

Rapid assessment of the government's intervention on the April 2022 flood disaster in Kwazulu-Natal, Eastern Cape and North West

March 2023

Evaluation Report



planning, monitoring
& evaluation

Department:
Planning, Monitoring and Evaluation
REPUBLIC OF SOUTH AFRICA

31 March 2023

This report was prepared by Mr Godfrey Mashamba and Ms Thokozile Molaiwa from the Evaluation, Evidence and Knowledge Systems (EEKS) branch of the Department of Planning, Monitoring and Evaluation (DPME). The report supports the work of the Oversight Mechanism on The National State of Disaster on the Impact of the Severe Weather Events and the National Joint Flood Coordination Committee (NJFCC).

Submitted by:

Mr Godfrey Mashamba DDG: EEKS and Ms Thokozile Molaiwa CD Evaluation
Department of Planning, Monitoring and Evaluation
Private Bag X944
Pretoria, 0001, South Africa
Tel: +27 12 312 0110
Email: ?@dpme.gov.za

Prepared for:

Oversight Mechanism on The National State of Disaster on the Impact of the Severe Weather Events
The Presidency: Republic of South Africa
Private Bag X1000, Pretoria, 0001

Copyright

Copyright of this evaluation report as a whole is vested in the Department of Planning, Monitoring and Evaluation.

In general, publication of results in journals is to be welcomed, but only after the reports have been to Cabinet, and subject to permission by the DPME/custodian department to ensure that confidential information is not used.

How to cite this report: DPME (2023) "Rapid assessment of the government's flood disaster interventions on the April 2022 floods in Kwazulu-Natal, Eastern Cape and North West- Full Report", Pretoria: Department of Planning, Monitoring and Evaluation

TABLE OF CONTENTS

EXECUTIVE SUMMARY	7
1. INTRODUCTION	11
1.1 Purpose of the Rapid Evaluation.....	11
1.2 Background and overview.....	11
2. RELEVANT FRAMEWORKS AND LITERATURE	14
3. EVALUATION DESIGN	19
3.1 Need and scope of this evaluation.....	19
3.2 Key evaluation questions.....	20
3.3 Research design.....	20
3.4 Evaluation stakeholders and intended uses.....	23
3.5 Limitations.....	23
4. FINDINGS	24
4.1 How effective were immediate humanitarian relief interventions?.....	24
4.1.1 Security, search and rescue operations.....	24
4.1.2 Mobilisation of capacity to support immediate interventions.....	26
4.1.3 Provision of psychosocial support.....	27
4.2 How effective were human settlement interventions?.....	29
4.2.1 Phase 1: Provision of temporary shelter.....	30
4.2.2 Phase 2 human settlement intervention.....	32
4.2.3 Phase 3 human settlement intervention.....	33
4.3 Have interventions plans been adequately developed?.....	34
4.3.1 Engagements to ensure capacity of the state to intervene.....	34
4.3.2 Planning for flood disaster interventions.....	35
4.4 Have funding and other resources effectively mobilised?.....	36
4.4.1 Mobilisation and flow of public funding resources.....	36
4.4.2 Contributions by non-government sectors.....	39
4.5 What is the progress in restoring damage to public infrastructure?.....	41
4.5.1 What were the estimates on the assessment of damages?.....	41
4.5.2 Roads and bridges infrastructure.....	42
4.5.3 Rail infrastructure.....	45
4.5.4 Water infrastructure.....	47
4.5.5 Electricity infrastructure.....	49
4.5.6 Health infrastructure facilities.....	51
4.5.7 Schools.....	52
4.6 What has been the impact of flood disaster on businesses?.....	54
4.6.1 Support for affected businesses.....	54
4.6.2 Agricultural establishments.....	58
4.6.3 Tourism sector establishments.....	59
4.6.4 Environmental rehabilitation, compliance and related matters.....	60
4.6.5 Science and technology.....	61
5. CONCLUSIONS, ONGOING ACTIONS AND RECOMMENDATIONS	61
Annexure 1: Matrix of key indicators for monitoring flood disaster interventions ..	64
Annexure 2: List reports, presentations and sources accessed ..	67
Annexure 3: Case Study 1 on Assessing & Responding to Needs of Families Affected by Floods in KZN	69
Annexure 4: Concept Note: Benchmarking international practices on disaster management systems	71

LIST OF FIGURES

Figure 1: Map depicting impact level of floods in KZN, EC and NW provinces	12
Figure 2: Three-phased approach to April 2022 flood disaster interventions	13
Figure 3: Coordination and institutional arrangements.....	14
Figure 4: Disaster management system in South Africa (National Sphere)	15
Figure 5: Results-Based Framework for the flood disaster interventions.....	22
Figure 6: Applying the Results Chain to unpack the interventions	22
Figure 7: Status on funding approvals as at 09 November 2022	38
Figure 8: Map indicating areas of damage along the rail infrastructure in KZN	46
Figure 9: Draft framework/ roadmap for the review of disaster management system	62

LIST OF TABLES

Table 1: Record of flood related disasters in KZN and Eastern Cape	18
Table 2: Potential users of the evaluation results.....	23
Table 3: Capacity deployed for security search and rescue operations in KZN	24
Table 4: Estimation of fatalities, missing persons and injuries	25
Table 5: Deployment of engineering and technical capacity in the 1st 2 weeks of disaster	26
Table 6: Assessment of damages to homes	29
Table 7: Provision of mass care centres and Temporary Residential Units (TRUs).....	31
Table 8: Progress indicators on planning, budgeting and funding.....	40
Table 9: Estimates of damages to road infrastructure in KZN, EC and NW.....	43
Table 10: SANRAL progress update on restoring KZN N2 roads infrastructure	44
Table 11: Estimation of damages to Transnet rail infrastructure	45
Table 12: Examples of rail infrastructure damages and targets for rehabilitation	46
Table 13: Progress in restoring bulk water supply per regions in KZN.....	47
Table 14: Progress in restoring bulk water infrastructure facilities	48
Table 15: Status on repairs of critical HV electricity infrastructure facilities in eThekweni.....	50
Table 16: Health facilities affected by flood damages	51
Table 17: KZN Implementation Plan: Targeted timeframes to repair of affected schools	52
Table 18: Number of schools reporting flood damages per district	53
Table 19: Funding support for affected businesses	56
Table 20: Support for small businesses per district	57
Table 21: Estimation of damages on agricultural establishments in KZN	59

GLOSSARY

APPs	Annual Performance Plans
BMGF	Bill and Melinda Gates Foundation
CI	Crime Intelligence
COGTA	Department of Cooperative Governance and Traditional Affairs
DBSA	Development Bank of Southern Africa
DFFE	Department of Environment, Forestry and Fisheries
DOT	Department of Transport
DPME	Department of Planning, Monitoring and Evaluation
DPWI	Department of Public Works and Infrastructure
DSD	Department of Social Development
DTIC	Department of Trade, Industry and Competition
DWA	Department of Water Affairs
DALRRD	Department of Agriculture, Land Reform and Rural Development
EC	Eastern Cape
EIAs	Environment Impact Assessments
EMS	Emergency Management Services
IDC	Industrial Development Corporation
ISA	Infrastructure South Africa
JOC	Joint Operating Committee
KZN	KwaZulu Natal
MISA	Municipal Infrastructure Support Agent
NC	Northern Cape
NDMC	National Disaster Management Centre
NEMA	National Environmental Management Act
DMA	Disaster Management Act (Act 57 of 2002)
NJFCC	National Joint Flood Coordinating Committee
NW	North West
OTPs	Offices of the Premier
PDMCs	Provincial Disaster Management Centres
PM&E	Planning, Monitoring and Evaluation
POP	Public Order Police
PPSD	Provincial Pharmaceutical Supply Depot
PRASA	Passenger Rail Agency of South Africa
RTMT	Real Time Monitoring Tool
SAEON	South African Environmental Observation Network's
SANRAL	South Africa National Roads Agency SOC Ltd
SEFA	Small Enterprise Finance Agency
SGBs	School Governing Boards
SPs	Strategic Plans
TFR	Transnet Freight Rail
TNPA	Transnet National Ports Authority
TRT	Tactical Response Team

TRUs	Temporary Residential Units
UNICEF	United Nations Children's Fund
VISPOL	Visible Police
WCG	Working Capital Grant

EXECUTIVE SUMMARY

This report provides the Department of Planning, Monitoring and Evaluation's (DPME) Rapid Assessment of progress on the government's flood disaster interventions as at January 2023, in response to the April 2022 floods that affected parts of KwaZulu-Natal (KZN), Eastern Cape (EC) and North-West (NW).

The aim of the Rapid Assessment is to trace the emergent results or outcomes of the flood disaster interventions, synthesise lessons and make recommendations for improvements going forward. The report uses the latest data accessed by the time of its compilation, which is 17 March 2023.

The content of this report supports the ongoing monitoring, evaluation and learning (MEL) activities in the system of disaster management in South Africa, which includes and not limited to, DPME Frontline Monitoring activities to verify the extent to which the damages from flood disaster have been restored, communication and gathering of citizen feedback, process of review of the disaster management system, planning at various levels as well as detailed work on evaluations by the province or relevant national departments.

The report also makes an input to close-out records for the Oversight Committee on The National State of Disaster on the Impact of the Severe Weather Events ("Oversight Committee").

The Disaster Management Act (57 of 2002 as amended) (DMA) and the National Disaster Management Framework of 2005 (NDMF) provide a sound legislative and institutional framework for disaster management in South Africa.¹ Relevant global frameworks and guidance advocate for national systems of disaster to speedily shift in orientation from the reactive response, relief and recovery towards disaster risk reduction (DRR).² The most recent major disasters, namely the Covid-19 pandemic, the July 2021 unrests and the April 2022 flood disasters have tested the system of disaster management, revealing specific strengths and limitations as they pertain to various areas of intervention. The escalation of disasters and the required transition towards climate-resilient economy requires an even more agile and effective system.³

¹ Covid-19 Country Report, June 2021.

² The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030; Sustainable Development Goals (SDGs) number 1.5, 11.5, 11b and 13.1; The White Paper: Strategic framework for drought risk management and enhancing resilience in Africa (2018).

³ NDMC's National Disaster Contingency Plan 2021-22, Oct 2021; NDMC Annual Report 2021/22; National Treasury Budget Review, 22 Feb 2023.

Key points in this report are the following:

Search and rescue: The search and rescue operations during the April 2022 flood disaster have been swift and effective. The contingent of over 6048 personnel from government and non-government structures conducted over 1012 search missions in KZN and EC and rescued 250 persons. The interventions saved lives and enabled families that lost their loved ones to find closure. Thousands of the displaced persons were provided temporary shelter to ensure their safety and wellbeing. Regrettably, 82 persons are still reported as missing, and 17 deceased have not been positively identified and/or traced back to their families.

Human settlement interventions: The delivery of human settlement interventions was extremely slow in all affected provinces and has been a great cause for concern. Displaced persons and their families stayed too long in the temporary shelters (the Mass Care Centres or MCCs). The longer stay in MCCs created new sets of social problems, especially given that all genders and aged slept in the same hall. Transitioning of families from Phase 1 (temporary emergency accommodation or MCC) to the next phases, which are Phase 2 (permanent solutions for rehousing people who have lost homes) and/or to Phase 3 (long term solutions for resettlement of people into new safer spaces) was fraught with complexities relating to the provision of Temporary Residential Units (TRUs), procurement delays, securing land parcels for resettlement, etc. KZN managed to phase out all the MCCs by December 2022 and relocated the families into 10 Temporary Emergency Accommodation (TEAs) with bed capacity 2909 and linked all the affected families to about 15 land parcels in an effort to transition towards Phase 3 solutions. All the 10 land parcels were at different stages of progress of the detailed planning (i.e. environmental impact assessment, geotechnical and engineering, etc.) and legal processes for Power of Attorney. In the NW area of Deelpan, a viable solution was still being explored.

Assessment and verification of damages: There were delays in finalising assessment and verification of damages and the costs in various sectors. This caused delays in completing funding applications and affected the flow of funds and implementation of interventions. There is a clear case for capacity building and guidance at the municipal sphere to ensure uniformity of assessment and standards for cost estimation. There must be a coherent way of mobilising technical capacity from relevant institutions that want to volunteer and provide support.

Funding and spending and mobilisation of other resources: A number of dependencies in the funding value chain created challenges and delayed implementation of interventions. Such challenges include delays in finalising assessment and verifying costs of damages, procurement, preparation and submission of funding applications. By November 2022, R5,501 billion had been approved for the affected provinces, municipalities and public entities under different funding mechanisms. Of this amount, R4,625 billion comprised reprioritisations while

R875 million comprised disaster relief grants. 94% of the total amount is for KZN, 4% for Eastern Cape, 1% for NW and 1% for national level support for businesses. MTBPS announced that an additional R6.1 billion is allocated through the 2022/23 adjustment budget for humanitarian relief and the recovery and rehabilitation of infrastructure damaged. Emergency procurement has been ineffective due to bureaucratic hindrances and a level of anxiety among government officials to make mistakes in fear of audits. The lack of trust on government to prevent the repeat of corruption experienced with the procurement of Covid-19 personal protection equipment (PPEs) motivated the President to establish the Oversight Committee to ensure that all funds allocated for disaster relief are utilised for that purpose. The processes mostly followed resembled “business as usual” instead. There is a strong case for awareness creation, training and guidance on matters of emergency procurement across government.

The adopted Results-Based Framework identified resources or inputs for intervening in the flood disaster as including government and non-government contribution, as follows (1) government funding sources, (2) capacity support (personnel and material) from national departments, (3) other provinces and public institutions, (4) development finance institutions, (5) non-government sector funding and in-kind contribution, (6) insurance; and (7) international sector funding and in-kind contribution.

Coordination and reporting structures: There were fragmentation of structures, processes and reporting requirements. This created challenges of communication across different structures, and with the affected families and broader public.

Disaster management planning: In-year, affected departments had to reprioritise their activities and budgets in favour of disaster interventions. This has proved difficult as trade-offs had to be made to displace planned activities. The DPME provided guidance through Circular 5/2022 for the 2023/24 planning and reporting cycle and Circular 6/2022 for preparation of the 2023/24 APPs. Assessment indicate that is generally poor adherence to a requirement for planning and budgeting for disaster across government.⁴ Implications are that the lack of integration of the Just Transition, Disaster Management Plans and Disaster Risk Reduction will undermine readiness for climate change risks and future disasters.

Restoration of major economic infrastructure and basic services: With regard to major economic infrastructure, namely roads, rail, port, electricity, bulk water supply and waste water facilities, significant progress has been reported. In the Port of Durban, there has been gradual opening of lanes as phased repairs were being completed, providing access to the port. This started with 2 lanes of Bayhead Road

⁴ DPME Assessment of the First and Second Draft 2023/24 APPs (Mar 2023).

on 16 April 2022 up to the 4th lane opening on 10 June 2022. Longer term interventions by relevant authorities include the redesign and reconstruction of the canal bridge to accommodate extreme flooding by end of 2023.

Restoration of social infrastructure: For social infrastructure and related facilities: Schools and healthcare infrastructure.

Whereas the National State of Disaster on the April 2022 flood ended on 18 August 2022, implementation of the interventions continued. This was important in order to catch upon the earlier implementation delays and to implement major infrastructure repairs that required longer lead times and/or new budget provisions. For this reason, monitoring should continue until things restored back to normal functioning.

New bouts of flood disaster have taken place – ongoing concern for authorities given the frequency and intensity.

1. Review of the disaster management system in South Africa
 - a. Legislative reforms
 - b. Capacity issues: institutions, people, systems, networks, coordination, data and information
2. Benchmarking to integrate international lessons
3. Planning, budgeting and financial management

Integration and centralised information and data management: Strengthening of the disaster management system requires continuous investments towards upgrading the information and data systems, and work towards an integrated data architecture that will foster seamless exchange of information across relevant institutions.

- a. Integrated data and information platform at the level of the OTP to draw from the various data collection capacities
- b. At a national level, gap analysis and appropriate ongoing investment at the NDMC in integrated data and information systems
- c. Infrastructure South Africa (ISA) and Council for Scientific and Industrial Research (CSIR) are working together to adapt the C-MORE platforms to support the disaster management sector. NDMC and ISA recommended establishing a way forward on this.

1. INTRODUCTION

1.1 Purpose of the Rapid Evaluation

This Rapid Evaluation provides the Department of Planning, Monitoring and Evaluation's (DPME) assessment of progress on the government's flood disaster interventions in response to the April 2022 floods in the affected provinces of KwaZulu-Natal (KZN), Eastern Cape (EC) and North-West (NW). It traces the emergent results or outcomes, takes lessons and makes recommendations to inform ongoing oversight activities and improvements going forward.

The report has several uses:

- to synthesise the available information regarding progress on various interventions in a format that is easy to follow for purposes of drawing lessons and support oversight activities.
- to highlight the successes and challenges and make recommendations for consideration in the process for reviewing the disaster management system in South Africa, which the DPME and COGTA have been tasked by Cabinet to lead.
- To contribute to a portfolio of close-out reports for the Oversight Committee on The National State of Disaster on the Impact of the Severe Weather Events ("Oversight Committee").
- to inform follow-up and ongoing monitoring, evaluation and learning (MEL) activities. Such activities include the DPME Frontline Monitoring activities to verify the extent to which the damages from flood disaster have been restored and gather citizen feedback on various areas of interventions as well as detailed work on evaluations by the province or relevant national departments.

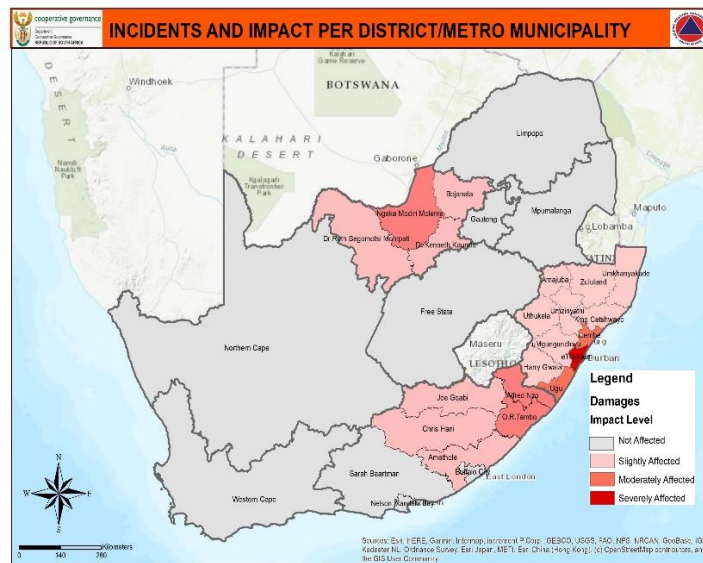
1.2 Background and overview

The inclement weather, with heavy persistent rainfall from 06 to 13 April 2022, caused widespread damages in the areas around KwaZulu-Natal (KZN), Eastern Cape (EC), Northern Cape (NC) and North-West (NW) provinces. Further heavy rains occurred on 21 and 22 May causing further damages in the KZN coastal areas.

- **10 districts in Kwazulu-Natal** were affected, namely uMkhanyakude, uThukela, uMzinyathi, uMgungundlovu, Zululand, eThekweni, iLembe, Harry Gwala, King Cetshwayo, Ugu and Amajuba.
- **5 districts in Eastern Cape** were affected namely Alfred Nzo, Amathole, Chris Hani, Joe Gqabi and OR Tambo.
- **1 district in North West** was affected, namely Ngaka Modiri Molema District Municipality (DM), Tswaing Municipality and concentrated in the Deelpan village.

And the areas around, experienced heavy rains between December 2021 to April 2022. From end of March and in April 2022, a large part of Deelpan village was flooded, with buildings/houses submerged and causing damages to roads, water and sanitation and other infrastructure. The area is situated on a wetland and got saturated due to heavy storms and sheet wash from upper areas. **1 district in Northern Cape** was affected, namely the ZF Mgcawu District Municipality and mostly concentrated in the area of Tsantsabane Local municipality.

