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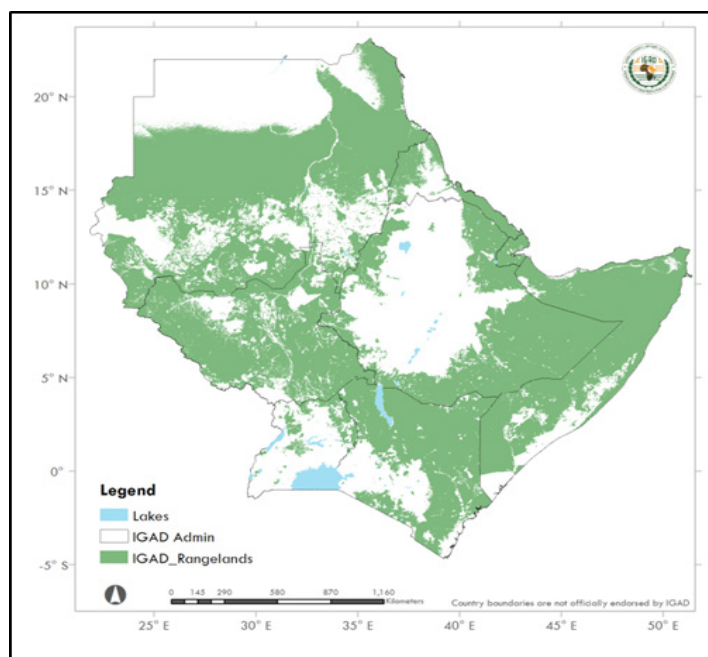
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Case Study on Improved Fodder and Seed Production; Storage and Marketing in Dikhil and Karamoja Clusters

Background

About 60 - 70% of the landmass in IGAD region is Arid and Semi-Arid Lands (ASALs). It is characterised by low erratic rainfall of upto 500mm per annum, increased frequency of devastating droughts and varying combinations of vegetative cover and soils. These regions exhibit ecological constraints which set limits to nomadic pastoralism as the main means of livelihood, because about 53% of the region's cattle (51 million), 71% of the goats (58 million), 68% of the sheep (58 million) and 51% of the global camel population (17.5 million) are found in the rangelands, majority of which is ASAL.



The ecological constraints include: erratic rainfall which usually falls as heavy showers and the water lost to runoff, high evapotranspiration, seasonal/ invasive weeds which compete for scarce nutrients and moisture with grass and herbs, and low organic matter levels which cannot support long term cultivation. As a result, producing livestock exclusively on rangeland resources has become a challenge for communities whose livelihoods depend largely on livestock performance. Moreover, recurrent droughts coupled with environmental degradation have threatened sustainable

livestock production in most parts of the IGAD region including Dikhil and Karamoja clusters. This has resulted in the erosion of local people's resilience and coping capacities, and has led to a shift towards the need for better understanding the importance of livelihood strategies and building of resilient livelihoods.

Additionally, shrinkage and degradation of rangelands and underdevelopment of the animal feed industry are important factors that underlie a serious shortage of animal feeds. Of the



many factors responsible for the poor production and productivity of livestock in the region, poor quality and availability of animal feed takes precedence. Feed scarcity has been a long-standing technical constraint for production improvement of livestock in smallholder mixed farming, pastoral and agropastoral production systems in the region. Adaptive livestock feeding methods have included crop residues, complemented with collection from and/or grazing of animals on communal land, livestock migration in search of pasture and water, grazing in forests and roadsides or fallow land.

Fodder and Fodder Seed Production Efforts

Deliberate efforts have been made by the four governments (Djibouti, Ethiopia, Kenya and Uganda) to produce and conserve fodder (hay) with support of national projects and development partners. The production method is either rain fed or irrigated. Moreover, sites for pasture seed multiplication alongside rangeland rehabilitation sites have been established in various locations of Karamoja and Dikhil clusters. The common pasture types promoted include; Rhodes grass (*Chloris gayana*), Guinea grass (*Panicum maximum*), Signal grass (*Brachiaria brizantha*) and Green leaf Desmodium (*Desmodium intortum*). Some good practices observed include: Fodder seed harvesting, fodder production under irrigation, sale of harvested fodder at local markets, back yard fodder production and sale of fodder seeds to adoptive farmers.



