



Rangeland Management and Community Resilience in Samburu County, Kenya

Summary

This case study examines the development and implementation of a community-led Rangeland Management Plan in Samburu County, Kenya, aimed at addressing land degradation, hydro-climatic extremes, and human-wildlife conflict. Through the DRESS-EA project, local communities—particularly the Kalama Community Conservancy—collaborated with government agencies, NGOs, and researchers to identify challenges, map sustainable land use practices, and integrate traditional knowledge with scientific insights. Key interventions included rotational grazing, soil and water conservation, settlement planning, and sand dam construction. The process enhanced community resilience, improved pasture availability, reduced wildlife conflicts, and aligned local actions with national and regional strategies. The case highlights the value of participatory planning, ecosystem-based management, and cross-sector collaboration in building drought resilience and sustaining pastoral livelihoods.

Socio-Ecological Challenges in Samburu

Samburu County, located in northern Kenya, is predominantly inhabited by pastoral nomadic communities whose livelihoods rely heavily on livestock and the health of rangelands. The region faces severe ecological and socio-economic challenges exacerbated by climate change and human activity. Land degradation is widespread due to overgrazing, unsustainable land use practices, and frequent hydro-climatic extremes such as droughts and flash floods that wash away nutrient-rich topsoil. Compounding this are pressures from

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.

sand harvesting, driven by construction demand in other parts of Kenya, and increased depletion of groundwater sources.

Additionally, human-wildlife conflict poses a growing risk. As rangelands degrade and pasture becomes scarce, pastoralists are increasingly forced into protected wildlife areas such as Samburu National Reserve, where interactions with wildlife—particularly elephants and predators—can result in injury or death. Wildlife migration corridors now intersect with human settlements, often with tragic consequences.

Community-Driven Actions Toward Sustainable Rangeland Management

To address these complex challenges, the DRESS-EA project (Drought Resilience for the Eastern Africa Region) supported a series of interventions in partnership with Kalama Community Conservancy, one of the pioneering conservancies in the area. These interventions centered around building a sustainable, community-owned Rangeland Management Plan.

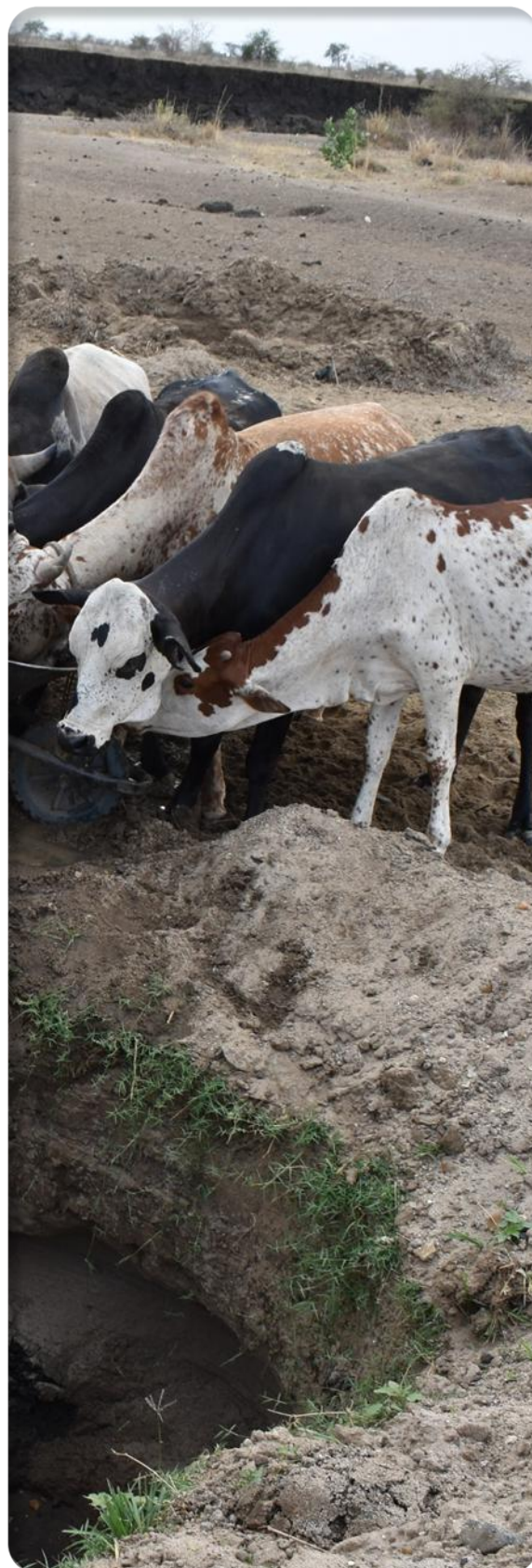
1. Community Consultation and Situational Awareness