Figure 1: Map depicting impact level of floods in KZN, EC and NW provinces



The declaration of a National State of Disaster on the Impact of Severe Weather on 18 April 2022 meant that the responsibility for coordination and management of the disaster confers to the national executive. This enables the mobilization of resources from across the board. On this basis, various organs of state are mobilized to support the existing structures to implement contingency arrangements and to ensure that immediate relief, recovery and reconstruction measures are put in place to effectively deal with the effects of the disaster. The National State of Disaster was to last for three months ending 18 July 2022, but was extended up to 18 August 2022 upon consideration that most of the immediate disaster relief interventions were still ongoing.

The Department of Cooperative Governance and Traditional Affairs (COGTA) and the National Disaster Management Centre (NDMC) applied the Disaster Management Act 57 of 2002 (the Act) and the National Disaster Management Framework of 2005 (NDMF) to activate the relevant institutional architecture to lead and coordinate the flood disaster interventions, bringing together the capabilities across the national government departments, the three spheres of government and the relevant government entities. At a national level, the Intergovernmental Committee on Disaster Management (ICDM), chaired by the Minister of COGTA provided oversight on the

coordination of the overall intervention, supported by the National Joint Flood Coordination Committee (NJFCC), which is a Directors-General forum. On 26 April 2022, in separate sessions, the National Assembly (NA) and the National Council of Provinces (NCOP) agreed on the establishment of the Ad Hoc Joint Committee on Flood Disaster Relief and Recovery to, among others, oversee the response and implementation of the relief measures by government and to facilitate a coordinated oversight function by various committees of the NA and NCOP.

The address by the President on 18 April 2022 included a 3-phased approach to the government intervention as depicted in Figure 2.

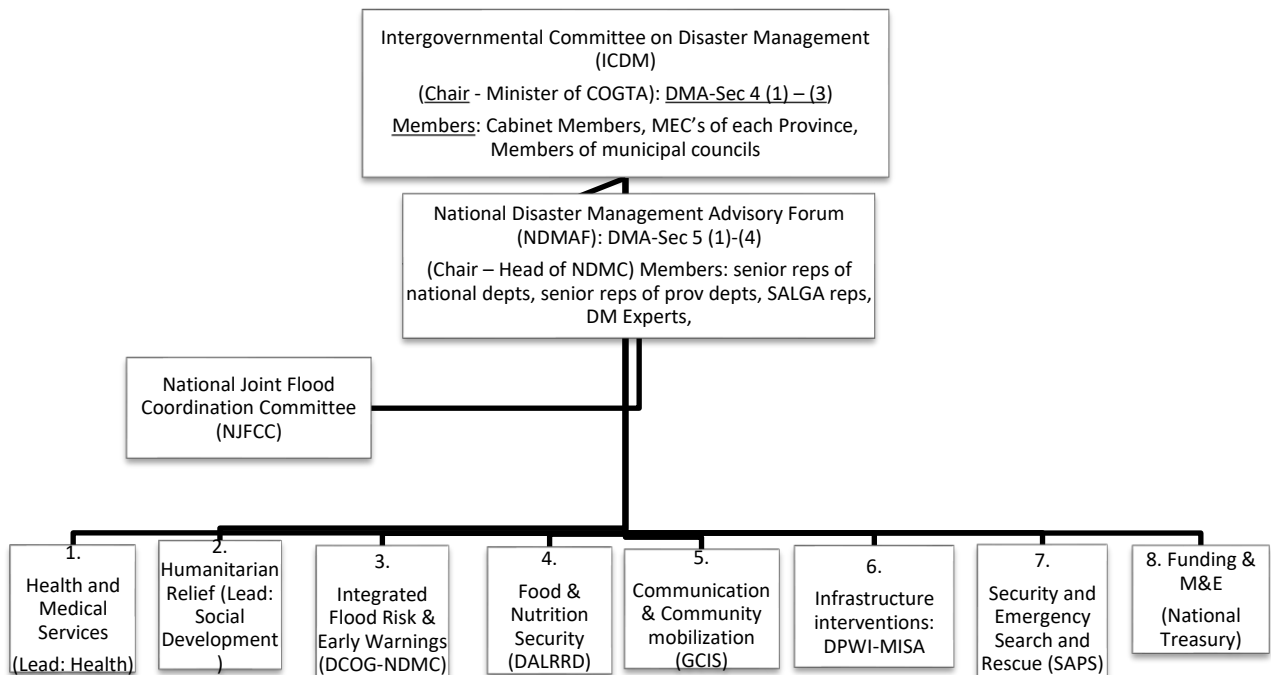
Figure 2: Three-phased approach to April 2022 flood disaster interventions



A meeting between the Minister in the Presidency and the Minister of COGTA on 27 April 2022 discussed the overall implementation approach, the role of various structures as well as how the two departments will work together in supporting executive oversight and coordination of the national effort based on their mandates and positioning at the Centre of Government.

The NJFCC was established to serve as an integrating platform, given the cross-cutting nature of interventions across several departments at national and provincial spheres and government entities. OTPs and the Provincial Disaster Management Centres (PDMCs) play similar roles. The NJFCC established Technical Task Teams to serve as workstreams for Health and Medical Services (Led by Health); Humanitarian Relief (Social Development); Integrated Flood Risk and Early Warnings (DCOG-NDMC); Communication & Community mobilization (GCIS); Food & Nutrition Security (DALRRD); Infrastructure interventions (DPWI-MISA); Security and Emergency Search and Rescue (SAPS); Funding and M&E (National Treasury). Each of the affected province established relevant coordinating structures that interfaces with national level structures.

Figure 3: Coordination and institutional arrangements



2. RELEVANT FRAMEWORKS AND LITERATURE

The Disaster Management Act (57 of 2002 as amended) (DMA) and the National Disaster Management Framework of 2005 (NDMF) provide a legislative and institutional framework for disaster management in South Africa.⁵ The DMA 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 and operational readiness
- Rapid and effective response to disasters
- Post-disaster recovery and rehabilitation.

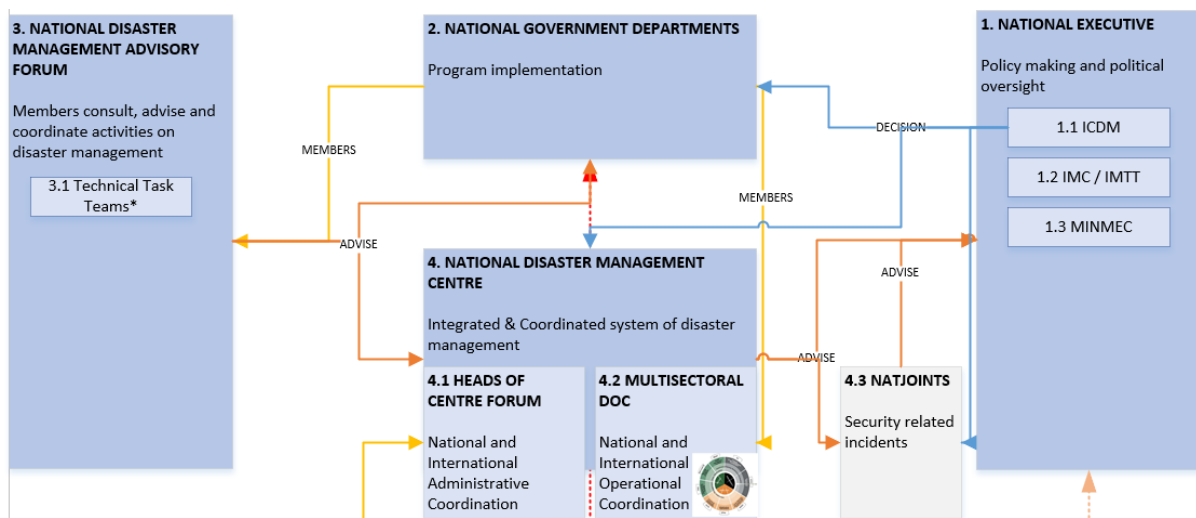
The legislation derives from the Constitution of the Republic of South Africa (108 of 1996), which in Chapter 3 Section 40 (1) and Section 41 (b), indicates that all spheres of government and all organs of the state within each sphere must secure the well-being of the people of the Republic; in Section 152(1)(d) requires local government to

⁵ Covid-19 Country Report, June 2021.

ensure a safe and healthy environment; and in Schedule 4A lists disaster management as a functional area of concurrent national and provincial legislative competence.

The disaster management system is established by the DMA, comprising roles that each structure and organisation play in the system. Section 8 of the DMA established the NDMC; Section 15 assigns various powers and duties to the NDMC, which ensures an integrated and coordinated functioning of the disaster management system in South Africa.

Figure 4: Disaster management system in South Africa (National Sphere)⁶



Relevant global frameworks such as the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030; its predecessor, the Hyogo Framework for Action (HFA) 2005-2015 (Building the Resilience of Nations and Communities to Disasters); and the specific sub-goals of the Sustainable Development Goals (SDGs), help in aggregating best practices and provide guidance to country level approaches and legislative frameworks. These international frameworks recognise the tenets of international solidarity, the importance of shared, global approaches to certain challenges while also acknowledging the need for country level policies, legislation, capacities and processes.

The SFDRR advocates for a shift in orientation from more reactive responses towards more preventative approaches of disaster risk reduction (DRR).⁷ These are measures that prevent and reduce hazard exposure and vulnerability to disaster, increase

⁶ NDMC presentation, 2022

⁷ The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030; Sustainable Development Goals (SDGs) number 1.5, 11.5, 11b and 13.1; The White Paper: Strategic framework for drought risk management and enhancing resilience in Africa (2018).

preparedness for response and recovery, and strengthen resilience. The desired outcome of the DRR approach is a substantial reduction of disaster risk and loss of lives, livelihoods, health, economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.⁸

Steps to localise the SFDRR in the African continent included the 2018 Southern African Development Cooperation (SADC) Regional Disaster Risk Reduction Conference that was held in South Africa, which adopted the African Union Programme of Action for Disaster Risk Reduction; and the White Paper: Strategic framework for drought risk management and enhancing resilience in Africa (2018) adopted during a conference under the African Union held in Namibia.

The sub-goals of the SDG applying to disaster management and relevant to this Rapid Assessment are the following.⁹

- SDG 1.5 – By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.
- SDG 11.5 – By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to a global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
- SDG 11.b – By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.
- SDG 13.1 – Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Vulnerability to disasters vary across society. For instance, the Covid-19 pandemic and lockdown measures amplified existing economic challenges, i.e. unemployment, poverty, and inequality. It also exposed existing coverage gaps in basic service delivery and infrastructure and broadened vulnerabilities to certain risks.¹⁰ Similarly,

⁸ https://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf

⁹ <https://metadata.un.org/sdg/?lang=en>

¹⁰ Covid-19 Country Report, June 2021

during the flood disaster, poorer segments of the society were found helpless and tended to require the most effort in order to recover from the devastation.

In its briefing to the Ad-Hoc Committee on 23 May 2022, The DPME highlighted specific causal factors that have tended to exacerbate challenges for disaster management in South Africa. The causal factors reflect the system-wide issues that require a strategic, coordinate approach by all sectors:

- Rapid urban development without climate change risk mitigation design protocols, controls and compliance
- Poor or no compliance with Spatial Planning and Land Use Management Act, 2013 (SPLUMA) and relevant Regulations.
- Development and settlement location outside the prescripts of SPLUMA in rural/ traditional authority areas
- Poor planning and design for climate change risks, adaptation and mitigation
- Poor maintenance of infrastructure including roads, bridges, stormwater, sewers, dams and retaining structures
- Poor construction of infrastructure including corruption during construction and maintenance
- Location of informal settlements and buildings within flood prone areas such as flood lines, flood plains and riverbanks
- Slow pace of delivery within upgrading of informal settlements programme.

Different types of disasters affect sectors of the economy in different ways, depending partly on the degree of exposure to such disasters. Small businesses in particular, become very vulnerable to greater losses, given such factors as their dependence on the continuity of larger/anchor businesses, poor cashflows, owner self-employment, and the fact that most of them remain uninsured. The guidelines for reducing risk and building resilience of small businesses to disasters that the United Nations Office for Disaster Risk Reduction (UNDRR) is very relevant for the socio-economic conditions of South Africa.

Various briefings by the NDMC drew attention to a broader context of climate change, highlighting that South Africa faces increasing levels of disaster risk, as it is exposed to a wide range of weather hazards, including drought, cyclones and severe storms that can trigger widespread hardship and devastation. Climate change is found to be altering the face of disaster risk, not only through increased weather-related risks and sea-level and temperature rises, but also through increases in societal vulnerabilities, for example, from stresses on water availability, agriculture and ecosystems; and that all this requires enhanced measures and actions from all organs of state, stakeholders, communities, etc. The eastern coastline has experienced a series of flood disasters over the past decade. Records show the following of the Eastern Cape and KZN.

Table 1: Record of flood related disasters in KZN and Eastern Cape

Eastern Cape	KZN
<ul style="list-style-type: none"> • 2013 April: heavy rains destroyed houses and roads • 2017 January: heavy rains affected houses and schools • 2018 April: hailstorm affected agricultural infrastructure • 2018 March: floods affected provincial and municipal roads • 2019 April: floods affected houses roads, agriculture • 2020 January: floods • 2020 November: tornado affected homes & schools • 2021 December & 2022 January: Thunderstorm and floods affecting households and schools. 	<ul style="list-style-type: none"> • 2017 April • 2018 Dec to Jan • 2019 April, October • 2020 Jan, August • 2021 Jan/ Feb & Nov/Dec • 2022 Jan, April/May & Oct/Nov

Media reports and statements by some public officials expressed great concern about the funding for disaster interventions and the required transition towards climate-resilient economy requires an even more agile and effective system.¹¹ Informed by the diagnostic analysis by the World Bank on financing disaster response in South Africa, the National Treasury notes the following recommendations which must inform its strategic role and coordination on climate responsiveness:¹²

- Developing a national disaster risk financing policy, including strategic priorities for financing disaster response.
- Reviewing the post-disaster budget mobilisation process and amending grant frameworks to integrate disaster risk management.
- Strengthening municipal capacity to finance disaster risk, including through municipal insurance pools.
- Redesigning the suite of financing instruments to respond to disasters and exploring incentives for the private sector to offer non-life insurance to exposed communities.

¹¹ NDMC’s National Disaster Contingency Plan 2021-22, Oct 2021; NDMC Annual Report 2021/22; National Treasury Budget Review, 22 Feb 2023.

¹² National Treasury Budget Review, 22 Feb 2023

3. EVALUATION DESIGN

3.1 Need and scope of this evaluation

The Revised National Evaluation Plan (2020-2025) recommends the use of rapid evaluations to fast-track problem analysis and generating policy options.¹³ Rapid evaluations are defined in terms of timescale, in that they can be started and completed within 6-12 weeks including production of the report.

In this case there was a need to undertake an evaluation which can produce results that can feed into government's disaster intervention and practice quickly in order to inform strategic and tactical adjustments given that the interventions on the April 2022 flood disaster are still ongoing. The need also arises because there are continuing flood disasters, repeating in some of the affected areas and also occurring in various other parts of the country. Affected communities have on several occasions raised concerns about the slow pace of implementing interventions. There have also been concerns raised in various strategic engagements regarding, among others, coordination challenges, slow movement of funding, and affected families staying for far too long in temporary accommodation. The Joint Ad-Hoc Committee, in particular, has requested an integrated and coordinated approach to planning of interventions and reporting of progress and results.

This Rapid Evaluation, therefore, responds to the abovementioned needs by providing an assessment of progress on the government's flood disaster interventions in response to the April 2022 floods.

The scope covers the three provinces affected by the April 2022 floods i.e. provinces of KwaZulu-Natal (KZN), Eastern Cape (EC), and North-West (NW). The Northern Cape (NC) has been excluded due to lack of information. All the 3-phases as announced by the President were covered in this evaluation, namely Phase 1 (immediate humanitarian relief), Phase 2 (stabilisation and recovery) and Phase 3 (rehabilitation and reconstruction). The evaluation traces what outcomes have been/ are being achieved and what can be done to improve on the ongoing interventions and when similar situations arise in future.

The evaluation was undertaken entirely by internal DPME staff and no service provider was used.

¹³ DPME, 2021

3.2 Key evaluation questions

The key evaluation questions were¹⁴:

1. How efficient and effective were the Government Flood Disaster Interventions?
This, focusing on the following:
 - a. Provision of security, search and rescue interventions?
 - b. Assessment of damages, costing, planning with clear targets, timeframes and responsibility?
 - c. Mobilisation of funding and other resources to enable implementation?
 - d. Provision of human settlement interventions, including temporary shelter to the displaced and longer-term solutions?
2. What is the progress in restoring damage to infrastructure such as roads, rail, water, electricity, health facilities, and schools?
3. What has been the impact of flood disaster on businesses?
4. What can be done to improve government's response to similar disasters in future?

3.3 Research design

The evaluation adopted a **desktop analysis approach**. It used both the quantitative and qualitative data drawn from existing secondary data sources. One case study has been selected to provide deeper insights in specific intervention areas. The approach did not involve new data collection activity. Rather, the approach involved synthesising information from various official reports, datasets, presentation, submissions, meeting and workshop proceedings into an easily accessible and standardised format in order to critically assess the state of progress, how things are working and how they can be strengthened.

The design is guided by the Results-Based approach and the Matrix of Key Indicators for Monitoring Flood Disaster Interventions that the DPME has recommended to the NJFCC and the Joint Ad-Hoc Committee (Attached as **Annexure 1**). The Matrix identified the following twelve intervention areas, which are ordinarily the types of interventions expected in terms of the disaster management legislation:

- Planning and resources mobilisation
- Humanitarian relief (focussing on search and rescue/ recovery)
- Human settlement and housing

¹⁴ When presenting findings on the key questions; success, challenges, solutions and emerging results will also be included where applicable.

-
- Education facilities
 - Health facilities
 - Electricity
 - Water and sanitation
 - Landfill sites
 - Roads and bridges
 - Rail infrastructure
 - DPWI public buildings
 - Support for businesses

The evaluation used the criterion for “effectiveness” as defined in the Development Assistance Committee of the Organisation for Economic Cooperation and Development (OECD-DAC).¹⁵ This criterion assesses the extent to which the intervention achieved, or is expected to achieve, its objectives and results.

Adapting the “effectiveness” criterion to this evaluation: We examine whether government’s flood support interventions were actually implemented and what progress has been made in implementing those interventions.

On each of the intervention areas, this evaluation examined the following:

- Assessment of damages
- Implementation of planned interventions
- Results achieved and/or extent of restoration of damages
- Ongoing actions/ challenges and/or recommendations.

The Results-Based approach enables a focus on the ultimate end-game, i.e. the extent to which things have been restored back to normality and on how far they are towards that in the various areas where damages have been identified. Examples of results include the following:

- Whether the people displaced by floods are back to their homes,
- Whether households are relocated from flood lines to new areas,
- Whether learners are back to regular schooling,
- Whether roads have been opened for traffic,
- Whether trains are moving people and goods,
- Whether households and businesses are getting reliable water and electricity supply,
- Whether businesses are back to full operations,
- Whether jobs are saved, etc.

