valuable training aids.

6.2.1 Objectives

- s 21, s 34, s 48, s 56, s 57 • To establish mechanisms for monitoring and reviewing incidents and significant events to facilitate early warnings (see section 4.1 and KPA 4 above).
- To establish mechanisms for monitoring and reviewing significant events and disasters in order to evaluate effectiveness, particularly with reference to sections 21, 34, 48, 56 and 57 of the Act, and to improve planning and operations.

6.2.2 Monitoring of incidents and significant events

s 23(1), s 24

The NDMC must establish mechanisms and harness the necessary expertise to enable the monitoring of trends and patterns of significant events as well as minor incidents in order to identify early warnings. For example, by monitoring a series of small incidents, the identification of an increase in the scale and frequency of the incidents could serve as an early warning. (See section 1.4 and KPA 2 above.)

6.2.3 Disaster reviews and reports

s 56, s 57

To maximise the benefits gained from 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:

- 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
- appointment of review panels with the relevant expertise
- a mechanism for reporting on the actual performance in a disaster situation with the

- aim of improving performance
- mechanisms to ensure that learning occurs.

6.2.4 Responsibility for the monitoring and review process

s 56, s 57 The NDMC is responsible for providing guidance on the review process. When conducting a review, the appointed review team must take into account local conditions, disaster management plans implemented prior to the disaster or significant event, and current disaster management plans.

6.2.5 Key performance indicators

- Mechanisms for progressive monitoring of compliance with section 21 of the Act have been developed.
- Mechanisms for progressive monitoring of and research on incidents and significant events in order to identify trends and patterns which could serve as early warnings have been developed and implemented.
- s 21 Provision has been made in funding arrangements of organs of state tasked with primary responsibility for specific known hazards to harness the necessary expertise to monitor and conduct research on incidents and significant events in order to identify trends and patterns which could serve as early warnings.
- s 56, s 57 Mechanisms for conducting 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.
- Provision has been made in funding arrangements of organs of state tasked with primary responsibility for specific known hazards to conduct disaster reviews.
- Review and research reports on significant events and trends are routinely submitted to the NDMC and disseminated to stakeholders.
- s 24, s 36, s 50 Review reports on actual disasters are routinely submitted.

6.3 Rehearsals, simulations, exercises and drills

6.3.1 Objectives

- To evaluate the effectiveness of planning.
- To create an opportunity for implementing disaster management measures in a controlled manner.
- To create opportunities to learn from experience.

6.3.2 Guidelines for organising rehearsals, simulations, exercises and drills

National, provincial and municipal organs of state must organise, conduct and evaluate their own rehearsals, simulations, exercises or drills on a regular basis to test all facets of their disaster management plans, and to identify new areas for which plans still have to be developed. Notification of such an exercise must be done at least seven days before the commencement of the event to allow enough time to inform all role players. All participants must be debriefed upon completion of the exercise to assess the effectiveness of specific disaster management plans. This information must be forwarded to the NDMC for planning purposes.

The outcomes of all live or table-top (paper) exercises involving any organ of state, NGOs, the private sector or the public must be communicated to the NDMC with the aim of improving disaster management planning and operations.

National, provincial and municipal organs of state must follow an inclusive approach when organising rehearsals, simulations, exercises, drills or similar activities.

6.3.3 Key performance indicator

s 25(1)(c)

- Live and/or table-top exercises show evidence of the effectiveness of disaster management planning and operations.

6.4 Integrated management and improvement of disaster management planning and programmes

6.4.1 Objectives

- To ensure that disaster management is managed in an integrated manner.
- To ensure the continuous improvement of disaster management plans and programmes.

6.4.2 Improvement of disaster management plans and programmes

Disaster management plans and programmes must be reviewed and updated regularly. Mechanisms for achieving this include:

- utilising the IDP review cycle
- monitoring and managing remedial actions identified by audits and exercise debriefing reports
- using information gathered from disaster management progress or status reports.

6.4.3 Key performance indicators

- Suggestions for the improvement of plans and programmes based on assessments or evaluation reports have been evaluated and, where appropriate, implemented.
- There is real evidence of a reduction in the level of disaster risk and disaster loss.

6.5 Progress reporting

6.5.1 Objective

To monitor the progress that has been made with the implementation of disaster management plans through the submission of regular reports.

6.5.2 Responsibility for progress reporting

The NDMC must develop standardised reporting formats and methodologies to ensure that reporting is done in a uniform manner.

s 24, s 36, s 50

The NDMC, PDMCs and MDMCs must submit annual reports as specified in sections 24, 36 and 50 of the Act.