Initial efforts focused on engaging the community to surface their insights about local drought impacts and identify practical solutions. The community's deep situational awareness became apparent—members clearly articulated the impacts of drought on livestock, education, and migration, and voiced the need for improved grazing practices, water access, and land use planning. Meetings were held across multiple villages to ensure broad representation in shaping the management plan.

2. Mapping and Supporting Sustainable Land Practices

The project built upon existing community initiatives, particularly rotational grazing systems and soil conservation techniques. Community grazing committees, long active in the region, played a central role. Women-led soil conservation efforts—such as constructing semi-circular bunds to prevent erosion—were enhanced. The introduction of perennial grasses helped stabilize fragile soils and improve forage quality.

Additionally, sand dams were constructed to capture surface runoff during heavy rains, improving groundwater recharge and ensuring access to water during dry periods. These measures were informed by scientific input from conservation NGOs and wildlife research institutions, including Save the Elephants and the Grevy's Zebra Trust.



3. Settlement and Land Use Planning

Recognizing the need for structured settlement to balance conservation, tourism, and pastoralism, communities agreed to relocate to designated areas on the fringes of the conservancy. This opened up core rangeland areas for grazing and wildlife use. “Mama Tembo” groups—women engaged in environmental awareness—were instrumental in sensitizing communities about avoiding wildlife corridors, further reducing the risk of conflict.

The management plan also incorporated real-time data on lion movements, enabling herders to avoid areas with high predator activity. This practical use of scientific knowledge significantly reduced livestock losses and improved human-wildlife coexistence.

Results: A Transformative and Locally Owned Rangeland Management Plan

The case of Samburu County illustrates the power of participatory planning, community-driven conservation, and cross-sector collaboration in building resilience to drought and land degradation. The development and adoption of the Rangeland Management Plan brought a number of measurable benefits:

- **Improved Rangeland Health and Livestock Productivity:** With better grazing management and restoration activities, pasture availability increased, reducing the need for illegal grazing in protected areas. This, in turn, lowered incidents of human-wildlife conflict.
- **Community Empowerment and Ownership:** The participatory process and integration of traditional knowledge with scientific research enhanced community trust and ownership. The plan was ratified in a member’s assembly, making it a collective agreement and roadmap for all.
- **Strengthened Institutional Collaboration:** The process fostered alignment between community efforts and broader national and regional frameworks, including: The Kenya Rangelands Management and Restoration Strategy (2021–2031), the IGAD Regional Rangelands Strategy, and the Kenya National Landscape and Ecosystem Restoration Strategy (2023–2032). These alignments provide a basis for accessing long-term support from the county and national governments and international donors.

Lessons and Way Forward

Several key lessons emerged from the experience in Samburu:

- **Leverage Local Knowledge and Ownership:** Community awareness of local climatic and ecological dynamics was a strong foundation for designing context-specific solutions and planning instruments.
- **Build on Existing Structures:** Rather than starting from scratch, the project layered new interventions onto existing community structures and initiatives, such as grazing committees and conservancy governance.
- **Fuse Traditional and Scientific Knowledge:** Collaboration with NGOs and research institutions enabled integration of community wisdom with scientific data, especially in mapping wildlife corridors and understanding drought dynamics.
- **Address Emerging Issues Through Policy:** The urgent issue of unregulated sand harvesting was highlighted. While beyond the scope of the project itself, the community identified this as a critical area for future regulation and environmental assessment, led by the county government.

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