¹⁵ OECD (2021), *Applying Evaluation Criteria Thoughtfully*, OECD (<https://doi.org/10.1787/543e84ed-en>)

Figure 5: Results-Based Framework for the flood disaster interventions

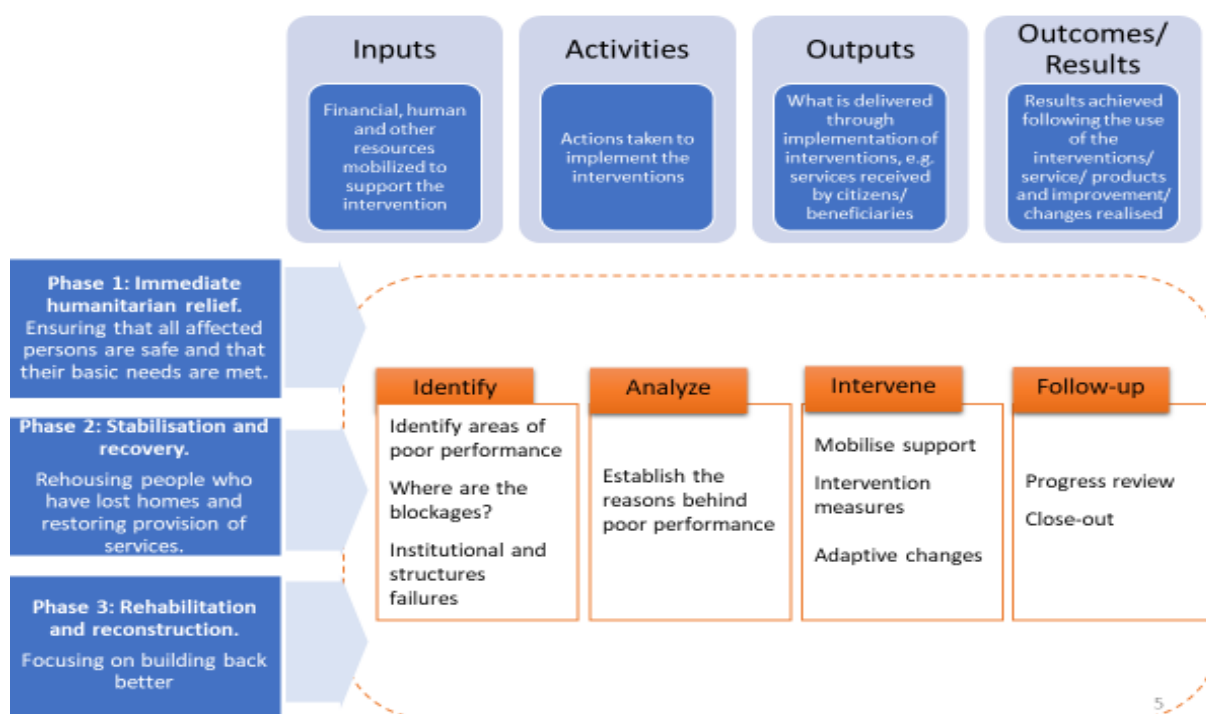


Figure 6: Applying the Results Chain to unpack the interventions

<ul style="list-style-type: none"> - Government funding sources - Capacity support (personnel and material) from national departments, other provinces and public institutions - Development Finance Institutions - Non-government sector funding and in-kind contribution - International sector funding and in-kind contribution 	<p>Phase 1: Provision of immediate humanitarian relief:</p> <ul style="list-style-type: none"> - Public communication and information dissemination - Delivery of the humanitarian relief (Search and rescue/ recovery, burial assistance, death certificates, post-mortems, health services, psychosocial support, temporary shelter, food, personal essentials and emergency water supply, etc.) <p>Phase 2: Stabilisation and recovery interventions:</p> <ul style="list-style-type: none"> - Short term measures to repair, scrapping, buying/building anew of public infrastructure and facilities on the following: water and sanitation, stormwater and drainage infrastructure, electricity, roads and bridges, rail networks, telecommunication networks, health facilities, solid waste infrastructure, school infrastructure, human settlement and housing. - Provision of housing support - Provision of social relief of distress (SRD) grants <p>Phase 3: Reconstruction and building interventions:</p> <ul style="list-style-type: none"> - Medium to long term interventions for economic recovery - Repair and restoration of economic infrastructure (SANRAL, PRASA, BAYHEAD, etc.) - Support to businesses (farms, warehouses, retail, etc.) - Provision of land for human re-settlement - Land use, urban and regional planning. 	<ul style="list-style-type: none"> - Recoveries of the diseased and unaccounted/missing persons - Uptake of humanitarian support (burial assistance, death certificates, post-mortems, health service, psychosocial support, temporary shelter, food, personal essentials and emergency water supply, etc.) - Restoration of essential/basic services and public infrastructure (water, electricity, schools, etc.) - Restoration of telecommunication networks - Uptake/ utilisation of vouchers for repair of houses and other housing support - Uptake of social relief of distress (SRD) grants - Uptake/ utilisation of assistance for repair of businesses - Rebuilding and repair of major public infrastructure - Establishment of new public infrastructure - Community resettlement and relocation processes - Flood risks resilience strategies 	<ul style="list-style-type: none"> - Greater human security - Enhanced citizen trust/confidence in authorities - Mitigation of water borne diseases (cholera, diarrhoea, malaria, etc.) - Public access to essential/basic services (i.e. water, electricity, key routes, schooling or learning infrastructure, telecoms networks, etc.) - Business impact/recovery status - Social protests/social sentiment status - Restored economic & industrial activities - Sustainable environmental and natural resource management
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

3.4 Evaluation stakeholders and intended uses

The following table identifies key stakeholders and potential used of the evaluation results.

Table 2: Potential users of the evaluation results

Potential Users of the Evaluation	How they will use it?
COGTA	<ul style="list-style-type: none">Legislative review on disaster management
The Oversight Mechanism on the National State of Disaster on the Impact of the Severe Weather Events	<ul style="list-style-type: none">To inform the close out report
The Parliamentary Ad-Hoc Joint Committee on Flood Disaster Relief and Recovery	<ul style="list-style-type: none">For accountability and oversight purposes by monitor progress with respect to implementing the government's disaster support intervention
National Joint Flood Coordination Committee (NJFCC)	<ul style="list-style-type: none">To inform the close out report
The National Disaster Management Centre and the Provincial Disaster Management Centres (PDMCs)	<ul style="list-style-type: none">An input into the review of disaster management system, lessons will be drawn and recommendation made.
Affected municipalities and citizens	<ul style="list-style-type: none">General use and track progress

3.5 Limitations

The rapid evaluation design establishes the parameters of the trade-off between research rigour, usefulness, timeliness cost. This evaluation may therefore suffer limitation characteristic with the following aspects:

- The evaluation was conducted in a short time. A trade-off – more time allows for more data points, more interviews, more literature, and more time in ensuring that the process is good quality, involves stakeholders, etc.
- The evaluation was mostly desktop analysis approach drawing from secondary data sources.
- Only limited review of literature and applicable frameworks was done, looking at South Africa and a reference to a limited set of relevant international material.
- The approach of using existing secondary data presented the following challenges: data points are of different timeframes and appear to have been largely influenced by dates for presenting to oversight structures; a degree of bias as most of the reports are submission implementing departments.

An important step to overcome some of the abovementioned limitation would be for relevant authorities to use the results of this evaluation to plan verification visits to confirm the results.

4. FINDINGS

The results/findings are presented according to the key evaluation questions outlined in Paragraph 3.2 outlined in Paragraph 3.3.

4.1 How effective were immediate humanitarian relief interventions?

Relevant sub-questions for this section examine the extent to which government was effective in providing immediate humanitarian relief in a form on search, rescue, recovery interventions; provision of emergency/ temporary shelter; provision of basic essentials such as food, personal essentials and emergency water supply; provision of psychosocial support; replacement of critical documents such as IDs, etc.; mobilisation of capacity of institutions to support immediate interventions; provision of awareness services and safety information.

4.1.1 Security, search and rescue operations

Speedy deployment of search and rescue during disaster is crucial in order to save as many lives as possible and provide appropriate emergency care and safety. The sensitive nature of this intervention requires great care and empathy, as it extends to include assistance with identifying deceased relatives and burial assistance to affected families (e.g. death certificates, post-mortems, burial assistance), as well as health services for the injured.

The capacity of deployed for security, search and rescue operations appeared to be sufficient, swift and effective to execute their assigned role. The interventions executed saved lives and also enabled affected families to find closure and bury their diseased loved ones. Table 2 and Table 3 provide relevant summary data and paragraphs that follow provide narrative per affected province.

Table 3: Capacity deployed for security search and rescue operations in KZN

Intervention	Number deployed
VISPOL (Visible Police)	1 556
(Detectives (DET)	664
Crime Intelligence (CI)	182
Tactical Response Team (TRT)	70
Public Order Police (POP)	686
RTI/Metro (Road Traffic)	837

National - VALA	300
Security Companies	403
SANDF	1 350
Total	6 048

Table 4: Estimation of fatalities, missing persons and injuries

Row Labels	Number of Fatalities	Number of Missing persons	Number of Injured persons
Eastern Cape	24 (18 may have been counted in KZN)	1	0
KZN	456	82	43
North West	0	0	0

KwaZulu- Natal (KZN) Province

In KZN, the security, search and rescue operations were deployed immediately on the onset of the flood disaster in the affected areas. The capacity comprised about 6048 personnel and was sourced from operations from across the country, with other provinces and municipalities and non-government structures deploying additional personnel and equipment from around 15 April 2022 and weeks that followed.

Latest available data for KZN of 10 August 2022 indicated a total of 1 012 search events, rescuing a total of 250 persons alive, recovering 456 deceased bodies. Key challenges were that 82 missing persons were not recovered (reported as missing) and 17 bodies of deceased that were not yet been positively identified and traced back to their families.

KZN reported to have received support from over 60 non-governmental structures, civil-society organisations providing various forms of humanitarian assistance, including financial contribution, provision of food, water tankers, clothing, blankets, mattresses, portable toilets, power generators, learning materials, cleaning materials and other essential items. Among the contributors were non-government organisations, political parties, the civil society, governments and embassies of other countries and international organisations, Gift of the Givers, Kaiser Motaung Junior Foundation, Collen Mashawana Foundation, Department of Social Development (SD D) through South African Social Security Agency (SASSA), National Lottery Commission, Department of Agriculture, Land Reform and Rural Development (DALRRD), Shoprite, Old Mutual Foundation, Local Churches, Business, Educators, Soup Kitchens and Meals on Wheels, Food vouchers through DSD, District Municipality and National Lottery.

Eastern Cape Province

For Eastern Cape, anecdotal information show that the search and rescue teams deployed in the KZN also conducted their missions in the EC.

North West Province

The North West Province (NW) did not report any fatalities, injuries or missing persons. NW estimated about 800 individuals that were evacuated and provided with temporary shelter in 3 places (a local church, tribal council hall and the old age home) and humanitarian relief services. Others whose homes were flooded have found accommodation with their relatives and friends – and the DSD has been providing food parcels and psychosocial support services where needed.

The DSD, the South Africa Social Security Agency (SASSA) and volunteers from the non-government sectors (e.g. Old Mutual, Gift of the Givers, Shoprite, local churches, etc.) provided the support to the affected community which included blankets, food parcels, cooked meals, mattresses, spiritual and psycho-social support services to the identified families, persons and learners.

4.1.2 Mobilisation of capacity to support immediate interventions

Various forms of capacity support were mobilised to help in affected areas. These included engineering and technical capability from institutions such as Municipal Infrastructure Support Agent (MISA), Development Bank of Southern Africa (DBSA), Infrastructure South Africa (ISA), national departments such as Department of Water Affairs (DWA), Department of Public Works and Infrastructure (DPWI) and relevant departments of other provinces, namely North West, Free State and Western Cape.

Rapid deployment by institutions that are listed on Table 4 below have demonstrated readiness and institutional capability (people, systems, networks, mandate, financial resources) to deploy during times of disaster. However, the current disaster management legislation is silent about roles of some of these institutions, e.g. Development Bank of Southern Africa (DBSA), Council for Scientific and Industrial Research (CSIR), Infrastructure South Africa (ISA), DPME, etc.

Table 5: Deployment of engineering and technical capacity in the 1st 2 weeks of disaster

Source of support	Nature of capacity support	Role and contribution
MISA	2 x Electrical, 4 x Water & Sanitation; 2 x Roads and Stormwater; 2 x Town Planners 5 x Water; 3 x Roads & Stormwater; 1 x Structural	- Providing technical team leader support to KZN municipalities - Prepared preliminary reports - Recommending safety measures
North-West (1) Free State (3) Western Cape (1) DBSA (7) Eskom (2) DWS (2) Provincial Treasury (12)	8 x Roads and Stormwater; 1 x Structural 7 x Electrical; 3 x Civil; 1 x Structural (dam safety); 2 x Civil (waste-water); 1 x Civil (water); 2 x Quantity Surveyors; 1 x Mechanical;	- Completed assessments for floods damaged municipal infrastructure in all KZN District Municipalities. - Supporting municipalities with: - Prioritisation of projects,

Private sector (4)	2 x Geotechnical; 2 x Town Planners; 2 x Consulting Engineers	<ul style="list-style-type: none"> - Applying for disaster applicable funding, - Reprioritization of infrastructure implementation plans. - Participating in the Joint Operating Committee (JOC).
---------------------------	---------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

4.1.3 Provision of psychosocial support

Various reports indicate that the many affected families in all provinces will require continued psychosocial support. The DSD deployed Social Workers from the onset in all the shelters to provide immediate Psychosocial Support services, social welfare related and child protection services, largely helping through generic intervention tools.

By August 2022, KZN reported that the DSD approach could not be sustained for a long period since the social workers needed to revert to their usual roles. New arrangements had to be agreed upon for continuation of psychosocial support, including sourcing in of willing NGOs. This presented a challenge of competing roles of the delegated staff.

In North West, psychosocial support continued through DSD. The DSD continued to monitor the situation through community/ family profiling for further assistance of psychosocial nature and also worked with DoE to monitor the performance of learners. DSD has conducted community/ family profiling to identify need for support. DSD and Department of Education (DoE) identified 447 learners (300 from Laba Primary School and 147 Badibana High School whilst Ramadiana Primary School was finalising the list) as needing support, of which 36 needed trauma counselling and the remainder needed essentials such as school uniforms and food.

In the Eastern Cape, the provincial Department of Social Development conducted assessment and facilitated provision of food parcels and psychosocial support, trauma debriefing services to about 899 affected families. Among the other sources of support in the EC were the Lotto Commission, Vusizwe Foundation, SASSA, Gift of the Givers, and Social Workers.

Text box 1: UNICEF/DSD assessment of state of wellbeing of the affected people

This text box summarises a Case Study selected to provide deeper insights on the operating environment of interventions to assist affected families.

The National Department of Social Development (DSD) collaborated with the United Nations Children's Fund (UNICEF) and other partners to produce a baseline study on Assessing & Responding to Needs of Families (Including Children, Young People & Women) Affected by Floods in KZN. **Annexure 3** shares details of study.

The study was undertaken between May and July 2022 using a Real Time Monitoring Tool (RTMT) to assess the state of wellbeing of the affected people in order to inform the emergency responses and support to those in high risk of hunger, violence, abuse and neglect.

The study adopted a Mixed methods approach. The **Quantitative methods** comprised survey data collection on losses & disruptions. The **Qualitative methods** involved field workers observing family contexts and conducting Key Informant Interviews on how effective the government coordination related to the response measures in addressing immediate, short term, medium term needs of affected families.

The innovative and responsive aspects of the study is that it used a multi-platform digital mobile application that enables production of real time data and includes data management and visualization capabilities. The scope covered the following areas: Education, economic strengthening, childcare and protection, health, nutrition, HIV/AIDS and psychosocial support.

A purposive sampling selected 10% of affected households, making a total of 586 comprising 182 individuals from shelters and 404 individuals from households. The sample include respondents in communities & shelters, covering urban, semi-urban and rural segments. Qualitative data included 35 Key Informant Interviews (KIIs) (government officials, local authorities & nonprofit organisations (NPOs).

Findings in summary:

Care and Protection: 47% of children report witnessing adults being violence or drunk; Life in the shelters does not allow for privacy or human dignity.

Education: Some children lost school uniforms, books etc. Learners in Matric and Tertiary currently residing in shelters with no proper infrastructure for studying.

Psychosocial: “Home can be rebuilt but children will still be orphaned and their lives will never be normal ever again”; “Whenever it rains we worry about losing what is left of our homes”.

Health Status: Limited access to primary health care, lot of chronic patients not accessing their routine care and treatment, high number of persons with disabilities.

HIV/AIDS:

Limited access to services especially chronic medication- ARVs and TB treatment etc. Fear to disclose HIV status; high levels of Stigma. This further hamper access to essential services.

Food Security: Families are struggling with limited resources buy sufficient food, some shelters are not as well resourced – no electricity or enough bathrooms, no kitchen facilities.

Economic Wellbeing: Most households are dependent on government grants with no other sources of income. High dependency ratios many family members dependent on the little they get from government – 40% have more than 5 members in the households. High cost of living and limited access to shops makes it even harder to stretch the Rands to cover their needs.

Implications in summary were:

- The study provided new insights to understand the needs of affected families at household level and at the shelters;
- Findings show vast requirement of needs, yet outreach still very limited;
- Coordination across sectors needed to be strengthened, through for example one comprehensive plan for governments response measures;
- A comprehensive strategy to move affected families from the shelters was required;

- With over 70% people unlikely to return home soon, there was a need for government to have plans that would cover the anticipated length of the stay;
- Address staffing shortages within social development sector for a more effective response; lots of unemployed social workers who could be deployed; improve the coordination of debriefing of social workers.
- Better services to school going children and especially high school learners related to study facilities; and
- A need for ongoing efforts to gather robust data to inform decision making.

Recommendations of this study were discussed by the NJFCC and the results were reported to be influencing the tactical changes on the ground to improve the efficacy of interventions. The second round of the study will be conducted and will help track progress and effectiveness of the emergency response over time.

4.2 How effective were human settlement interventions?

Assessments showed a total of 17 702 homes affected by floods across the four provinces, 6 568 of these are reported to be totally destroyed and 10 081 partially damaged. Most of these damages were reported in KZN districts of eThekwini, uGu and iLembe.

Estimates showed that 7 988 people have been left homeless in throughout the provinces with 4 983 in KZN, 800 in the North West district of Ngaka Modiri Molema. EC reported that there were 2 205 people left homeless, mostly in OR Tambo and Alfred Nzo.

Table 6: Assessment of damages to homes

Province and District	Number of Homes affected	Number of Homes totally destroyed	Number of Homes partially damaged	Number of People left homeless
Eastern Cape	1 771	-	1 771	2 205
Alfred Nzo	185	-	185	435
Amathole	-	-	-	282
Chris Hani	-	-	-	191
Joe Gqabi	-	-	-	41
OR Tambo	1 586	-	586	1 256
KZN	14 848	6 568	8 310	4 983
Amajuba	88	69	19	-
eThekwini	10 200	3 000	7 200	3 000

Province and District	Number of Homes affected	Number of Homes totally destroyed	Number of Homes partially damaged	Number of People left homeless
Harry Gwala	519	297	222	143
iLembe	1 439	187	252	653
King Cetshwayo	331	228	103	147
uGu	1 139	049	90	490
uMgungundlovu	232	172	60	257
uMkhanyakude	82	78	4	17
uMzinyathi	163	153	10	36
uThukela	261	192	69	132
Zululand	394	143	281	108
North West	1 083	-	-	800
Ngaka Modiri Molema	1 591	-	-	800
Grand Total	17 702	6 568	10 081	7 988

4.2.1 Phase 1: Provision of temporary shelter

Phase 1 Immediate interventions to assist families who have lost their homes consisted of provision of temporary shelter, through Mass Care Centres (MCCs), and the Temporary Residential Units (TRUs). More permanent solutions, which form part of the Phase 2 and Phase 3 interventions, included provision of building materials and related support for households to repair their homes and allocation of land for re-settlement of communities that lived in flood prone areas.

Accommodation in MCCs is provided within days of the flood disasters to ensure that people have shelter, are safe and are provided with essentials. According to the sector norms and standards, the floor area of a shelter should be at least 24m² and may vary up to 30m² depending on the need and possibilities within the funding limits.

TRU's are allocated per household affected. The NHBRC conducts quality and compliance verification against approved specifications, industry norms and standards and reports on any variance so that corrective steps can be taken. There were controversies regarding inconsistencies with respect to costing of TRU construction in different provinces, which calls for standardisation of costing and a better

understanding of key cost drivers that cause the variation in different settings. Some affected families, especially in North West, rejected the TRU concept as degrading.