National, provincial and municipal organs of state must submit disaster management plans in accordance with the requirements of sections 25, 38 and 52 of the Act.

6.5.3 Key performance indicators

- Progress reports by national, provincial and municipal organs of state are submitted to the NDMC.
- Annual reports by the NDMC are submitted to the Minister.

6.6 Resources

Municipal, provincial and national organs of state must make budgetary provision for the performance of evaluation, auditing, assessment and review functions.

Rehearsals, exercises and drills are important methods for the assessment of emergency preparedness, and all spheres of government must make provision for them in their budgets.

The continuous improvement of disaster management plans and programmes must be provided for in the normal budgetary processes of all organs of state involved in disaster management. (See also subsection 1.1.4 above.)

6.7 Guidelines to be developed

- National guidelines for conducting audits.
- National guidelines for standardised and meaningful reporting formats.
- National guidelines for the process and procedures to be followed in conducting reviews of significant events and events classified as disasters.

Appendix 1: Glossary of terms

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	A standard, rule, guide or test 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 or threatening death, injury or disease, and damage to property, infrastructure or the environment, which exceeds the ability of those affected by the disaster to cope with its effects using only their own resources.
Disaster management	A collective term encompassing all aspects of planning for and responding to significant events and events classified as disasters, including risk reduction (prevention and mitigation), preparedness, response, recovery and rehabilitation.
Disaster risk	The probability that an individual, a household, a community, an area, a province or a country is unable to anticipate, resist or recover from the losses sustained from a hazard or other threat without external assistance.
Disaster risk management	The systematic management of administrative decisions, organisations, operational skills and capacities to implement policies, strategies and coping capacities of a community, an area, a province or a country 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.
Early warning	The identification, interpretation and recognition of events that would draw attention to a potential emergency. The timely provision and dissemination of this information

	allows individuals, areas, communities and households exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.
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.
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. When a hazard results in great suffering or collapse, it is usually termed a disaster.
Human-made hazards	Disasters or emergency situations that are caused directly or indirectly by identifiable human actions, deliberate or otherwise.
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.
Monitoring	A system of checking and observing to ensure that the correct procedures and practices are being followed.
Municipal organ of state	A municipality, a department or other administrative unit within a municipality or a municipal entity.
National Qualifications Framework (NQF)	An integrated national approach to education and training in South Africa. It specifies how different education and training standards and/or qualifications must be set and how courses 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, No. 58 of 1995.
National organ of state	A national department or a national public entity (defined in section 1 of the Public Finance Management Act, No. 1 of 1999).
Natural hazards	Natural processes or phenomena, such as extreme climatological, hydrological or geological processes, that may constitute a damaging event.
Preparedness	Activities and measures, including timely and effective early warnings, taken in advance, which contribute to the ability of organs of state and other institutions involved in disaster management, the private sector, communities and individuals to mobilise, organise, and provide relief measures to deal with an impending or current disaster or the effects of a disaster.

Prevention	Activities to provide outright avoidance of the adverse impact of hazards and means to minimise related environmental, technological and biological disasters.
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 (defined in section 1 of the Public Finance Management Act, No. 1 of 1999).
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.
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 after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.
Relief	The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can include the provision of shelter, food, medicine, clothing, water, etc.
Risk	The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, disrupted economic activity or environmental damage) resulting from interactions between natural or human-induced hazards and vulnerable conditions.
Risk assessment/analysis	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 reduction	Measures taken to reduce long-term risks associated with human activity or natural events.
Sector Education and Training Authority (SETA)	A body responsible for organising education and training programmes in a particular economic sector. Sector Education and Training Authorities must devise and implement skills development plans within their sectors.
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.
Standards Generating Body (SGB)	The body that develops standards and qualifications in a particular sub-field of learning. The standards are written as unit standards which specify learning outcomes as well as the number of credits attached to the unit standard.

Statutory functionary	A person performing a function assigned to that person by national, provincial or municipal legislation.
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.
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 the South African Qualifications Authority. Unit standards have credits attached to them. One credit is accepted as being equal to 10 hours of learning.
Vulnerability	The characteristics that limit an individual, a household, a community, an area, a province or a country's capacity to anticipate, manage, resist or recover from the impact of a hazard or other threat.

Glossary sources include:

- Ministry for Provincial Affairs and Constitutional Development. 1999. *White Paper on Disaster Management Act*. Pretoria.
- Republic of South Africa. 2003. *Disaster Management Act, No. 57 of 2002*. Pretoria.
- United Nations – International Strategy for Disaster Risk Reduction. 2003 *Terminology on disaster risk reduction* (Working document). Geneva: United Nations.