

The Development of Sudan's National Drought Management Plan

Summary

This case study outlines the process of developing Sudan's National Drought Management Plan (NDMP) under the DRESS-EA project. Faced with increasing drought risks driven by climate variability, socio-economic vulnerability, and governance challenges, Sudan embarked on a participatory, data-informed planning process from August 2024 to March 2025. The NDMP was developed through a combination of literature review, remote sensing analysis, stakeholder consultations, and extensive community engagement across 12 villages in the White Nile State. The resulting plan addresses early warning, risk mapping, mitigation, public awareness, and resource mobilization. The process emphasized inclusivity, flexibility, and local relevance, culminating in a widely validated, implementable strategy. Key lessons highlight the importance of local context, community ownership, stakeholder collaboration, and long-term capacity building for sustainable drought resilience.

The Impact of Droughts in Sudan

Sudan is one of the most drought-prone countries in Africa, situated in the Sahel region with an arid to semi-arid climate. Its geographic exposure to climate variability, combined with heavy reliance on rainfed agriculture and agro-pastoralism, places it at high risk of drought impacts. The country's vulnerability is further compounded by systemic issues such as underdeveloped infrastructure, technological limitations, and chronic political instability.

About DRESS-EA

Funded by the Adaptation Fund and implemented by the Sahara and Sahel Observatory (OSS) and the Global Water Partnership (GWP), the DRESS-EA (Drought Resilience in East Africa) project supports countries in developing proactive drought management plans through capacity building, stakeholder engagement, and applied research. It promotes integrated, community-centered approaches to enhance resilience, reduce vulnerability, and strengthen early warning systems across drought-prone regions in East Africa.

The socio-hydrological nature of drought in Sudan creates cascading risks. Drought has critical implications for food security—leading to widespread crop failure and livestock loss. It also intensifies water scarcity, as evidenced by documented declines in rainfall quantity and reliability, shorter rainy seasons, and shifting precipitation patterns. This reflected on food insecurity, worsens public health outcomes, and contributes to widespread displacement, with rural populations increasingly migrating to already stressed urban centers.

While past efforts aimed to produce a national drought strategy, including a 2018 draft, they lacked long-term traction. The current initiative, supported by the DRESS-EA project, aims to overcome these gaps through a participatory, evidence-informed, and community-anchored process.

Developing Sudan's NDMP

The development of Sudan's NDMP was initiated in August 2024 and concluded in March 2025. It was a collaborative and evidence-based process led by a consultancy team under the DRESS-EA project. The effort began with a thorough **assessment of existing knowledge and prior drought-related initiatives**, focusing on climate impacts, early warning systems, and vulnerabilities, particularly in White Nile State where the DRESS-EA project is active.

Following this initial review, the team engaged in a **wide-ranging stakeholder consultation process**. Beginning with introductory meetings with the DRESS-EA project team, consultations expanded to include national and subnational government agencies, NGOs, and local communities. Despite logistical challenges due to ongoing conflict, the team conducted three consultation meetings, using both online platforms and in-person gatherings in safer regions. These engagements included representatives from water, environment, and agricultural ministries, as well as civil society organizations.

A central component of the process was **community-level engagement**. The team visited twelve villages, conducting focus group discussions and interviews with a diverse range of community members, including women and youth. These interactions provided critical insights into local drought experiences, traditional coping strategies, and priority needs.



The team also performed a **vulnerability assessment using a bottom-up approach**, incorporating demographic data and field observations.

To complement the qualitative data, the DRESS EA team utilized **remote sensing and meteorological analysis** to assess long-term trends in rainfall, temperature, land use, and vegetation. This combination of local knowledge and scientific evidence allowed for a comprehensive understanding of drought risk across Sudan.

With this robust evidence base, the team drafted both a Drought Emergency Response Plan and the NDMP. These documents were then presented and discussed during a **two-day validation workshop** attended by stakeholders from all relevant sectors. The workshop allowed for final feedback and adjustments, ensuring that the plan was practical, context-specific, and widely endorsed.

Lessons Learned and Key Recommendations

The development of Sudan NDMP exemplifies a robust, inclusive approach to building drought resilience. It shifts focus from short-term relief to addressing the environmental and socioeconomic roots of vulnerability, ensuring long-term impact through national ownership and integration with existing policies.

For replication, the NDMP **emphasizes context-specific interventions**. It blends local knowledge with modern data tools like GIS and meteorological analysis. Crucially, **inclusive stakeholder engagement, particularly involving women and youth**, enhances ownership and effectiveness. Iterative validation further refines and legitimizes the plan, making it adaptable for similar contexts.

Key next steps involve **securing high-level political endorsement** and dedicated resources. Investing in capacity building for critical services (e.g., extension, meteorological) is vital. A strong monitoring and evaluation framework will ensure adaptive management. Finally, mobilization of needed resources and **strengthening partnerships** with NGOs, civil society, and research institutions will not only boost coordination, innovation, and facilitate broader regional adoption but also sustain drought resilience as ultimate outcome for the NDMPs.

Overview of Sudan's NDMP

The NDMP consist of 12 chapters, each addressing key elements of a comprehensive drought response strategy:

1. **Introduction:** Contextual overview including Sudan's drought history and the link to climate change.
2. **Principles and Process:** Rationale and guiding principles (sustainability, flexibility, collaboration, community-centeredness).
3. **Policy Alignment:** Coordination with existing national policies on water, land, and environment.
4. **Stakeholder Roles:** Assignment of responsibilities to ministries, agencies, NGOs, and communities.
5. **Monitoring and Early Warning:** Systems for drought detection, forecasting, and communication.
6. **Risk and Vulnerability Mapping:** Identification of drought hotspots and at-risk communities.
7. **Communication and Response:** Framework for coordinated drought responses and crisis communication.
8. **Preparedness and Mitigation:** Strategic measures to build resilience and reduce exposure.
9. **Awareness, Education, and Research:** Role of academia and education in promoting drought literacy.
10. **Resource Mobilization and Partnerships:** Funding strategies and partnership models for implementation.
11. **Implementation and Governance:** Institutional coordination and policy mainstreaming.
12. **Conclusion and Recommendations:** Next steps and policy priorities.

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