Table 7: Provision of mass care centres and Temporary Residential Units (TRUs)

Row Labels	People left homeless	Number of mass care centres provided	Number of Persons/occupants in mass care centres (baselines)	Temporary residential units (TRUs) targeted and delivered	Temporary residential units (TRUs) delivered
KZN	4 983	104	6 706	1 810	827
EC	2 205	3	-	-	255
NW	800		182	335 335	-
Total	7 988	107	6 888	2 145	1 082

Row Labels	People left homeless	Number of mass care centres provided	Number of Persons/occupants in MCCs (baselines)	Temporary residential units (TRUs) delivered
Eastern Cape	2 205	3	-	255
Alfred Nzo	435	-	-	170
Amathole	282	-	-	-
Chris Hani	191	-	-	-
Joe Gqabi	41	-	-	-
OR Tambo	1 256	3	-	85
KZN	4 983	104	6 706	1 710
Amajuba	-	-	-	100
eThekweni	3 000	120	6 357	287
Harry Gwala	143	-	-	150
iLembe	653	11	240	490
King Cetshwayo	147	-	-	140
UGu	490	3	28	139
uMgungundlovu	257	1	81	180
uMkhanyakude	17	-	-	40
uMzinyathi	36	-	-	70
uThukela	132	-	-	70
Zululand	108	-	-	40
North West	800		182	-
Ngaka Modiri	800	4	182	-
Grand Total	7 988	111	6 888	1 082

From 7200 families with budget affording only 3011 families, 576 have been supplied with material vouchers. Other flood victims' families are staying with their relatives

KZN has initially reported providing over 104 mass care centres, accommodating 6 706 people. This number of occupants exceeded the 4 983 reported to have been left homeless. Most of the families were reported to be from the informal settlements

that are in flood prone areas. The number of mass care centres and number of occupants gradually reduced as people exit back to their homes, or to occupy TRUs or find other alternatives.

4.2.2 Phase 2 human settlement intervention

By 31 July, the number of mass care centres in KZN had reduced to 89 and exit plans have been developed to link those facilities to Land parcels and TRUs as part of the exit plans.

eThekwini had established a joint operations committee to administer a strategy for closing the centres. The strategy involves linking of each centre to a land parcel where TRUs are to be constructed. Increased provision of TRUs has also enabled closure of 40 mass care centres and exiting of 1314 people from the centres by 08 August 2022.

NW provided 3 shelters (Gereformeerde Kerk, Tribal Authority Hall and Old Age Home) which accommodated the 800 people that were left homeless. Reports indicate that by 30 June 2022 all the 800 people have exited the MCCs in NW, wherein some of the people returned to their homes while others have found alternative accommodation with their friends and relatives. NW has been requested to collect relevant data to quantify how many people are housed with families and relatives or still using alternative accommodation.

EC provided 3 mass care centres but there was no data reported on the number of occupants. It is not clear how the 2 205 people reported to have been left homeless were assisted with shelter.

KZN has targeted 1810 Temporary Residential Units (TRUs) to be provided to eligible households by 31 July 2022. Beneficiary profiling and assessments have commenced in all districts to assess eligibility. Construction of TRUs commences immediately once suitable land is confirmed and procurement processes are finalised.

Available information indicates that by 12 August 2022, KZN completed construction of 827 TRUs and handed over 764 to households for occupation; 2 districts in KZN had achieved their targeted number of TRUs (King Cetshwayo – 40; uMkhanyakude – 40; and uMzinyathi exceeded its target from 50 to 70). The pace for the delivery of TRUs improved over time but still deemed to be too slow, largely due to lengthy processes for identification and allocation of suitable land. Granular information showed progress of TRU construction at various stages: geophysical assessment completed; platforms cut; slabs completed; wall panels installed; TRU completion; and TRUs handed over to families for occupation.

4.2.3 Phase 3 human settlement intervention

By 30 June 2022, a total of 616 land parcels had been identified by the DPWI in various parts of KZN. Of this number 65 sites had been assessed and found to be suitable for human settlement. By that time, 38 land parcels (covering 78 hectares) was awaiting release by DPWI pending a Power of Attorney.

North West reported that 335 families require TRUs. Part of residents are hesitant to accept TRUs but prefer RDPs while other prefer support to repairs to their existing homes (some people wanted to be compensated for their value of houses in excess of the RDPs), or assistance with relocation to a new place within Deelpan.

Information regarding provision of TRUs in EC and NC provinces could not be accessed by the time of compiling this report.

Text Box 1: Outcome of DPME monitoring visit to Deelpan, North West

The DPME's monitoring visit to Deelpan, North West on 18 August 2022 revealed that some key concerns that were noted during the 24 May visit led by the Deputy Minister (DM Pinky Kekana) and the 30-31 June visit by the Ad-Hoc Joint Committee were still not resolved. A decision matrix has been developed between the DPME and the Office of the Premier to identify key issues requiring urgent decision and/or actions.

Important markers of progress were that (a) the traditional leadership in Deelpan has allocated land that can be used for temporary residences and/or permanent relocation, (b) The Provincial Department of Human Settlement has budgeted R54 million for construction of the targeted 800 TRUs.

Amongst the key concerns were the following:

- Construction of TRUs has not commenced. Less than half (335 out of 800) of the displaced families have confirmed need for TRUs, while others prefer other alternatives, i.e. RDP houses, repairs to own house, relocation to a new area, etc. NW has been requested to collect data to quantify these preferences and inform decisions.
- Part of the community refused to be relocated for a variety of reasons. Social facilitation consultations have been recommended to address this gridlock.
- The land allocated by the traditional authority needed to be assessed for its suitability for temporary and/or permanent human settlement.
- Concerns that estimates of flood disaster tended to include pre-existing items, which should not have been included.
- Difficulties to reprioritisation of the funds given the risk of negative impact on other areas of service delivery.
- Decision on funding: NDMC and OTP must meet to resolve the funding applications by Tswaing Local Municipality (27 July 2022) of R84,9 million, the challenges, options and a way forward.
- Unreliable provision of water through tankering services.
- Sanitation challenges that the 50 promised mobile toilets were still not provided.
- Risk of water borne diseases – requiring that water testing be done more frequently.

KZN and EC have received support from the Development Bank of Southern Africa (DBSA) consisting of purchase and handing over of water tankers to relevant Water Services Authorities (WSA) and provision of 100,000 litres of water; 15 Borehole water packages (permanent structures comprising solar powered borehole and treatment

shared community facilities); 230 replacement houses (permanent structures targeted provided to the indigent) and repair of 2 bridges (Mneno Bridge in Port St Johns and the Dikidini Bridge in Ntabankulu – Alfred Nzo district). The DBSA valued its support at R120 million and its approach is to use its own capacity to construct the facilities/ infrastructure and handing it over once completed to the local authority to operate and maintain. The capacity deployed by DBSA included civil and electrical engineers, quantity surveyors, project managers/ administrators and supply chain/ procurement specialist.

Information regarding uptake/ utilisation of vouchers or material for repair of houses and other housing support has not been accessed by the time of compiling this report.

4.3 Have interventions plans been adequately developed?

To what extent were plans adequately developed, costed with clear targets, timeframes and responsibility? This question covered engagements to ensure capacity of the state to intervene and planning.

4.3.1 Engagements to ensure capacity of the state to intervene

Following the declaration of the national disaster, the DPME convened several engagements with relevant role players to scan the institutional environment with a view to ensure that sufficient capacity is mobilised to support the disaster management interventions, building on the recommendations of the meeting of 27 April 2022 between the Minister in the Presidency and the Minister of COGTA, which noted that both institutions mandated by the Disaster Management Act (DMA, Act 57 of 2002) and others that are capable be mobilized to support the overall national effort.

The DPME engaged the following institutions:

- **Development Bank of Southern Africa (DBSA)** on 07 June 2022, which had already deployed capacity to support the efforts in the KZN and EC provinces with respect to emergency water supply, provision of 15 borehole facilities as part of long-term water solutions, building of 230 replacement houses for the indigent, repair of 2 bridges. The DBSA needed government's guidance on land identification where they can build the permanent housing structures.
- **Durban Chamber of Commerce and Industry ("the Chamber")** on 09 June 2022 to understand the contribution and need of business sector. The Chamber, among other interventions to restore business operations, highlighted a need for an effective mechanism of following through on the key commitments made during their engagements with senior government leaders regarding recovery from not only the recent floods but also the July 2021 unrests and Covid-19 lockdowns. The Chamber met with the President on 15 May 2022, where a priority for restoring operations at the Port of Durban was identified. The business community needed

certainty on government's commitment in replacing the current stormwater and sanitation systems in the Prosperon precinct with flood resilient infrastructure in order to resolve a long-standing challenge of vulnerability of the area to floods.

- **United Nations Development Programme (UNDP)** on 13 June 2022. To strengthen the capability for disaster management in South Africa, the UNDP had already deployed its officials to assist with the flood interventions in the KZN province and was supporting the NDMC with the review of the disaster management frameworks. Furthermore, the UNDP was supporting the National School of Government (NSG) in designing a training course on disaster management. The DPME and UNDP agreed to collaborate on a series of webinars in which good practices for disaster risk management will be exchanged with the countries that UNDP has been requested to recommend.
- **Auditor General of South Africa (AGSA)** to share information that will aid scoping of the real-time audit. Initial engagements assisted AGSA in understanding the roles of various actors, i.e. "who is doing what".
- **Council for Scientific and Industrial Research (CSIR)** to support the KZN province with respect to data systems to support the interventions.
- **Human Sciences Research Council (HSRC)** to plan a collaborative project on frontline citizen-based monitoring of the disaster interventions.
- **The Presidency and National Treasury** to contribute to the establishment of the Oversight Committee on the National State of Disaster on the Impact of the Severe Weather Events ("Oversight Committee"), a structure to be led by the DG Presidency to ensure that resources made available for disaster relief are utilized for that sole purpose and value for money and impact on citizens.

4.3.2 Planning for flood disaster interventions

From the onset, the DPME provided support in relation to planning, monitoring and evaluation (PM&E). This comprised guidance to affected components of government on how the disaster response interventions can be integrated within the PME frameworks and on facilitating the necessary adjustments, where required. The DPME and the National Treasury jointly ran consultations with Offices of the Premier (OTPs) in KZN, EC, NC, and NW on the revision of Annual Performance Plans (APPs) and adjustments to the 2022/23 budget allocations to incorporate the impact of the flood disaster interventions. Circular 5/2022 was subsequently issued to provide guidance on the revision and re-tabling of the APPs (2022/23 and the outer years) and the 2020-2025 Strategic Plans (SPs). In addition to providing support and guidance in relation to PM&E, it was further indicated that the DPME may at any point initiate independent processes for assessing and validating plans, as well as monitoring and evaluation activities with a view to inform strengthening of the capacity of the state institutions in implementing the interventions and enhancing their efficacy.

4.4 Have funding and other resources effectively mobilised?

To what extent was funding and other resources effectively mobilised to enable implementation? This question covered mobilisation and flow of public funding resources and contributions by non-government sectors.

4.4.1 Mobilisation and flow of public funding resources

The adopted Results-Based Framework identified resources or inputs for intervening in the flood disaster as including government and non-government contribution, as follows (1) government funding sources, (2) capacity support (personnel and material) from national departments, (3) other provinces and public institutions, (4) development finance institutions, (5) non-government sector funding and in-kind contribution, (6) insurance; and (7) international sector funding and in-kind contribution.

The system of disaster management in South Africa requires all organs of state to have disaster risk preparedness and response plans. This implies that a portion of their budget would be set aside for this purpose, to enable immediate repairs for the damages that may arise from disasters. Organs of state can take insurance cover for their assets to offset of the cost of damages. Accounting Officers can make certain adjustments in their budgets to fund their disaster response, in some cases requiring approval of the National Treasury but in others not. Over and above this, the government allocates disaster relief grants under Vote 3: Cooperative Governance (which are Provincial Disaster Response Grant and the Municipal Disaster Response Grant) and Vote 33: Human Settlement (which are Provincial Emergency Housing Grant and the Municipal Emergency Housing Grant) in terms of Schedule 7 of the Divisions of Revenue Act (DORA).

To access funding under these streams, national departments, provinces and municipalities make an application to the relevant national transferring departments, which are the Department of Human Settlement (DHS) and the Department of Cooperative Governance (DCoG), who in turn make a recommendation for the National Treasury for the funding transfer. Beyond these funding streams, disaster relief can be attended to through the Contingency Reserves should there be a case for “Unforeseeable and Unavoidable” expenditure which can be motivated in terms of Section 30 of the Public Finance Management Act (PFMA).

By November 2022, R5.501 billion had been approved for the affected provinces, municipalities and public entities under different funding mechanisms. Of this amount, R4,625 billion comprised reprioritisations while R875 million comprised disaster relief grants. 94% of the total amount is for KZN, 4% for Eastern Cape, 1% for NW and 1% for national level support for businesses. MTBPS announced that an additional R6.1

billion is allocated through the 2022/23 adjustment budget for humanitarian relief and the recovery and rehabilitation of infrastructure damaged.

Emergency procurement has been ineffective due to bureaucratic hindrances and a level of anxiety among government officials to make mistakes in fear of audits. The lack of trust on government to prevent the repeat of corruption experienced with the procurement of Covid-19 personal protection equipment (PPEs) motivated the President to establish the Oversight Committee to ensure that all funds allocated for disaster relief are utilised for that purpose. The processes mostly followed resembled “business as usual” instead. There is a strong case for awareness creation, training and guidance on matters of emergency procurement across government.

Several affected municipalities and provinces delayed completing assessments and verifications of damages, which indicated challenges of capacity and understanding of the process. There have also been delays with respect to confirmation of damages to be covered through insurance. Both these factors seem to have delayed decisions on the approval of funding and implementation of interventions. Latest reports still indicate that most of the activities at the local level, i.e. municipality, are still at procurement stages.

The real-time audits, while it added to the time lag between fund approval and utilisation, proved an important mechanism to ensure that funds are utilised for the intended purposes and value for money as reported by the Auditor General on 31 August 2022.

The first report of the Auditor General of South Africa (AGSA) was dated 31 August 2022. Its scope covered schools (mobile units), human settlement (temporary residential units), water infrastructure (water tinkering services in KZN), repairs to government properties and Social relief. AGSA reported on real-time audits aimed at preventing and detecting weaknesses in controls, and reporting the risks as implementation unfolds in order to enable prompt corrective actions – and focused on procurement, contract management and payments; value for money; and effectiveness of monitoring and oversight.

Key findings by AGSA: Overall response was too slow; slow spending and slow delivery; Inadequate needs assessment of schools mobile units, incomplete installations and not following specifications; TRUs - slow needs assessment and validation of beneficiaries, installations not following specifications; Water Tankering – inadequate needs assessment, ineffective use of water tankers, variation in pricing; Government properties – possible unfairness in procurement, late submission of quotations, open-ended appointments; Social relief – no material findings.

Figure 7: Status on funding approvals as at 09 November 2022

Rand thousand	KwaZulu-Natal	Eastern Cape	North-West	National	Total
Human Settlements	1 729 164	122 310	55 928	-	1 907 402
Human Settlements Development Grant	733 086	105 710	55 928	-	894 724
Informal Settlements Upgrading Partnershi	189 217	-	-	-	189 217
Informal Settlements Upgrading Partnershi	124 429	-	-	-	124 429
Provincial Emergency Housing Grant	342 132	-	-	-	342 132
Municipal Emergency Housing Grant	-	16 600	-	-	16 600
Urban Settlements Development Grant	340 300	-	-	-	340 300
Water and Sanitation	64 933	-	-	-	64 933
Water Services Infrastructure Grant	64 933	-	-	-	64 933
Co-operative Governance	448 110	109 811	-	-	557 921
Municipal Disaster Response Grant	406 850	109 811	-	-	516 661
Municipal Infrastructure Grant	41 260	-	-	-	41 260
Small Business Development	-	-	-	60 000	60 000
Flood relief programme	-	-	-	60 000	60 000
Transport	2 910 892	-	-	-	2 910 892
Provincial roads from equitable share	1 881 718	-	-	-	1 881 718
Provincial Roads Maintenance Grant	1 029 174	-	-	-	1 029 174
Total	5 153 099	232 121	55 928	60 000	5 501 148
Of which:					
Total disaster relief grants	748 982	126 411	-	-	875 393
Total reprioritisation	4 404 117	105 710	55 928	60 000	4 625 755

	Total allocation	Transferred	% allocated to date	Spent	% spent to date
Human Settlements	1 907 402	1 696 983	89,0%	1 347 822	79,4%
Water and Sanitation	64 933	64 933	100,0%	-	0,0%
Co-operative Governance	557 921	554 548	99,4%	18 407	3,3%
Small Business Development	60 000	60 000	100,0%	-	0,0%
Transport	2 910 892	2 910 892	100,0%	1 907 918	65,5%
Totals	5 501 148	5 287 356	96,1%	3 274 147	61,9%

Source: DPME calculations based on National Treasury data (07 Nov 2022)

4.4.2 Contributions by non-government sectors

Donations have been received in a form of funding and in-kind support, and delivered to the destined provinces or affected areas. Information on donations appear in various reports but it is not easy to discern at an aggregated level. KZN has developed guidelines and information systems to consolidate donations at the provincial level to enable proper governance and ensure a level of oversight on the donation and their deployment. The Ad-Hoc Committee has called for a mechanism of ensuring that donations are helping to achieve equity principles.

A report by National Treasury indicates that KZN received Donor Funding totalling R4.23 million, R3 millions of which is allocated to education for repair and rehabilitation of schools, R100,000 towards health. MinComBud process was due to consider allocation of the balance by 31 August 2022. KZN also reported R600,000 in donations pledge. By the time of preparing this report, there was no indication of whether such pledges have translated into actual donations.

By the time of preparing this report, funding through insurance cover were still awaited in various sectors. Relevant municipal authorities were still engaging with respective insurance companies. Delayed response by insurance companies has been identified as one of the causes of delays in finalising submission of applications for funding through government sources.

Markers of progress in the areas on planning, budgeting and funding are listed in Table 1 together with the status to date. Paragraphs that follow provide the explanations.

