



## **Climate change**

Read in conjunction with the Overstrand Disaster Management Plan

2026 - 2027

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This contingency plan is developed in alignment with the Disaster Management Act, No 57 of 2002, which provides a comprehensive framework for integrated and coordinated disaster management in South Africa. The Act emphasises preventing or reducing disaster risks, mitigating their severity, ensuring emergency preparedness, enabling rapid and effective response and facilitating post-disaster recovery and rehabilitation. This plan specifically addresses climate change-induced disasters, such as floods, droughts, wildfires, extreme heat, coastal storms, and intensified rainfall events, which have been exacerbated by human-induced climate change as evidenced by recent events in the region. It integrates the principles of the National Disaster Management Framework and promotes collaboration across national, provincial, and municipal levels through established Disaster Management Centres.

The plan follows the disaster management cycle: prevention, mitigation, preparedness, response and recovery. It aims to build resilience, particularly in vulnerable communities like informal settlements, agricultural areas, and coastal zones, where climate impacts are most acute.

### 1. Objectives

- Reduce the risk and impact of climate-related disasters through proactive measures;
- Ensure compliance with the Disaster Management Act’s requirements for coherent, transparent, and inclusive disaster management policies;
- Enhance adaptive capacity to climate change by integrating early warning systems, community involvement, and sustainable development practices;
- Promote intergovernmental coordination and resource mobilization for effective implementation.

### 2. Risk Assessment and Vulnerability Analysis

Climate change in South Africa is projected to result in higher temperatures, reduced rainfall in some regions, increased frequency of extreme weather events, water shortages, and greater wildfire risks.

Coastal areas face sea-level rise and storm surges, while inland regions contend with droughts affecting agriculture and food security.

#### Key Climate-Related Risks

The following table summarizes major risks based on historical data and projections:

Risk Type	Potential Impacts	Affected Regions/Areas	Vulnerability Factors
Floods	Infrastructure damage, displacement, loss of life	Eastern coastal provinces (e.g., KwaZulu-Natal), informal settlements	Poor drainage, urbanization, climate-amplified rainfall (probability)

Risk Type	Potential Impacts	Affected Regions/Areas	Vulnerability Factors
Droughts	Water scarcity, crop failure, livestock loss	Western and northern provinces (e.g., Northern Cape, Limpopo)	doubled by (climate change) Arid climate, over-reliance on rain-fed agriculture
Wildfires	Destruction of ecosystems, property damage	Western Cape, grasslands	Dry conditions, invasive species
Extreme Heat	Health risks, reduced productivity	Urban centers, rural areas	Elderly populations, lack of cooling infrastructure
Coastal Storms	Erosion, flooding of coastal developments	Eastern and southern coasts	Sea-level rise, fishing communities

Vulnerability analysis will be conducted annually by the National Disaster Management Centre (NDMC) using tools like geographic information systems (GIS) for mapping high-risk areas. Community consultations and data from the South African Weather Service (SAWS) will inform updates.

### 3. Prevention and Mitigation Strategies

Under Section 25 of the Act, emphasis is placed on risk reduction. Long-term mitigation will integrate climate adaptation into national policies, drawing from the Climate Change Adaptation Response Plan (CARP).

- Infrastructure resilience: upgrade dams, drainage systems, and buildings to withstand extreme weather. Enforce building codes in high-risk zones.
- Land-use planning: restrict development in flood-prone areas and promote reforestation to combat soil erosion and wildfires.
- Water resource management: implement drought-resistant agriculture, rainwater harvesting, and efficient irrigation to address water shortages.
- Ecosystem-based approaches: restore wetlands and mangroves for natural flood barriers, especially in coastal regions.
- Policy integration: align with the National Climate Change Response White Paper to mainstream climate considerations into sectoral plans

### 4. Preparedness Measures

Preparedness focuses on building capacity before disaster strikes, as mandated by the Act's establishment of the Disaster Management Centres across spheres of government.

- Early warning systems: enhance SAWS and multi-hazard early warning systems for real-time alerts on floods, droughts, and storms. Use SMS, radio, and apps for dissemination, targeting vulnerable groups.
- Training and drills: conduct annual simulation and training for emergency responders, communities, and officials. Include climate-specific scenarios like heatwaves.
- Resource stockpiling: maintain stockpiles of emergency supplies (water, food, medical kits) at provincial Disaster Management Centres. Develop contingency funds for rapid deployment.
- Community engagement: establish local disaster management forums to educate residents on evacuation routes and self-help measures.
- Anticipatory action: adopt regional roadmaps for proactive measures, such as pre-positioning aid in high-risk seasons.

## **5. Response Protocols**

Upon declaration of a disaster under Section 23 of the Act, response will be activated through the NDMC

- Activation triggers: based on SAWS forecasts or event occurrence (rainfall exceeding thresholds).
- Coordination structure: NDMC leads national response, with provincial and municipal centres handling local operations. Involve SANDF, SAPS, and NGOs.
- Emergency Operations: evacuate affected areas, provide immediate relief (shelter, food, medical aid) and secure infrastructure. Use incident command system for efficiency.
- Communication: establish 24/7 hotline and media briefings to counter misinformation.
- Special Considerations for Climate Change events: for floods, prioritize informal settlements; for droughts, activate water rationing and food distribution.

## **6. Recovery and Rehabilitation**

Post-disaster efforts aim for “build back better” to enhance resilience, as per the Act.

- Damage assessment: rapid assessment within 48-hours using drones and teams to evaluate impacts.
- Short-term recovery: restore essential services (water, electricity, roads) and provide psychosocial support.
- Long-term rehabilitation: rebuild with climate-resilient materials, relocate high-risk communities if needed, and integrate lessons into updated plans.
- Economic support: offer grants for affected farmers and businesses, linked to sustainable practices.

## **7. Monitoring, Evaluation, and Review**

- Monitoring: track implementation through key performance indicators (eg response time, risk reduction metrics) via the NDMC.
- Evaluation: conduct post-event reviews and biennial audits to assess effectiveness.
- Review: update the plan every two years or after major events, incorporating new climate data and stakeholder feedback.
- Reporting: annual reports to Parliament as required by the Act.

## **8. Funding and Resources**

- Budget allocation: secure funding through the national fiscus, provincial budgets, and international climate finance (eg Green Climate Fund)
- Partnerships: collaborate with private sector, NGOs, and international bodies like UNDP for technical support.
- Human Resources: train and deploy dedicated disaster management personnel across levels.

This plan serves as a living document, adaptable to emerging climate threats. Implementation requires commitment from all stakeholders to safeguard South Africa's people and environment against the escalating impact of climate change.

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