Table 8: Progress indicators on planning, budgeting and funding

Output and result indicators monitored by DPME	Status as at 12 August 2022)	Key issues arising/ Decision Points/ Recommended Action
Finalised assessment and costing of damages	<ul style="list-style-type: none"> - Assessments and verification of damages have been conducted and were at various stages of completion - There were certain outstanding verifications of damages and costing (health sector, electricity, rail infrastructure, telecommunications, agriculture) - Potential duplication of recorded damages across sectors need to be reconciled 	<ul style="list-style-type: none"> - Relevant institutions to finalise consultations on the assignment of responsibility for the repair of various infrastructure and related facilities (Department of Public Enterprises, National and provincial departments of Transport and eThekweni, Transport, SANRAL, PRASA, TRANSNET, etc. private companies. - NDMC to continue working with Infrastructure South Africa to develop a complete and clear view on progress with regards to infrastructure reconstruction.
Integration of disaster responses into APPs and budgets	<ul style="list-style-type: none"> - Circular 5/2022 issued to facilitate revision of Plans to provide guidance on the revision of Annual Performance Plans (APPs) and Strategic Plans (SPs) - Of the 51 national institutions addressed by Circular 2/2022, 5 have revised and re-tabled their APPs, 33 replied indicating that they have not revised their APPs, and 13 did not respond. Provincial institutions that revised and re-tabled their APPs are 2 in NW, 5 in KZN. No indication was received from NC and EC. - 2023/24 MTEC process is underway. 	<ul style="list-style-type: none"> - Provinces, through their PROVJOINTS, to consolidate their planned interventions, targeted timeframes and progress to date in order to enable integrated view of disaster responses.
Coherent reporting frameworks & systems	<ul style="list-style-type: none"> - Activity planning and reporting template adopted by NJFCC on to facilitate consistency (NJFCC). There are still gaps concerning targets and timeframes for certain interventions. 	<ul style="list-style-type: none"> - Fast-track the automation of reporting templates and monitoring systems still underway (NDMC, ISA, CSIR, DPME)
Utilization of allocated or approved funding	<ul style="list-style-type: none"> - By 12 August 2022, National Treasury reported that R5,253 billion had been approved for the affected provinces, municipalities and public entities under different funding mechanisms. - On procurement, R101 million has been paid out of a total of R4.09 	<ul style="list-style-type: none"> - All provinces, through their PROVJOINTS, to present consolidated information on funding applications they have submitted and/or intend to submit, highlighting specific challenges hampering submission of such applications and the nature of support required

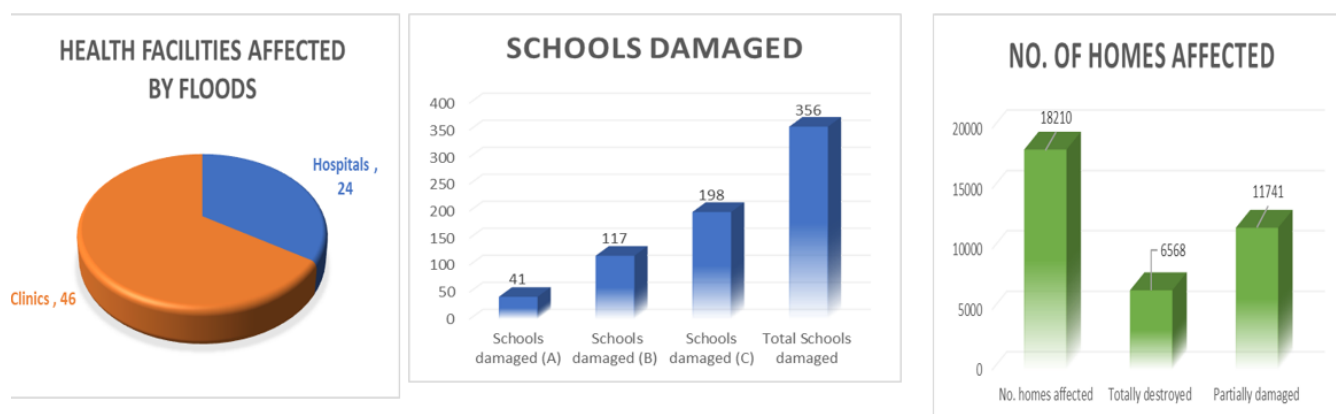
	billion in orders relating to the flood disaster response	
Reporting on funding from non-government sources	<ul style="list-style-type: none"> - Donor funding totalling R4.23 million reported for KZN; R3.10 million already allocated to relevant interventions. KZN also reported R600,000 in donations pledged - KZN adopted Guidelines for administering donor funding. 	<ul style="list-style-type: none"> - To ensure accountability – All provinces encouraged to adopt and implement guidelines for administering donor funding (EC, NC, NW)
Reports on utilization of allocated or approved funding	<ul style="list-style-type: none"> - 473 Total Orders to the value of R3.96 billion across 87 Institutions. R72.22 million Total Payments reported. - KZN commenced with internal audits 	<ul style="list-style-type: none"> - Slow spending indicates slow pace of implementation

4.5 What is the progress in restoring damage to public infrastructure?

This section will first present the estimates on the extent of damages, and present findings as per the different basic infrastructure starting with roads and bridges, rail infrastructure, water; electricity; health facilities, and schools, covering more detail on the estimation of damages, the interventions, results and ongoing actions/ challenges and/or recommendations.

4.5.1 What were the estimates on the assessment of damages?

Initial estimates of the extent of the damage and the associated impact were done through preliminary assessments in various provinces. Verifications and reconciliation of records has proceeded in various sectors and some of the verifications were still underway by 30 June 2022. Information on the estimated damage and costing implications were updated as new evidence emerge.



Among the impact of damages were fatalities, missing persons, injured persons as well as damages to homes, businesses, livestock and crops as well as social facilities and public infrastructure (roads and bridges, railways, electricity lines, water infrastructure,

health facilities, schools, police stations, magistrate courts, military bases, churches and mosques, sports facilities, etc.).

4.5.2 Roads and bridges infrastructure

Estimation of damages

Initial assessments in KZN have confirmed different types of damages to the road infrastructure. The immediate impact was closures of various routes that were deemed unsafe. Various places could not be accessed including to areas that required critical intervention for the search and rescue teams. The types of damages on road infrastructure include: roads layer washed away, mud slides, slip failures and gabion wingwalls washed away, drainage structures washed away, sinkholes, mudslides, gravel loss, potholes, bridges collapses, etc.

Interventions

Swift interventions led by the KZN Department of Transport (KZN-DOT) were implemented as part of Phase 1, which focussed clearing the debris and reinstate road access in certain areas within the first 3 weeks of the disaster. The search and rescue and humanitarian teams used helicopters to access certain areas. Community members and civil society organisation in various places volunteered to assist in clearing the debris. Emergency procurement guidelines were developed and used to appoint service providers to complete the minor urgent repairs on the road networks within the initial 3 weeks.

The general approach was for municipalities and provinces to conduct initial assessment of the damages. SANRAL conducted further assessments to verify and confirm the damages and estimates of costs of repairs and prepared a final portfolio of work packages of road infrastructure repairs across the system. The information was loaded into a mobile APP, which is used in the sector as common reference point for tracking progress at a project level and communication with respect to restoration of functionality of infrastructure.

Responsibility for repairs has been allocated in line with the mandates of relevant institutions, namely Department of Transport (at national, provincial and local level) and SANRAL, given the demarcation of the national and provincial roads. KZN-DOT and SANRAL signed a Memorandum of Agreement (MOA) for the repair of road infrastructure. The sector has appointed SANRAL as the coordinator for road infrastructure repairs, and it will implement some of the projects on behalf of other road authorities. A Rapid Response Team, comprising executives of lead agencies and DGs of respective departments and provinces, has been established in the sector to monitor implementation of projects and reports to the Minister of Transport regularly. The national DOT, therefore, produces progress update at project level.

KZN-DOT estimated the damages on the roads in the province to be R5.799 billion and managed to reprioritise R2.910 billion which will be used on some 730 prioritised repair projects in 2022/23.

EC estimated damages at R1.360 billion, about R1.288 for roads and R71 million for bridges. The damages are reported on 224 roads (stretching 2753,61 km) and 32 bridges. Damages reported include road washed away, bridge collapses, landslides and erosion. Affected districts are Alfred Nzo, OR Tambo, Joe Gqabi, Chris Hani and Amatole and include those damaged during floods in December 2021 and January 2022. Alternative access routes have been opened to enable mobility and access. EC provincial Department of Transport has allocated R158 million for the repairs and reported a shortfall of R1.202 billion, of which R800 million is required in 2022/23 and R402 million will be required in 2023/24. The national DOT is implementing repairs in the EC using existing funding, of which repairs amounting to R110 will be carried out in 2022/23 and for about R50 million in 2023/24 financial year.

NW estimated damages to road is R4.039 billion and include structures washed away, bridges collapsing, gravel loss and erosion. The damages in NW are reported to have occurred in December 2021, January 2022 and April 2022 not only in Deelpan in Naka Modiri Molemo District but in Dr Ruth Mophati, Bojanala and Kenneth Kaunda districts as well. Immediate and interim measures implemented to enable mobility include opening of alternative routes using existing resources in the province. Reports show that major repairs will be undertaken once funding becomes available.

Table 9: Estimates of damages to road infrastructure in KZN, EC and NW

	KZN	EC	NW
Total number of damages reported	730	256	
Number of roads affected		224	
Number of bridges affected		32	
Estimated cost of damages on roads and bridges	R5.799 billion	R1.360 billion	R4.039 billion
Available funding	R2.910 billion	RR158 million	
Estimated shortfall		R1.202 billion	
Estimated request in DOT funding application under U&U	R2.059 billion	R800 million	R111,1 million

Results

Summary information on KZN indicates that Phase 1 repairs have been completed and some of the key routes have been opened to traffic (See Table 8). The damages were reported on various parts of the N2, N3, M4 and R102. More specifically, the damages indicated are as follows: the N2 uMhlali river bridge; N2 uMhlanga river erosion, northbound carriageway; N2 uMhlangane river erosion queen Nandi drive; N2 Louis Botha overpass approach fill; N2 Section 23 slip failure; N2 Section 24 slip failure; N2 Adams road erosion; N3 Cliffdale southbound carriageway onramp pipe culvert failure; Minor Routine Maintenance Repairs on sections of the N2 and N3; R102 (KZNDOT); M4 (KZNDOT). Phase 1 repairs have been carried out on these and most of these

have been opened to traffic while the repair work is ongoing. SANRAL has targeted to advertise tenders for all permanent repairs by end of August 2022 so that construction can commence in September 2022 – with targets to complete some failures by December 2022 and the rest by July 2023.

Table 10: SANRAL progress update on restoring KZN N2 roads infrastructure

Location	Photo	Damage Details	Est Cost	Est Duration	Status	Repair Progress	Estimated Milestones
B959A Mhlali River Bridge (North Bound)		Bridge shifted off bearings and scour behind abutments	R36m	3 months	Partially opened through deviation Bridge closed	Design and construction drawings finalised. At Contractor procurement stage	Commence construction 28 September 2022
B3018 Ramp M45 Queen Nandi to N25 over Umhlangane River		Scour and erosion to both the approach embankments behind the abutments of the bridge in the shoulders	R5m	1 months	Open to traffic	Design and construction drawings finalised. At Contractor procurement stage	
B810 Louis Botha Overpass		Scour and erosion to both the approach embankments behind the abutments of the bridge.	R6.5m	2 months	Open to traffic	Design and construction drawings finalised. At Contractor procurement stage	
Umhlanga River Bridge		Scour and erosion to both the approach embankments behind the abutments of the bridge in the shoulders	R5m	1 months	Open to traffic	Complete. Road will be open to traffic on 9th June 2022	Complete
Armco Culvert on N3 SB ramp at Peacevale Interchange		Pavement failure and severe erosion of the road fill above the Peacevale Armco culvert.	R10m	6 months	Open to traffic	Permanent road repairs – At Contractor procurement stage	Commence construction 28 September 2022
Embankment failure on N2 NBC		Complete embankment failure resulting in NBC slow lane and shoulder settlement over 1meter	R240m	8months	Deviation to median Closed to traffic	Deviation to the median opened to traffic on 27 th May 2022. Permanent road repairs – At Contractor procurement stage	
Embankment failure on N2 SBC		Embankment failure resulting in cracking and settlement on the SBC shoulder, slow and fast lanes	R240m	10 months	Open to traffic	Finalisation of scoping. At Consultant procurement stage	Commence design 7 September 2022
Embankment failure on N2 SBC N2 524		Embankment failure on N2 NBC -Adams Road.	R10m	2 months	One lane closed	Permanent road repairs – At Contractor procurement stage	Commence construction 28 September 2022

In the Port of Durban, Transnet National Ports Authority (TNPA) has completed the repairs on the Bayhead Road and all lanes are reported to have been opened. Key stages included the following:

- Phase 1: Opening of 1-way traffic immediately to enable flow and access; opening of 2 lanes on 16 April 2022;
- Phase 2: Opening of 3rd lane on 07 May 2022; and a target to open 4th lane on 10 June 2022;
- Phase 3: A target for the redesign and reconstruction of the canal bridge to accommodate extreme flooding to have 3 lanes inbound and 3 lanes outbound by end of 2023.
- Construction of a new Bayhead Bypass road within the Port of Durban has commenced.

Ongoing actions/ challenges and/or recommendations

A process to build pedestrian and vehicular bridges was to be implemented by the DOT in partnership with DPWI and Department of Defence from 25 April over a period of 3 months – covering 23 bridges in KZN and 20 in EC. KZN has confirmed a budget of R242 million with DPWI. Completion of these bridges is targeted for 30 May 2023. For KZN, the planned start dates for construction of 23 bridges is indicated as July 2022. Major repairs, such as complete washed-away bridges and roads, would require longer term interventions.

The funding accessed thus far is insufficient to cover the cost of repairs in KZN, NW and EC. The National Department of Transport is preparing a submission to request approval for funding in terms of Section 30 of the Public Finance Management Act (PFMA) as “unforeseeable and unavoidable expenditure”, which require approval by a

committee of Cabinet. The request estimates R2.970 billion, which comprises R2.059 billion is for KZN, R800 million for EC, and R111,1 million for NW.

4.5.3 Rail infrastructure

Estimation of damages

The damages on the rail infrastructure includes tunnels and canal bridges, rail tracks damaged, drainage structures blocked, rubble/debris washed onto the railway tracks, signalling machinery and track equipment damaged, relay rooms flooded, electrical cables exposed, fibre cables and UPS equipment damaged as well as damages on wagons and locomotives. The damages include the Durban-Cato Ridge line, a key node that moves freight between Gauteng and Durban.

Table 9 summarises the estimates that Transnet did as at 30 June 2022 which amounts to R5.015 billion. Further to this, Transnet has estimated costs of business interruption and cost of immediate clean up that were done, which increase the overall loss to R6.402 billion.

Table 11: Estimation of damages to Transnet rail infrastructure

Transnet operation affected	Estimated cost of damage
Transnet Engineering	R1.125 billion
Transnet Freight Rail (TFR) infrastructure	R2.380 billion
Transnet Freight Rail (TFR) locomotives and wagons	R334 million
Transnet National Port Authority	R465 million
Transnet Pipelines	R66 million
Transnet Port Terminals	R6,7 million
Transnet Academy (School of Rail)	R9,5 million
Transnet Properties	627,5 million
Total	R5.015 billion

The map in Figure 5 indicates specific areas affected. Damages are reported in 6 areas in the North and South Coasts under the Transnet Freight Rail (TFR) and also within the Bayhead area. The Passenger Rail Agency of South Africa (PRASA) assets affected include the 7 lines on the Pinetown line and the Reunion – Kelso line. PRASA is appointed as a coordinator for rail infrastructure repairs working with Transnet. The Department of Environmental Affairs and Forestry (DFFE) has applied Section 30A National Environmental Management Act (NEMA) to provide verbal directives or authorisations (with formal written confirmation later) for environment impact assessments (EIAs) so that repairs can be fast-tracked.

Figure 8: Map indicating areas of damage along the rail infrastructure in KZN

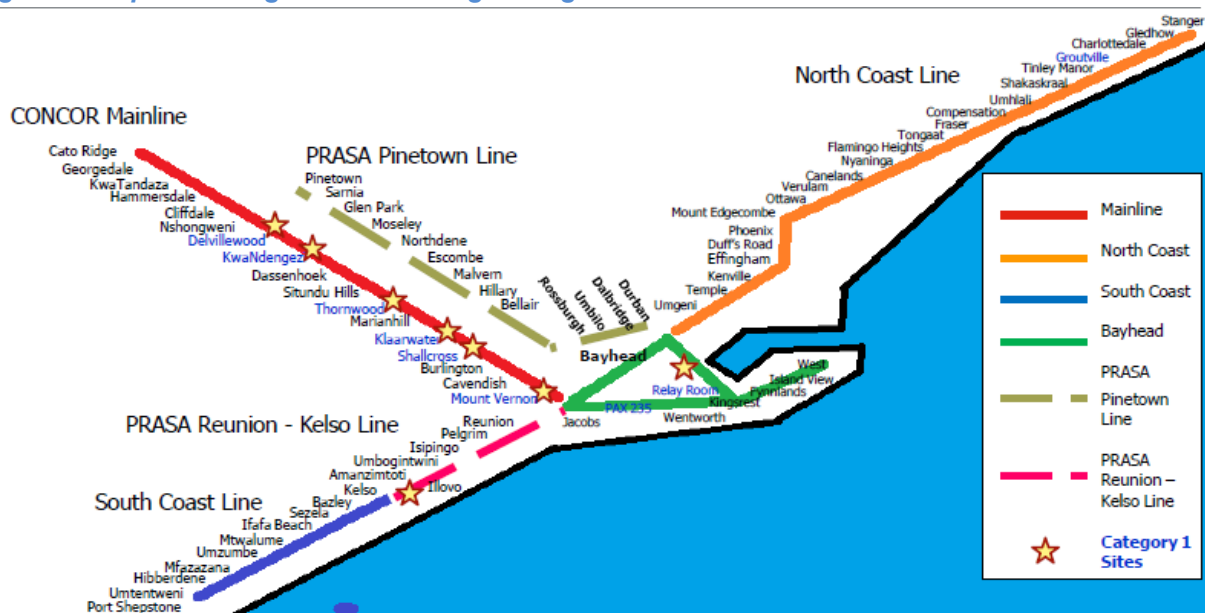


Table 12: Examples of rail infrastructure damages and targets for rehabilitation

Key infrastructure affected	Relevant target
Bayhead key infrastructure:	
Bayhead Canal	Reconstruction and expansion of the canal to reduce flood risk to be completed by December 2022
New Bayhead By-Pass	Construction of new 2-lane route to provide alternative access to the port to be completed by November 2022
Repair of Bayhead seawalls	Repair of Bayhead seawalls to be completed by August 2022
TFR key infrastructure	
The railway line (i.e. the main line which is a double-line) on the Container Corridor between Pietermaritzburg and Bayhead	Majority of the rail infrastructure repair work is being carried out by TFR own internal capacity in a phased approach and targeted to be completed by March 2023, with 100% back into operation by April 2023.
The railway line (also a double line) on the North Coast between Umgeni and Stanger	
The railway line on the South Coast between Kelso and Port Shepstone	
The railway line between Umtentweni and Simuma (on the South Coast)	
433 wagons	
100 locomotives (88 electric and 12 diesel)	Interim targets include opening some lines running the diesel services while repairs are ongoing on the electric services.
Passenger Rail Agency of South Africa (PRASA):	
Pinetown line	Repairs at Reunion Station reported to have commenced in May 2022 and targeted for end of June 2022. By 30 June 2022, none of the 6 railway lines were operational. Repairs targeted to have commenced by 30 July 2022 and be completed by September 2022.
Reunion – Kelso line	

4.5.4 Water infrastructure

Bulk water infrastructure

Estimation of damages

Nature of damages include water pipes bursting and/or washed away, flooding of the water works, contamination, and general damages to critical installations. The immediate impact ranged from complete halt of supply, interrupted supply/load-shedding to low pressure flow.

In KZN, 75 water infrastructure and 62 sewer infrastructure facilities have been identified to have floods damages in various KZN districts and the repairs are estimated to cost about R2.214 billion for short-term emergency repairs (alternative estimate for long-term “building back better” is R7.734 billion).

Interventions

To coordinate action, KZN established a War-Room comprising eThekweni, Umgeni Water, DWS, Human Settlement and DOT, bringing together about 250 personnel. Immediate interventions included repair and/or replacement of damaged pipes, valves and other installations to restore water supply. In other places, temporary alternative supply lines were installed to restore water supply. Water tankers were used to provide critical water supply as part of the humanitarian interventions.

On the Waste water infrastructure, the trunk mains that supply eThekweni’s 27 waste water treatment works were damaged.

Table 13: Progress in restoring bulk water supply per regions in KZN

	Baseline at the point of flood damage (20 April 2022)	Capacity restored as at 31 July 2022 (latest available data)
Inner-west region	30%	60%
Outer West Region	45%	60%
Central Region	45%	50%
Southern Region	15%	20%
Northern Region	40%	42%

The Department of Water and Sanitation’s (DWS) target is to restore the water infrastructure to their pre-disaster status. Reports indicate that most of the emergency repairs and water supply services have been restored as shown in the table above. Tongaat and the areas in the eThekweni South Durban Basin still present major challenges. The storms in May 2022 interrupted restoration of waste water works. In restoring the water and sanitation infrastructure, the sector also undertakes a “Build back better assessment” to determine if redesign is required to incorporate sustainability considerations for the future.

Ongoing actions/ challenges and/or recommendations

There are hospitals/ healthcare facilities and schools that are reported to still be dependent on water tanking services. Preliminary list of the health facilities with this challenge include: Tongaat CHC, Inanda CHC, KwaMakhutha clinic, Msimbini Clinic, Magabheni Clinic, PMMH Gateway. The DWS and the Department of Health have committed to jointly develop a list of health facilities and develop a plan with timeframes for addressing the water supply challenges. This activity is also recommended for the Department of Education in the case of schools.

Relevant municipal authorities are finalising their engagements with insurance and the outcome thereof will inform how much will be requested from the government sources. An estimated R3.4 billion is required for repairs and upgrades of the various water treatment facilities and pipelines. This to be funded through insurance and the water service grant funding. The categorisation of bulk water infrastructure facilities identified are grouped into 4 categories: Those with major damage requiring repairs; Those with moderate damage and needing upgrades; Those requiring construction of emergency pipeline; and Those requiring decommissioning.

Table 14: Progress in restoring bulk water infrastructure facilities

Facility and nature of damage	Baselines reported	Status as at 12 August 2022
Major damage requiring repairs:		
Tongaat	Reinstate WTW to design capacity of 21	No update
Umbilo	Reinstate WWTW to original capacity, which is sufficient for projected sewer demands.	
Umhlanga	Reinstate WWTW to original capacity, which is sufficient for projected sewer demands.	
Needing upgrades to address moderate damage:		
Mkhizwana	Upgrade the moderately damaged Mkhizwana WTW to 4 MI/day. All environmental authorizations are in place for the required upgrade.	No update
Hammersdale	Upgrade the WWTW to 34 MI/day to provide sufficient capacity for projected sewer demands.	
Phoenix	Upgrade WWTW to 110 MI/day to provide sufficient capacity for projected sewer demands.	
Umhlathuzana	Upgrade WWTW to 25 MI/day.	
Hazelmere	Conduct feasibility studies on the upgrade WTW as the long-term solution to address sustainable water supply to Tongaat	
Lower Tugela	Conduct feasibility studies on the upgrade WTW as the long-term solution to address sustainable water supply to Tongaat	
Requiring construction of emergency pipeline:		
Mamba Ridge pipeline	Constructing the Hazelmere to Mamba Ridge pipeline (7 MI/day) to supply the Tongaat area in the short to medium-term.	No update
Nyaninga South	Construct Nyaninga to Tongaat South-emergency pipeline (4 MI/day) to supply the Tongaat area in the short to medium-term.	
Those requiring decommissioning:		
KwaNdengezi	Decommission WWTW and transfer flows to Southern WWTW, with a capacity of 230 MI/day,	No update

Dasselhoek	Decommission WWTW and transfer flows to Southern WWTW, with a capacity of 230 Ml/day,	
------------	---------------------------------------------------------------------------------------	--

4.5.5 Electricity infrastructure

Estimation of damages

In KZN, assessments confirmed that the damages on electricity infrastructure was largely in the eThekweni regions of electricity supply and in uMgungundlovu district. eThekweni municipality estimated the damaged to be around R405 million, which included substations flooded, cables damaged, buildings, boundary walls and fencing damaged. These damages have been grouped into 3 categories, namely high voltage (HV), medium voltage (MV) and low (LV) voltage operations. HV would be substations and main supply cables to industrial operations while LV would mainly be end users such as households. The damages were on both the indoor and outdoor infrastructure. The higher winds and rain caused power lines and pole structures to fall due to soaked ground. Circuits tripped as water penetrated the equipment. As network damages increased, electricity supply to customers were progressively being cut off – estimated to have affected more than 200,000 households. Automated protection systems operated were deemed to have been effective in correctly switching-off power where it detected faults.

Interventions

eThekweni reported that the process of restoring faults and repairs were immediately carried out once access routes to affected areas were opened. Accessibility was a key challenge in the initial stages due to debris and blocked roadways, localised flooding, collapsed bridges, etc. To manage response time to restore faults using limited staff and time pressures, the teams resorted to providing group responses instead of responding to individual queries/faults. This approach involved teams working continuously in a shift system, pooling resources such as vehicles, equipment and centralised dispatch to ensure impactful response in restoring the supply and reach as many people as possible in any area covered. Restoration of electricity was done in accordance with hierarchical importance, with highest priority given to safety/health and emergency response, followed by disaster relief efforts, and then restoration of critical utility services, area restoration and lastly.

Results

The number of faults reported increased considerably at the height of the disaster, with LV faults increasing from 964 of 11th of April to peak at 12,546 on the 28th of April. MV increased form 11 on the 11th of April and peaked at 108 on the 24th of April 2022. Data ending 19 May 2022 provided by eThekweni show that the grid has been stabilised with the LV and MV faults reduced to around 10 and around 2000 respectively.

KZN has reported that electricity supply has been restored in most areas.

Ongoing actions/ challenges and/or recommendations

Challenges remain largely in the eThekweni municipality around the South Durban Basin, where there are 8 damaged key electricity infrastructure facilities were reported. Such facilities are at varying stages of repair work and are being closely monitored for stability and recovery: Substations: Prospecton, Edwin Swales, Toyota, Isipingo, Lotus Park, and Sapref; and Cable damages on Mondi, Engen, and Sapref. It is reported that while operation of some of these facilities have been restored, some will still remain fragile until proper equipment and re-build programmes are completed. Urgent attention is needed in three areas given the vulnerability of the high voltage networks and long-term sustainable solutions are required:

- Edwin Swales 132 kV Switching Station, where electrical protection must be installed immediately since any future flooding event will cause extended outages in the areas of Fynnlands, Wentworth and Jacobs substations. This is responsibility of the eThekweni Municipality
- Toyota 11 Kv substation, where new switchgear must be installed. Temporary option is to transfer electrical load to Fynnlands. This is responsibility of the eThekweni Municipality.
- Mondi-Sapref 132 kV cabling, this is the supply to the largest refinery in the country (Mondi) and also to Sapref. This has dependencies of Transnet building the canal wall and the Transnet and the eThekweni Municipality securing funding urgently. Interim supply to Mondi is complete while for Sapref was still outstanding.

Dependencies across the systems needed to be managed. For instance, LV networks cannot operate without addressing the upstream supply in areas affected by the HV and MV outages. In some instances, faults at LV show up once upstream operations (i.e. HV & MV) are switched on/ energised. There are also recurring/repeat faults due to various parts of the cable and or the equipment failing at different point in short succession. Some of these are expected occurrences associated with repair processes for storms and flood damages.

Table 15: Status on repairs of critical HV electricity infrastructure facilities in eThekweni

Electricity infrastructure reporting damaged	Status update reported as at 30 July 2022
Substations: Prospecton	Repaired
Substations: Edwin Sales	In progress
Substations: Toyota	Restored but temporary solution
Substations: Isipingo	Repaired
Substations: Lotus Park	Repaired
Substations: Sapref	Restored but temporary solution
Cable damages: Mondi	Repaired
Cable damages: Engen	Repaired
Cable damages: Sapref	In progress

4.5.6 Health infrastructure facilities

Estimation of damages

KZN reported 94 health facilities to have been affected by flood damages, 46 of which are clinics, 24 hospitals, and 24 other facilities namely Community Health Centres, provincial pharmaceutical depot, Offices, Emergency Management Services (EMS). The floods have exacerbated pre-existing challenges of aging infrastructure, poor maintenance and poor/ inconsistent water supply. The floods caused failures in major water reservoir mechanisms and bursting of water mains affecting several facilities. In the first 3 weeks following the floods, the following were reported to be dependent on water tankers:

- Hospitals (Osindisweni, Prince Mshyeni Memorial, Wentworth Hospital, Port Shepstone Hospital, GJ Crooks Hospital).
- Clinics (Tongaat Clinic, KwaMakhutha Clinic, Umlazi K Clinic, Odidini Clinic, Nsimbini Clinic, Magabheni Clinic, Ntuzuma Clinic, Folweni, Gamalake CHC).

Table 16: Health facilities affected by flood damages

Row Labels	Number of Hospitals affected	Number of Clinics affected	Number of Other Health facilities affected (Community Health Centres, Pharma depot, Offices, EMS)
Eastern Cape	-	-	-
KZN	24	46	24
Amajuba	-	-	-
eThekwini	12	17	9
Harry Gwala	-	-	-
iLembe	1	7	-
King Cetshwayo	4	7	-
UGu	2	12	1
uMgungundlovu	4	2	2
uMkhanyakude	1	1	12
uMzinyathi	-	-	-
uThukela	-	-	-
Zululand	-	-	-
North West	-	-	-
Grand Total	24	46	24

Interventions

Interventions to restore water supply have prioritised restoration of reliable water supply to health facilities.

Ongoing actions/ challenges and/or recommendations

By 31 July 2022, several of the health facilities that were reported in May to be dependent on water tankers still needed to be restored back to 100% water supply

functionality. Medium to longer term solutions are needed for upgrading or refurbishing the general infrastructure around health facilities.

Challenges remain with the Provincial Pharmaceutical Supply Depot (PPSD), which appear to require an overhaul of the existing information systems and filing facilities. The damaged old ICT platforms, information systems threaten connectivity and business continuity. A business case was being developed to mobilise potential sources of support. Through the facilitation of the DPME, the National Department of Health, the Bill and Melinda Gates Foundation (BMGF) were due to visit the depot to assess what support could be required.

4.5.7 Schools

Estimation of damages

Initial assessment identified a total of 630 schools to have been affected or damaged by the floods. The KZN Department of Education did follow-up detailed assessments, which assisted in identifying the nature of damages per school, what was required to restore and re-open each one of them as well as the estimated costs.

Of the 630 schools, 274 were identified to only require deep cleaning and clearing of debris, which could be done immediately to return to functionality.

The remaining 356 were identified to require more work to repair and restore to functionality. These were grouped into three categories as follows:

- Category A: 41 schools. The nature of storm damages to these schools could be implemented immediately and completed by 31 July 2022. The repair costs are estimated to be at most R150,000 and could be implemented through Schools / School Governing Boards (SGBs) utilising their Norms and Standards for school funding allocations.
- Category B: 117 schools. These require repairs utilising the District Offices Maintenance Budget and their estimated cost of repair ranging between R150,000 and R500,000. Implementation can start in July and end in September 2022.
- Category C. 198 schools. The repair works require an implementing agent, and have estimated cost of over R500,000.

Table 17: KZN Implementation Plan: Targeted timeframes to repair of affected schools

	Number of affected schools	Estimate repair cost	Estimated total cost of repair	Targeted timeframes to complete the repairs	Responsibility
Category A	41	Less than R150,000	R8.765 mil	Immediately up to 31 Jul 2022	Schools / School SGBs
Category B	117	R150,000 – R500,000	R77.506 mill	Jul to Sep 2022	District Offices
Category C	198	Over R500,000	R163.347 mil	Jul to Dec 2022	Provincial DBE

Totals	356		R249.619 mil	
---------------	------------	--	---------------------	--

Table 18: Number of schools reporting flood damages per district

Province/ District	Schools damaged (A)	Schools damaged (B)	Schools damaged (C)	All Schools damaged
Eastern Cape	-	-	-	-
Alfred Nzo	-	-	-	-
Amathole	-	-	-	-
Chris Hani	-	-	-	-
Joe Gqabi	-	-	-	-
OR Tambo	-	-	-	-
KZN	41	117	198	356
Amajuba	-	3	-	3
eThekwini	18	45	178	241
Harry Gwala	2	2	3	7
iLembe	9	-	-	9
King Cetshwayo	-	4	5	9
UGu	11	17	-	28
uMgungundlovu	1	46	11	58
uMkhanyakude	-	-	-	-
uMzinyathi	-	-	-	-
uThukela	-	-	-	-
Zululand	-	-	1	1
North West	-	-	-	-
Ngaka Modiri Molema	-	-	-	-
Grand Total	41	117	198	356

Interventions

Immediate interventions in KZN involved deep cleaning, which was carried out in all the 274 schools requiring this and also provision of 65 mobile classrooms to 24 of the 26 schools that requested mobile classrooms (of the 65 mobile classrooms, 59 are in eThekwini (38 in Pinetown and 21 Umlazi) and 6 in Ugu. Clearing of access roads and bridges needed to be done in certain areas to enable access to these schools. Teaching and learning resumed at all schools that were provided with deep cleaning and those provided with these mobile classrooms, restoring learning for the affected learners in KZN. A further 5 mobile classrooms were still to be installed in Umlazi, and also 4 in Harry Gwala.

Ongoing actions/ challenges and/or recommendations

KZN DBE received financial and in-kind support from different stakeholders. These included the support from the Department of Correctional Services for deep cleaning

of 16 schools in Umlazi and Pine Town; SAME Foundation for deep cleaning of 11 schools and replacement of destroyed equipment; Tsogo Sun donation of R3 million for the rehabilitation of 4 schools; and Sasol pledge to rehabilitate 11 schools.

For all the 41 schools with Category A damages, construction works are planned to be implemented and completed during the winter school holiday and anticipated for completion by 31 July 2022. Relevant quotations have been sourced and repairs of some minor damages had already started in some of the schools. DPME monitoring visits of 18-21 July found that several of the Category A schools could not progress much with the repairs due to insufficient funds to start or complete the repairs.

For schools with Category B damages, construction works were planned to commence from July 2022 and have an anticipated completion date 30 September 2022. Procurement processes have commenced and about 51 had their real-time auditing completed and ready to proceed to award the contracts to service providers while 69 had their real-time audits still pending/underway. DPME monitoring visits of 18-21 July found that actual repairs had not started in all the Category B schools visited because the Provincial Treasury had just completed its real-time audits of the schools. Furthermore, the number of schools reported under each of the 3 categories was likely to change following the outcome of these audits.

All the 198 schools with Category C damages are reported to be waiting for the Provincial DBE to allocate Implementing Agents and confirmation of relevant budgets. The following are key issues emerging and/or requiring attention. Information could not be accessed by the time of preparing this report.

- Proper categorisation of schools – the observed damages during the DPME monitoring visits indicate a possibility of certain schools classified on a higher or lower category than they deserve, e.g. Ekhuza and Ecekeza schools.
- Data on schools damaged and interventions in North West and Eastern Cape
- Data on number of learners affected per district in all areas.
- Lack of communication regarding the next steps, causing uncertainty given the risk of further damages in the coming rainy season.

4.6 What has been the impact of flood disaster on businesses?

This section discusses the support that government offered to affected business in the agricultural, tourism, environmental, and science and technology sectors.

4.6.1 Support for affected businesses

Intervention

The DTIC has run a survey and established a database with 268 businesses affected by floods. Among those businesses are those that are affected through supply chain

linkages upstream and/or downstream. The survey also found that about 30% had all-inclusive insurance, meaning that they could be able to claim for the damages incurred. A challenge identified was that more than 50% of businesses in areas impacted were not insured. The DTIC and the DSBD are sharing a dataset on the affected businesses and the dataset is being used as basis for identifying businesses that are eligible for support. Most of the uninsured businesses are informal and small and micro enterprises.

Individual businesses also incurred loss of income due to closure and disruption of economic activity. Estimates in April 2022 indicated that the City eThekweni was likely to lose 1.5 – 1.8% of GDP due to the floods. All sectors were affected, Chemicals/C&T/Furniture (19 Factories); Inner West - 3 Factories; North Region - 5 Factories; South Region - 9 Factories (including Toyota and TFG Manufacturing); Central - 2 Factories; Footwear and Leather (15 Factories); Outer West - 8 Factories; Inner West - 7 Factories. Some big business operations were not-operational for about 60 days – some of them highly automated operations that would ordinarily require 2-3 months to resume operations. For instance, Toyota needed to replace machinery in the entire plant; Mondi in Merebank also needed to replace machinery in the entire plant, SAPPI stopped production in their three mills SAICCOR, Tugela, and Stanger; SAPREF was completely flooded also; etc.

Results

Reports show 4 business support programmes with total of R1.362 million made available being implemented to support affected businesses. The programmes are as follows:

- The Department of Small Business Development has allocated R60 million to implement business support under two schemes run through the Small Enterprise Development Agency (SEDA), the Formal Traders Relief Fund with a budget of R50 million (the support capped at R2 million per business), and the Informal Traders Relief Fund with a budget of R10 million (support capped at R10,000 per informal trader). Applications windows for these schemes were 25 April – 13 May 2022 and 25 July - 12 August 2022 respectively.
- The Department of Trade, Industry and Competition (DTIC) is providing support through the Industrial Development Corporation (IDC) under 4 streams, namely the Working Capital Grant (a 30% cost sharing grant for manufacturing businesses); Infrastructure Support Grant (a 50% cost-sharing grant for all affected businesses for the reconstruction of bulk infrastructure inside their premises); the Industrial Loan Component (available to uninsured businesses or those businesses with insurance shortfall); and the Intermediary channel (about R15 million to support SMMEs via intermediary agents).

A total of R457 applications were received for the abovementioned programmes with R244.7 million estimated support required. 408 (89%) of the applications are from KZN

and 49 (11%) from EC. 36% of the applications are from agriculture business, 36% services, 14% manufacturing, 7% construction and 4% tourism.

Table 19: Funding support for affected businesses

Department	Business support programme	Nature of support	Allocated budget	Progress as at 11 August 2022
DSBD working with DALRRD/SEFA/SEDA	Informal Trader Relief	R10,000 non-refundable grant capped per informal business for the repair of damages on Informal businesses	R10 million	Application window opened 25 July and closed 12 August 2022. Update as at 11 August 2022: Implementation processes still unfolding. Processing of applications underway and programme can potentially support 1 333 businesses.
DSBD working with DALRRD/SEFA/SEDA	Formal Trader Relief Fund	R2 million non-refundable grant capped per business for the repair of damages on Formal businesses	R50 million	Application window opened 25 April – 13 May 2022. Update as at 11 August 2022: 169 Application Received, 99 Approved to the Value of R33.571 million.
the dtic working with the IDC	Working capital grant (WCG); Infrastructure Support Grant; Industrial Loan Component; Intermediary channel	30% cost sharing grant for working Capital support in manufacturing businesses; 50% cost-sharing grant for the reconstruction of bulk infrastructure inside premises; Uninsured businesses or those with insurance shortfall; Support SMMEs via intermediary agents.	IDC: R1.2 billion and the dtic WCG: R100 million	Update as at 15 July 2022: R352 million approved, of which R297 million is already disbursed to 13 intermediaries. 962 SMMEs have received support. 7349 jobs potentially saved.

Approved number of applications under the formal trader relief per sector shows that 43% thus far went to agriculture, followed by manufacturing with 19%, then services (18%), tourism (4%), and the remainder going to construction, ICT/ digital, retail and others. There was insufficient data on support through other programmes at the time of preparing this report.

The DSBD, DTIC and others have a mechanism to share information in order to avoid double dipping and to ensure that each application is attended to through the most appropriate support scheme. Among the risks being mitigated against are possibility that some businesses may have applied for more than one scheme, reliability of estimated damage, completeness of applications, items covered already by insurance

and issues relating to tax compliance. The DTIC has deployed engineers to verify the claimed damages as part of due diligence.

Table 20: Support for small businesses per district

Province/ District	Formal Trader Relief (Number of Approvals)	Formal Trader Relief (Approved Amounts)	Formal Trader Relief (Jobs supported)
Eastern Cape	25	11 003 476	206
Alfred Nzo	15	7 008 833	191
Amathole	-	-	-
Chris Hani	-	-	-
Joe Gqabi	-	-	-
OR Tambo	10	3 994 643	15
KZN	74	22 567 926	633
Amajuba	-	-	-
eThekwini	38	14 076 190	291
Harry Gwala	4	187 021	23
iLembe	14	4 222 790	174
King Cetshwayo	7	688 431	25
UGu	3	81 329	55
uMgungundlovu	-	-	-
uMkhanyakude	3	384 914	7
uMzinyathi	3	1 979 109	25
uThukela	-	-	-
Zululand	2	948 142	33
North West	-	-	-
Ngaka Modiri Molema	-	-	-
Grand Total	99	33 571 402	839

Ongoing actions/ challenges and/or recommendations

Government has had several engagements with the business community. The President met with business sector on 15 May 2022; The DPME DG met with the Durban Chamber of Commerce and Industry (“the Chamber”) on 09 June 2022; the Mayor of eThekwini also had an engagement with business on 22 April 2022; and before this, the KZN Office of the Premier engaged the business sector on 23 July 2021 regarding business recovery following the July unrests. The Chamber, among other interventions to restore business operations, highlighted a need for an effective

mechanism of following through on the key commitments made during their engagements with senior government leaders regarding recovery from not only the recent floods but also the July 2021 unrests/lootings and Covid-19 lockdowns. To restore confidence, the business community needs certainty on government's commitment that beyond the immediate repairs to damaged infrastructure. The key issues included the following:

- Repairs to infrastructure in the Durban South business precinct, including plans to build flood resilient infrastructure (i.e. redesign of the Umlaas Canal and replacing the current stormwater and sanitation systems in the Prosperon precinct with flood resilient infrastructure in order to resolve a long-standing challenge of vulnerability of the area to floods). The water, stormwater systems and sanitation systems in the eThekweni area are not coping with the demand and pose a risk of stalling growth and development if left unattended.
- Support for affected businesses through the DTIC, DSBD, DALRRD and the provincial governments.
- SAPS and eThekweni must provide an update on measures to address the safety and security concerns for business operations (unlawful acts of business forums, gangs and vigilantes, high-jacking of trucks and lootings).
- Measures to improve efficiency in the Port of Durban and Richards Bay given that exporters are now resorting to using the port in Maputo, Mozambique.

4.6.2 Agricultural establishments

Extent of damages

Assessments by the KZN provincial Department of Agriculture, Land Reform and Rural Development (DALRRD) recorded about 1 777 crop farms affected, 482 livestock farms affected, and 222 infield roads that were damaged. Table 18 provides further details. There is need to reconcile the datasets between the DTIC, DSBD/SEDA and the KZN DALRRD to mitigate against possibility of double dipping. Provincial DALRRD have planned specific short-term interventions for different types of agricultural establishments and nature of damage reported, including soil sampling and testing of the nutrients before planting, feeding inputs for livestock, rehabilitation of infield roads, and food support to farm workers. Progress reports are expected with respect to uptake of various form of interventions and the nature of results achieved. In Eastern Cape, the flood damage incidents were tallied at 1 943 requiring relief and rehabilitation ranges from livestock, crop damage, erosion, water logging, and damaged infrastructure projects. Information on North West could not be accessed by the time of preparing this report.

Table 21: Estimation of damages on agricultural establishments in KZN

District	Crop farms affected			Livestock farms affected		Infields roads affected		Total estimated
	Number of farms	Hectares	Estimated cost	Number of farms	Estimated cost	Number farms	Estimated cost	Total cost
Zululand	87	501,03	21 195 433	33	17 577 080	1	150 000	38 922 513
uThukela	75	693,93	13 296 800	7	173 090	0	-	13 469 890
uMzinyathi	33	285,49	3 517 500	32	14 716 840	18	550 000	18 784 340
uMkhanyakude	185	598,97	15 222 279	14	221 700	25	617 500	16 661 479
uMgungundlovu	136	760,78	33 193 122	70	10 241 430	3	2 250 000	45 684 552
Ugu	382	766,57	43 818 486	155	7 043 485	88	32 652 500	83 514 471
King Cetshwayo	135	143,72	13 784 763	27	1 077 660	8	745 000	15 607 423
iLembe	300	168,1	44 287 536	45	1 222 845	45	1 649 8149	62 008 530
Harry Gwala	98	598,28	9 653 195	18	2 852 500	7	3 670 000	16 175 695
eThekweni Metropolitan	252	309,8	31 600 605	65	4 618 900	16	5 160 000	41 379 505
Amajuba	94	351,86	6 809 717	16	1 940 620	11	1 428 200	10 178 537
Totals	1777	5178,53	236 979 436	482	61 686 150	222	63 721 349	362 386 935

4.6.3 Tourism sector establishments

Extent of damages

On Tourism, site inspections conducted by the national Department of Tourism, KZN Economic Development and Environmental Affairs and Tourism, Tourism KZN, Ezemvelo KZN Wildlife and KwaZulu-Natal Sharks Board on tourism establishments and major tourism attractions sites concluded that this sector whilst affected by the April Floods, especially the enabling infrastructure such as key routes and bulk services infrastructure, the tourism supply remains intact, a view shared by the private sector. Tourism businesses that are directly affected will be supported through the interventions led by the DTIC and the DSB and some indicated that they will claim from their insurance. Programmes for repairing and restoring public infrastructure will also assist the recovery of tourism sector.

By 12 August 2022, damages have been quantified but details were still to be made available for Isimangaliso Wetland Park, the Drakensberg World Heritage Site, Hluhluwe-iMfolozi Park and several areas around the beaches (Status of the Beaches Report based on the 14 April 2022 aerial survey). A private sector-led project, Umgeni Steam Rail Project, has its rail washed away and consultations are still underway to determine the appropriate interventions - The old main line is run under lease from Transnet Freight Rail and is only used for heritage tourism driving demand to the City (both locally and internationally).

Intervention

The approach adopted by the tourism sector enables a coordinated way to the recovery interventions and mitigates against any possible duplications. Two major tourism events have taken place since the flood disaster and have served to re-store some confidence in the sector, namely the Africa's Travel Indaba (3-5 May 2022) and the Durban July (02 July 2022) with the Comrades Marathon scheduled for 28 August 2022. In-between these major events, the Province managed to host other major events including international ones.

4.6.4 Environmental rehabilitation, compliance and related matters

Intervention

The Department of Environment, Forestry and Fisheries (DFFE) has mobilised communities and other stakeholders to carry out clean-ups in various areas to clear the debris and open up access/ restore functionality. To fastrack recovery, DFFE has also been issuing Section 30 directives providing verbal authorisations for environmental impact assessments (EIAs) and waste licenses to the following projects with a view that fast-tracked authorization allows for rebuilding and restoration of critical infrastructure and services quicker:

- 23 Temporary bridges to be constructed to address the situation for communities to be able to drive through crossings and for farmers to access essential services 6 of these will be in the Eastern Cape and 19 in KZN by DPWI;
- 7 railway lines Passenger Rail Agency of South Africa (PRASA) is rehabilitating.
- 4. South Africa National Roads Agency SOC Ltd. (SANRAL) rehabilitating 2 Damaged Bridges
- 3 Transnet pipelines rehabilitating;
- 3 SASOL's pipelines crossing watercourses and
- 3 Umgeni Water pipelines rehabilitation.

Environment infrastructure restoration and rebuilding - Seven land fill sites require intervention in the following areas: Umzimvubu (1), Ethekewini (4), Ray Nkonyeni Municipality (1) and King Cetshwayo (1). Nature of damage identified for certain landfill sites are being checked against other infrastructure interventions, e.g. roads, in order to manage possible duplications. The DFFE call for proposals from start-up and emerging waste management and recycling companies for support under the Recycling Enterprise Support Programme has closed and processes for reviewing the proposal has commenced.

Concerns of delays in environmental rehabilitation creates challenges for the tourism sector.

4.6.5 Science and technology

Interventions

The Department of Science and Innovation has mobilised its entities to provide support to various interventions where scientific and technological input is required. The South African Environmental Observation Network's (SAEON) earth observation capability is available to undertake aerial surveys when required and the South African National Space Agency is already providing satellite imagery when required. The CSIR is providing support on data systems. The CSIR's Green Book provides guideline for construction of civil infrastructure according to climate resilient principles. A detailed presentation on the application of the green book was shared to all NJFCC Task Teams in order to inform the planning of interventions.

Ongoing actions/ challenges and/or recommendations

Pre-existing spatial development challenges have hampered speedy provision of land for construction of TRUs and for permanent resettlement of communities that have been residing in the flood plain. DALRRD and DHS must lead a comprehensive government plan to relocate people out of flood plains into safer spaces. Such a process will come at a cost and require time to develop and implement. The District Development Model (DDM) approach must help address certain spatial challenges.

The process must draw from scientific evidence on risk and vulnerability and suitability of land parcels for human settlement – in which institutions such as CSIR, the South African Weather Service (SAWS) and the Council for Geosciences (CGS), South African National Space Agency (SANSA), among others, can contribute.

5. CONCLUSIONS, ONGOING ACTIONS AND RECOMMENDATIONS

This section answers the fourth key question of the evaluation on what can be done to improve government's current interventions and when there are similar disasters in future?

The following recommendations are made to improve government's response to similar disasters in future:

1. Continuation of current interventions

By the time of preparing this report, there was still a lot of remaining work to restore things back to normality. This includes:

- Provision of permanent solutions for human settlement for families that are accommodated in TEAs in the KZN. This means finalizing repairs to homes for families to move back and/or resettlement of families to the identified land parcels.
- Finalising allocation of appropriate land for resettlement and construction of houses to accommodate the affected families in the North West area of Deelpan.

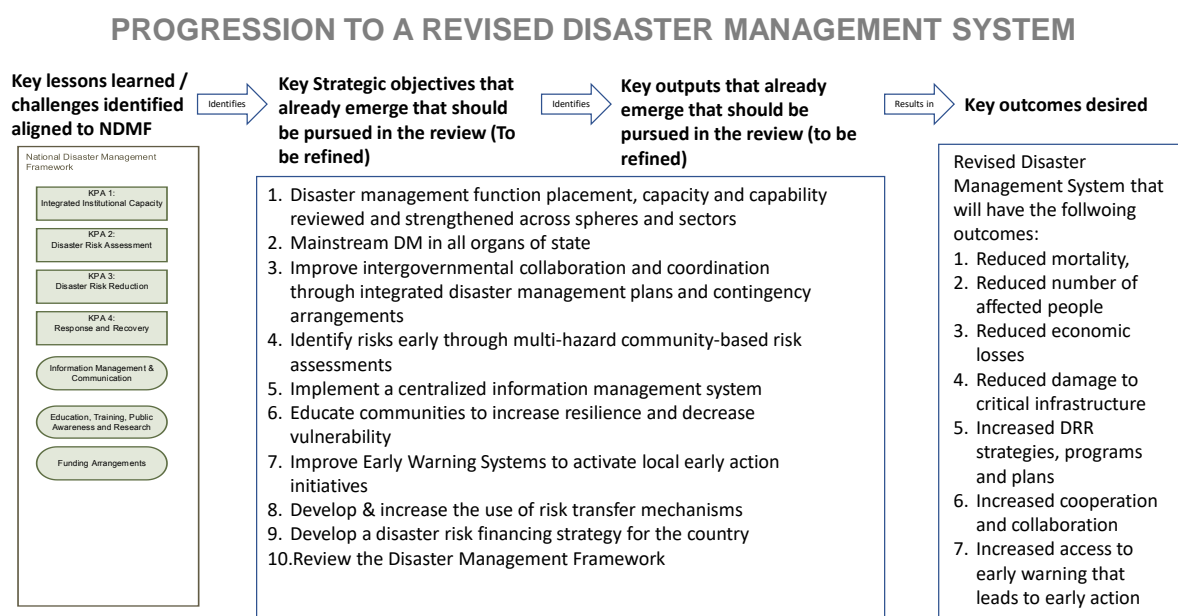
- Restoration of various public facilities and infrastructure under SANRAL, Transnet, DPWI and Water Affairs, e.g. roads, rail, water, health facilities and schools, so that they can return to full operation.

There are new challenges emerging, with floods repeating in some of the affected areas and also occurring in various other parts of the country. A key recommendation in this regard was for the NJFCC to continue in order to monitor execution of remaining interventions. The lack of progress in the North West area of Deelpan must be escalated. The Oversight Mechanism be phased out and some of the practices that it has established to strengthen oversight be integrated into ordinary processes for disaster management.

1. Review of the system for disaster risk management

Lessons from the recent flood disaster point to a need for reviewing the system for disaster management in South Africa. Cabinet has already made a resolution for the DPME and the DCOG to produce recommendations to this effect by March 2023. In December 2022, the DPME and the NDMC had already discussed a broad framework for this task, drawing on the lessons and identified key issues that would require attention. The NDMC developed the Terms of Reference to source in an independent expert to assist with this task and a Steering Committee had been established. Figure 9 summarises the key aspects of the proposed review process, which include institutional location, funding and resources, integration of disaster into government planning system, information and data systems, roles of other government institutions, etc.

Figure 9: Draft framework/ roadmap for the review of disaster management system



Source: NDMC, 19 December 2022

2. International benchmarking to inform ongoing improvements

To support of learning and ongoing improvement, it is recommended that benchmarking and exchange of lessons and practices on disaster management be conducted. The DPME has initiated a process in collaboration with the South African National Disaster Management Center (NDMC) and the United Nations – South Africa (UN-SA), to convene dialogue series to benchmark how different countries successfully prepare for and respond to disasters. Such an exchange will contribute to the review of the system of disaster management in South Africa as recommended above. A Concept Note for this purpose has been developed for this purpose (See Annexure 4) for implementation between February 2023 to June 2023. The dialogue series prioritises issues at the intersection of the international frameworks such as the Sendai on the one hand and South Africa’s needs on the other hand.

4. Evaluation on the economic impact and business recovery

It is recommended that a comprehensive study be conducted to assess the impact of the flood disaster on economy and the extent to which businesses have recovered from the disaster. Such a study will help to highlight implication for employment, small businesses, investment and livelihood and inform relevant policy actions and future preparedness.

Annexure 1: Matrix of key indicators for monitoring flood disaster interventions

Intervention areas and Key activities	Indicators of Output and Results	Lead responsibility
Intervention area: Humanitarian relief		
Search and rescue/ recovery, health services	Capacity deployed for security, search and rescue	PDMCs
Search and rescue/ recovery, health services	Number of search and rescue missions	PDMCs
Search and rescue/ recovery, health services	Numbers of persons rescued	PDMCs
Search and rescue/ recovery, health services	Number of missing persons	PDMCs
Search and rescue/ recovery, health services	Number of Fatalities confirmed due to floods	PDMCs
Search and rescue/ recovery, health services	Number of fatalities not yet identified	PDMCs
Search and rescue/ recovery, health services	Number of Families that received burial assistance	PDMCs
Replacement of critical documents such as IDs, etc.	Nature and coverage of Provision of home affairs citizen services	Dept. Home Affairs
Provision of food psychosocial support	Nature and coverage of psychosocial support provided	DSD
Emergency water supply	Nature, quantities and coverage of Emergency water supply	DWS
Provision of temporary shelter	Number of Mass Care Centers (temporary shelters) provided	DSD
Provision of temporary shelter	Number of Persons provided with shelter in Mass Care Centers	DSD
Provision of food and other personal essentials	Nature and coverage of Provision of food and other essentials	DSD
Intervention area: Human settlement and housing		
Provision of Temporary Residential Units	Temporary residential units (TRUs) targeted	DHS
Provision of Temporary Residential Units	Temporary residential units (TRUs) constructed	DHS
Provision of Temporary Residential Units	Temporary residential units (TRUs) handed to families for occupation	DHS
Provision of support for housing repairs	Uptake/ utilisation of vouchers for repair of houses and other housing support	DHS
Allocation of land for human settlement	Number of land parcels sites confirmed for TRUs construction (coverage in hectares)	DALRRD
Allocation of land for human settlement	Number of land parcels confirmed for permanent resettlement (coverage in hectares)	DALRRD
Intervention area: Education infrastructure		
Repair of schools and related	Number of schools restored and accessible to learners	DPWI
Repair of schools and related	Number of mobile classrooms provides	DBE
Repair of schools and related	Number of learners returning to normal school (number still left out)	DBE
Intervention area: Health facilities		

Intervention areas and Key activities	Indicators of Output and Results	Lead responsibility
Repair of health sector infrastructure	Number of Health facilities restored and accessible to patients	DPWI
Restoration of healthcare services supply	% extent returned to normal operation (services remaining suspended)	Department of Health
Mitigation of water borne diseases (cholera, diarrhoea, malaria, etc.)	No reports of incidence of water borne diseases (cholera, diarrhoea, malaria, etc.)	Department of Health
Intervention area: Electricity infrastructure		
Repair of identified electricity infrastructure	Number of Electricity supply restored and areas served	Eskom, Municipality
Restoration of electricity supply	% electricity capacity restored (areas remaining unserved)	Eskom, Municipality
Intervention area: Water and sanitation infrastructure		
Repair of bulk water infrastructure;	Number of Water supply pipelines restored	DWS
Restoration of water supply services	% capacity restored (areas remaining unserved)	DWS
Intervention area: Landfill sites (environmental infrastructure)		
Rebuilding and restoration of landfills sites	Number of land fill sites restored; % returned to normal operations	DEFF
Intervention area: Roads and bridges		
Roads cleared/ restored for access	Number of Roads cleared/ restored and identification of access route enabled/ areas serviced	DOT; SANRAL
Bridged cleared/ restored for access	Number of Bridged cleared/ restored and the identification of access routed enabled/ areas serviced	DOT; SANRAL
Intervention area: Rail infrastructure		
Rail lines cleared and accessible	Number of Rail lines cleared/ restored	DOT; TRANSNET
Rail lines cleared and access routes enabled	Number of access route enabled/ areas serviced	DOT; TRANSNET
Intervention area: DPWI public buildings		
Repair of identified public buildings (airforce base, police stations, magistrate courts, etc.)	Number of identified building repaired/ restored	DPWI
Restoration of essential public services	% services restored (areas remaining unserved)	DPWI
Intervention area: Support for businesses		
Support for affected businesses, including agriculture, tourism	Number of businesses Approved for support per key programme	DTIC; DSBD; Municipality
Support for affected businesses, including agriculture, tourism	Value of business support Disbursed per key programme	DTIC; DSBD; Municipality

Intervention areas and Key activities	Indicators of Output and Results	Lead responsibility
Support for affected businesses, including agriculture, tourism	Jobs retained (number of jobs in businesses receiving support)	DTIC; DSBD; Municipality
Support for affected businesses, including agriculture, tourism	Business closures and job losses	DTIC; DSBD; Municipality
Rehabilitation of damaged agricultural establishments	Number of agricultural establishments received rehabilitation support	DALRRD
Intervention area: Planning and resource mobilisation		
Finalised assessment and costing of damages	List of intervention areas with finalised damage assessments	Various lead departments and Provinces
Integration of disaster responses into APPs and budgets	Number of national and provincial institutions integrating flood interventions in APPs	DPME
Approval and provision of government funding, including DFIs	Amount of government funding approved per key programme/ source	National Treasury; NDMC
Capacity support (personnel and material) from national departments, other provinces and public institutions	List of capacity (personnel and material) mobilised from national, provincial and public institutions	NDMC; PDMC
Non-government sector funding and in-kind contribution	Quantification of non-government and international sector funding and in-kind contribution	DSD; Provinces; NT

Annexure 2: List reports, presentations and sources accessed

Title of Referenced material	Month
1. April 2022 KZN-DHS Flood disaster report, 23 June 2022	Jun-22
2. DFFE Response to disaster in KwaZulu-Natal (KZN) due to recent floods and intervention plan, 28 June 2022	Jun-22
3. Task Team Communication Workstream	
4. Funding Task Team Report, Presentation to the Extended National Joint Flood Coordination Committee, National Treasury. 23 June 2022.	Jun-22
5. Progress report to the NFJCC infrastructure task team - DPWI KZN and EC disaster interventions. Department of Public Works and Infrastructure. 30 June 2022	Jun-22
6. Economic Recovery Task Team. Presentation to NJFCC	Jun-22
7. DPWI: KZN and EC Emergency services - Disaster Monitoring Template. Spreadsheet on DPWI Assets. 30 June 2022.	Jun-22
8. Infrastructure Updates on KZN Recent flood disasters. Presentation to Cabinet meeting. 18 April 2022.	Apr-22
9. Briefing to the ICDM on the coordination of response and recovery efforts to flooding incidents in KZN, EC, and NW. DCOG. 06 May 2022.	May-22
10. Flood relief Programme Update. Kwazulu-Natal & Eastern Cape. 27 June 2022.	Jun-22
11. KZN Disaster Monitoring Template. Spreadsheets for Business Support and for Infrastructure.	Jul-22
12. Post visit report on the oversight monitoring visit to North West. Deelpan Village, Tswaing Local Municipality, Ngaka Modiri Molema District	May-22
13. Progress report on flood damaged schools. 24 June 2022. KwaZulu-Natal Department of Education.	Jun-22
14. Mayor's Engagement with Business. Economic Flood Impact and Response 22/04/2022. No date	Apr-22
15. Ethekwini Municipality update on storm damages (Overview of the Status of The Electrical Network Post the Storm April 2022), 20 July 2022	Jul-22
16. Draft Recovery Plan of the KZN Department of Agriculture and Rural Development, 25 July 2022 & 02 Aug 2022	Aug-22
17. Ethekwini Municipality South Durban Basin Technical Flood Response and Mitigation, July 2022	Jul-22
18. KZN Province Disaster Crisis ProvJoComm, 25 July 2022	Jul-22
19. KZN Provincial Joint Coordination Committee Disaster Management - Health	Jul-22
20. KZN Security Cluster Feedback, 25 July 2022	Jul-22
21. North West Implementation of the disaster management legislation in North West, COGTA 03 August 2022	Aug-22
22. Summary report on the revision and re-tabling of 2022/23 annual performance plans and 2020-2025 strategic plans of national institutions based on circular 5 of 2022	Jul-22

23. EC Presentation on the April 2022 Floods Disaster, 08 JUNE 2022	Jun-22
24. DBSA response to the KZN and EC flood related disasters	May-22
25. Recovery of Transnet Infrastructure from KZN floods: Progress report (Presentation by Minister Gordhan 11 August 2022)	Aug-22
26. Department of Transport Ad Hoc Joint Committee Flood Disaster Relief and Recovery (11 August 2022)	Aug-22
27. Flood relief Programme Update. Kwazulu-Natal & Eastern Cape. 05 June 2022.	Aug-22
28. Eskom Status Report on KZN floods	Aug-22
29. DPME input on lessons learnt and recommendations for future (Presentation at the KZN Debriefing Summit on April/ May flood disaster)	Dec. 2022
30. Abbreviated reflection on lessons learnt, challenges and recommendations (DCOG presentation at the KZN Debriefing Summit)	Dec 2022
31. Draft policy: donations management of disaster relief (Presentations by KZN Provincial Disaster Management Centre at the KZN Debriefing Summit)	Dec 2022
32. Lessons learned from April/May floods (Presentations by KZN COGTA at the KZN Debriefing Summit)	Dec 2022
33. Lessons learned by human settlement sector during flood disaster response (Presentations by KZN Human Settlement at the KZN Debriefing Summit)	Dec 2022
34. Donations & humanitarian support (Presentations by KZN Social Development at the KZN Debriefing Summit)	Dec 2022
35. Presentation on the flood disaster management audits – KZN provincial government (Presentations by KZN Treasury at the KZN Debriefing Summit)	Dec 2022

Annexure 3: Case Study 1 on Assessing & Responding to Needs of Families Affected by Floods in KZN

A collaborative study led by DSD and United Nations Children's Fund (UNICEF) using Real Time Monitoring Tool (RTMT) was undertaken between May and July 2022 on Assessing & Responding to Needs of Families (Including Children, Young People & Women) Affected by Floods in KZN. The study assesses the state of wellbeing of the affected people and inform the emergency responses and support to those in high risk of hunger, violence, abuse and neglect. The study used a multi-platform digital mobile application that enables production of real time data and includes data management and visualization capabilities and covered the following areas: Education, economic strengthening, childcare and protection, health, nutrition, HIV/AIDS, psychosocial support.

The study adopted a Mixed methods approach

Qualitative methods: Field workers observed family context & Key Informant Interviews focusing on how effective the government coordination related to the response measures in addressing immediate, short term, medium term needs of affected families.

Quantitative methods: Surveys: data collection on losses & disruptions

Sampling

Purposive sampling: 10% of affected households (including those in communities & shelters). Sample size representative of urban, semi-urban & rural. The sample size was eThekweni Metro: 240 (affected were 2000) and Ugu District: 96 (affected households were 589). uThukela: 146 households.

A total of **482 households**. Survey included 182 individuals from shelters & 404 individuals from households with a total of **586**. Qualitative data included **35** Key Informant Interviews (KIIs) (government officials, local authorities & non profit organisations (NPOs).

Study findings:

Care and Protection: 47% of children report witnessing adults being violence or drunk; Life in the shelters does not allow for privacy or human dignity.

Education: Some children lost school uniforms, books etc. Learners in Matric and Tertiary currently residing in shelters with no proper infrastructure for studying.

Psychosocial: "Home can be rebuilt but children will still be orphaned and their lives will never be normal ever again"; "Whenever it rains we worry about losing what is left of our homes".

Health Status: Limited access to primary health care, lot of chronic patients not accessing their routine care and treatment, high number persons with disabilities.

HIV/AIDS:

Limited access to services especially chronic medication- ARVs and TB treatment etc. Fear to disclose HIV status; high levels of Stigma. This further hamper access to essential services.

Food Security: Families are struggling with limited resources buy sufficient food, some shelters are not as well resourced – no electricity or enough bathrooms, no kitchen facilities.

Economic Wellbeing: Most households are dependent on government grants with no other sources of income. High dependency ratios many family members dependent on the little they get from government – 40% have more than 5 members in the households. High cost of living and limited access to shops makes it even harder to stretch the Rands to cover their needs.

Recommendations:

- Need to do more to understand the needs of affected families at household level & shelters;
- Findings show vast requirement of needs; yet outreach is still very limited;
- Ongoing efforts to gather robust data to inform decision making are needed;
- Strengthen coordination across sectors;
- Develop a One Comprehensive Plan for governments response measures;
- Need for a comprehensive strategy to move affected families from the shelters;
- Develop longer term plans; with over 70% people unlikely to return home soon;
- Address staffing shortages within Social Development Sector for a more effective response; lots of unemployed social workers who could be deployed; improve the coordination of debriefing of social workers.
- Better services to school going children and especially high school learners related to study facilities; and

Recommendations of this study were discussed by the NJFCC and a team established to develop an improvement plan. The DSD is currently panning a second stage assessment study to track progress and effectiveness of the emergency response over time.

Annexure 4: Concept Note: Benchmarking international practices on disaster management systems

1. Context: Statement of Problem

South Africa is recognized as one of the countries on the Continent that has a solid legal framework on disaster risk reduction. The effectiveness of the disaster regulatory system was evident during the advent of the global coronavirus disease pandemic that inflicted large scale damage across vital systems upon which human societies and economies depend. Despite the effectiveness of the legislation during the pandemic, the country's response to the 2021/22 floods in Kwa Zulu Natal, Eastern Cape and North West was once again tested. In the face of intensifying climate change impacts and increasing system threats, South Africa's risk reduction efforts seem too little and too late. Evidence indicated that the three provinces had disaster-related losses, with significant economic, social, health, cultural and environmental impact, especially at the local and community levels. The Auditor General also noted in the First Special Report on flood relief funds dated August 31, 2022 that, although government provided social relief, the rehousing and rebuilding phases were too slow. Not all delivery in critical areas took place at the required speed and quality. The responses also revealed weaknesses in intergovernmental processes and coordination.

It is thus urgent and critical for the country to anticipate, further plan for, and reduce disaster risk in order to more effectively protect persons, communities, livelihoods, health, socio-economic assets, and thus strengthen the resilience to flood-related disasters.

During the Third United Nations World Conference on Disaster Risk Reduction in 2015 in Japan, countries reiterated their commitment to address disaster risk reduction, and to build resilience to disasters; and integrate both disaster risk reduction and building of resilience into policies, plans, programmes and budgets at all levels, and to consider both within relevant frameworks. The result of the Conference was the adoption of the Sendai Framework for Disaster Risk Reduction 2015-2030¹⁶ whose outcome is

'The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries'

The Sendai framework acknowledges that 'the realization of this outcome requires the strong commitment and involvement of political leadership ... at all levels in the implementation and follow-up of the framework'.

¹⁶ Third United Nations World Conference on Disaster Risk Reduction held from 14 – 18 March 2015 in Sendai, Miyagi, Japan

To this end, the Department of Planning, Monitoring and Evaluation (DPME) working together with the Department of Cooperative Governance and Traditional Affairs (CoGTA) through the National Disaster Management Centre (NDMC), is responding to the request by Cabinet to review the systems for disaster management in South Africa. To support this process, the United Nations-South Africa (UN—SA) has offered to work with DPME and NDMC in facilitating the exchange of lessons and practices on disaster management. All three collaborating partners will convene dialogue series to benchmark how different countries successfully prepare for and respond to disasters. Such an exchange of international practices will contribute to the review of the system of disaster management in South Africa which is meant to better prepare the country's response to major risks. The importance of preparing for major risks was highlighted by the United Nations Secretary-General that 'all too often after a major crisis, we tend to go back to business as usual, leaving vulnerabilities in our societies unaddressed'¹⁷.

The series will thus review existing disaster-related challenges faced by South Africa; and what works under various conditions, and come up with strategies to prepare for future ones by focusing on monitoring, assessing and understanding disaster risk, and sharing expertise information on how they are mitigated. The series will also deliberate on efforts to strengthen disaster risk governance and coordination across all relevant institutions and sectors; the full and meaningful participation of relevant stakeholders at appropriate levels; and enhancing multi-hazard early warning systems, preparedness, response, recovery, rehabilitation and reconstruction.

The knowledge-sharing sessions will draw from the four Priorities¹⁸ contained in the Sendai Framework of Action, and in the Hyogo Framework for Action; and guided by the principles of the Sendai Framework, while considering South Africa's circumstances, and consistent with the country's domestic laws as well as international obligations and commitments.

It should be noted that the approach to the disaster risk reduction dialogue series will complement existing national action and capacity by learning from international experiences of countries that have been exposed to various forms of disasters.

2. AIM OF THE KNOWLEDGE-SHARING SERIES

The dialogue series seek to leverage the experiences of global countries that have been affected by disasters by benchmarking how they prepare for, and respond to such. The series also seeks to enhance the knowledge of South Africa on mainstreaming disaster management into the country's planning systems, guided by the National Development Plan (NDP), as well as into implementation frameworks such as the Medium-Term Strategic Framework (MTSF), to ensure the involvement of the

¹⁷ The United Nations Office of Disaster Risk Reduction: Global Risk Assessment Report on Disaster Risk Reduction; 2022

¹⁸ *Priority 1*: understanding disaster risk; *Priority 2*: strengthening disaster risk governance to manage disaster risk; *Priority 3*: investing in disaster risk reduction for resilience; *Priority 4*: enhancing disaster preparedness for effective response and to 'Build Back Better' in recovery, rehabilitation and reconstruction.

whole of government. Insights from the knowledge-sharing series will contribute to the review and strengthening of the system of disaster management in South Africa.

3. KEY OUTCOMES OF THE KNOWLEDGE-SHARING SERIES

The key outcomes of the knowledge-sharing series are aligned to the Key Performance Areas and Enablers of the National Disaster Management Policy Framework¹⁹ which are drawn from the four Priorities of Action of the Sendai Framework:

- a) Strengthened integrated institutional capacity for disaster management, including strengthened capacity of the public sector to enable the effective implementation of disaster risk management and legislation.
- b) Enhanced disaster risk assessment and monitoring that will inform disaster risk management planning and disaster risk reduction undertaken by organs of state and other role players.
- c) Strengthened and integrated coordination mechanisms within and across sectors and with relevant stakeholders at all levels. This requires a clear articulation of responsibilities across all stakeholders to ensure mutual outreach, complementarity in roles, accountability and follow-up.
- d) Enhanced disaster risk reduction approaches to ensure that all disaster management stakeholders develop and implement integrated disaster risk management plans and risk reduction programs in accordance to approved frameworks.
- e) Improved empowerment strategies of local authorities and local communities to reduce disaster risk through effective decision-making responsibilities.
- f) Enhanced disaster preparedness for effective response, and to 'Build Back Better' during post-disaster recovery, rehabilitation and reconstruction efforts that is meant to increase public education and awareness of disaster risk.

4. DEVELOPMENT OBJECTIVE

Sharing global expertise and knowledge on disaster risk reduction in response to the recent floods in South Africa; exposure to innovative disaster monitoring systems, processes and tools.

5. ACTIVITY DESCRIPTION

The knowledge-sharing series on disaster risk reduction which DPME and NDMC will convene in collaboration with UN-SA aims to share experiences and expertise on the creation of a system of stability in response to the climatic catastrophes which the country has experienced, as well as further reduce disaster losses. The United Nations (UN) shall identify, and invite countries that have experienced various forms of climatic disasters to share lessons, given its analytical and global comparative advantage of having the (i) United Nations Disaster Risk Reduction Office (UNDRR) which specializes

¹⁹ https://www.gov.za/sites/default/files/gcis_document/201409/275340.pdf

in making communities safer and resilient to disasters; (ii) Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action; (iii) Hyogo Framework for Action; and (iv) Sendai Framework for Disaster Risk Reduction 2015-2030.

The identified countries will be requested to indicate why they are successful in managing disasters, i.e. they should share their critical success factors.

5.1 KEY EFFECTS FROM THE RECENT FLOODS IN SA:

Some of the key challenges experienced by South Africa during the recent floods shall guide the UN-SA to identify the countries that will participate in the dialogue series. These include:

- a) Climate change resilient infrastructure, especially amongst communities that are prone to floods;
- b) Early warning systems and early action which have the potential to significantly make a difference in reducing the destruction caused by disasters;
- c) Communication strategies with every segment of society affected by disasters in order to achieve the required results;
- d) Implementing a whole-of-society approach which contributes to the effective management of disasters, and assists in recovery efforts;
- e) Harnessing the scientific and technological capability in support of disaster management;
- f) Mainstreaming of disasters in the National Development Plans, thus becoming an instrument that holds all responsible accountable;
- g) Disaster monitoring systems;
- h) Disaster risk reduction strategies; and
- i) Mechanism to transfer risk.

UN-SA will also be guided by the lessons learnt from the recent floods that were identified by the National Joint Flood Coordinating Committee. These include, amongst others, the following:

- a) Review disaster management function placement and strengthen capacity and capability across spheres of government and sectors to achieve better and faster outcomes;
- b) Mainstream disaster management in all organs of state;
- c) Identify risks early through multi-hazard sector and community-based risk assessments. Improve risk informed planning by conducting risk assessments and integration into ONE PLAN process.;
- d) Improve intergovernmental collaboration and coordination through integrated disaster reduction strategies and disaster management plans;
- e) Capacitate the disaster operation centers with adequate human resources and suitable ICT support systems;
- f) Implement a centralized disaster management information management system, and improve early warning systems to activate localized early action initiatives;
- g) Educate communities to increase resilience and decrease vulnerability; and
- h) Implement a disaster grant fund information management system.

5.2 RISK PROFILE MAPS

The countries with good risk reduction practices are referenced in both the Hyogo Framework and Sendai Framework on disaster risk reduction:

#	Country	Risk reduction Area
1	Switzerland	Early warning systems that predict potential threats like landslides, avalanches and floods. They enable the movement of thousand of people from danger to safer zones
2	Brazil	Strict regulation on construction activities in the flood plains of the Amazon River basin and its tributaries (refer to the construction of shacks in flood plains in South Africa)
3	Mexico	Identified standards for buildings which emphasize minimum reinforcement of buildings
4	Japan	Developed best system of warning for tsunami and earthquakes ²⁰
5	Cuba	National media is well prepared to warn public about impending disasters. Civil protection committees are well trained to execute evacuation plans.
6	Germany	Forests are considered as a natural barrier that acts as a shield against storm winds.
7	India	Have adopted community-based approaches in building multi-purpose shelters to be inhabited by citizens. The country blows sirens in coastlines as an early warning system to move citizens in times of disasters.
8	Jakarta in Indonesia	Have early warning hazard maps that move citizens out of danger zones
9	Accra in Ghana	Use water and sanitation initiatives for communities that are vulnerable to natural disasters
10	Mozambique	Turned shorelines to forests. The initiative was started in response to Cyclone Idai

BRICS and SADC countries will also be considered in sharing their experiences of managing disasters.

The knowledge-sharing series will sequence the topics to be deliberated during the dialogue sessions. The topics will address the disaster risk reduction challenges faced by the country, some of which are mentioned in section 5.1 above. More than one country with similar expertise, tools, and ideas of how to address systemic risks will be invited to share their experiences with the audience listed below in section 6. One of the outcomes of the dialogue series is to potentially enhance the knowledge-sharing platform for building of partnerships and networks at the national, regional and international levels.

²⁰ Hyogo Framework for Action mentions that during the tsunami of 2011, the most trained category were Japanese children. Once the warning siren sounded in coastal schools, the children have been taught to leave the building knowing well how to act by going to the highest point in their neighborhood in time to reach safety while roaring waters destroyed the school. Hyogo Framework for Action

6. TARGET AUDIENCE

The dialogue series are primarily knowledge exchange sessions supported by the DPME; NDMC and the United Nations South Africa who acknowledge the presence of disaster management institutions/ organizations and Forums in the public, private sectors; as well as the existence of civil society organizations. Participants in the sessions will represent the broader Community of Practitioners, and will include, amongst others:

- a) Government Administrative Leadership;
 - Directors General/Permanent Secretaries/Principal Secretaries.
 - Heads of Disaster Management Centers.
 - National Planning Commission Secretariat.
- b) National Disaster Management Advisory Forum;
- c) National, provincial, and local Disaster Management Centers;
- d) Technical Officers;
 - Disaster managers at central government level; provincial and local levels.
 - M & E Programme Managers at national; provincial; and local levels.
 - Planners, including spatial planners at national; provincial and local levels.
 - Evaluators at national; provincial and local levels.
- e) Multilateral bodies and other development partners active in disaster management;
- f) Civil society organizations; academia and private sector;
- g) Research Institutes and relevant Chapter 9 institutions; and
- h) Other African countries that are directly affected by natural disasters.

7. ABRIDGED PLAN

The abridged plan for knowledge-sharing sessions is outlined below:

Item	Timeframe	Responsibility
a) Consultative planning meeting between DPME and UN-SA on the approach to UN support to DPME	October	DPME/NDMC/UN-SA
b) Development of 1st version of Concept Note	October	DPME
c) Review of Concept Note	November	DPME/NDMC/UN-SA
d) Approval of Concept Note to give direction to the knowledge-sharing series on disaster risk reduction	November	DPME/NDMC/UN-SA
e) Consensus on sequencing of dialogue series	November	DPME/NDMC/UN-SA
f) Identify best countries at reducing disaster risks, including BRICS and SADC countries.	November	UN-SA
g) Develop a comprehensive knowledge-sharing program that reflects the following themes that are aligned to the	November	DPME/NDMC/UN-SA

<p>National Disaster Management Framework, and to the Priorities of Action of the Sendai Framework:</p> <ul style="list-style-type: none"> i. Integrated institutional capacity for disaster management (including strengthening the capacity of the public sector to manage disasters; disaster risk assessment; ii. Disaster risk reduction (mainstreaming disaster management into National Development Plans and implementation frameworks); iii. Disaster preparedness, response and recovery (including early warning systems and access to such - early warning, early action); iv. Information management and communication (including communication strategies used during disasters and disaster monitoring systems; v. Public awareness, research, and capacity building; vi. Funding arrangements for disaster management; and vii. Integrated approaches used to coordinate the whole of society. 		
<p>h) Invitations to:</p> <ul style="list-style-type: none"> i. Countries to share best practices ii. Target audience iii. Other UN Offices on the Continent 	<p>March</p>	<p>DPME</p>
<p>i) Convene 1st knowledge-sharing session</p>	<p>April 2023</p>	<p>DPME/NDMC/UN-SA</p>
<p>j) Convene additional knowledge-sharing sessions on agreed themes</p>	<p>May 2023</p>	<p>DPME/NDMC/UN-SA</p>
<p>k) Produce a comprehensive report on the dialogue series.</p>	<p>End April 2023</p>	<p>DPME; UN-SA</p>