Chloris Gayana



Brachiaria Brizantha



Fodder Seed

This effort is however faced with some challenges that include:

- i. Continuous land demarcation in pastoral areas since the drive is towards sedenterisation and community land ownership,
- ii. Wanton mismanagement of rangelands which has contributed to increasing aridity and land bareness,

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- iii. Recurrent extreme climatic events, especially drought, and increasingly scarce, variable and unpredictable rainfall exacerbated by low adaptation capacity, poor meteorological infrastructure, inadequate access and use of climate information and services,
 - iv. Deterioration of environment, natural resources, soil and spread of invasive plant species leading to pasture and water scarcity,
 - v. Lack of or poorly designated fodder storage facilities and low demand for fodder and fodder seed in some regions,
 - vi. Insecurity arising from conflicts over resource utilization from within and without,
 - vii. Retrogressive cultural practices, failure to accept change towards good management aspects e.g. commercial fodder production, fodder seed harvesting, conservation and utilization,
 - viii. Inadequate extension services in ASALs with a focus towards commercial fodder/ pasture production,
 - ix. Low uptake of modern technology in fodder production due to low literacy and inadequate private sector involvement especially in ASALs.

Proposed Way Forward

- 1) Local authorities need to be strengthened and empowered to protect demarcated grazing reserves and mobility corridors to ensure safe passage for transhumant pastoralists, including cross-border movements in search of pasture and water,
- 2) Member States need to develop or strengthen policy and legal frameworks that provide for the enforcement of environmental management including sustainable utilization of rangelands and natural resources (fauna and flora) and water,
- 3) The governments and development partners should facilitate development of water harvesting structures (surface and sand dams, pans, rock and roof catchment) and extraction (wells, borehole, reticulation) at strategic locations for use by host and transhumant communities,
- 4) Member States, with the support of development partners, should develop and operationalize (and where available strengthen) an integrated early warning system for monitoring water and fodder/pasture situation, resource conflict, and animal and human health nutrition,
- 5) Governments and development partners should strengthen the capacity of communities to adopt rainfed and / or irrigated fodder production and construction of appropriate storage facilities and link producers to markets. Where practical and affordable fodder/ pasture producing groups can be facilitated to mechanise fodder

production and processing, including tractor mounted mowers, harrowers, rakes and balers / briquettes, to improve efficiency of production,

- 6) Communities should be strengthened and empowered by local and national governments and development partners to sustainably and cost effectively harvest and bulk pasture seeds, reseed and manage rangelands, including the control of invasive plant species within their communal boundaries,
- 7) Governments and development partners should strengthen community participation and public- private partnership in fodder production, harvesting, conservation and marketing programmes,
- 8) Government and private sector should invest in research in appropriate dry land fodder/ pastures production systems,
- 9) Governments should strengthen livestock extension services that are a prerequisite for promoting technology uptake by pastoralist with regard to fodder production whether rainfed or irrigated

Policy Advice

1. IGAD Member States are advised to develop or strengthen policy and legal frameworks that provide for the enforcement of efficient environmental management including safeguarding of communal land tenure, sustainable utilization of rangelands and natural resources (fauna and flora) and water,
2. IGAD Member States are advised to review policies to accommodate integrated early warning systems for early action to mitigate severe impact arising from climate change that has contributed to increased vulnerability of communities in the Arid and Semi-Arid Areas (ASALs) of the IGAD region,
3. Countries are advised to put in place policies focused on effective control and subsequent eradication of invasive plant species, especially *Prosopis Juliflora* that is currently threatening rangelands and water resources.

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FOR MORE INFORMATION, PLEASE CONTACT
THE DIRECTOR,
P.O. Box 47824-00100 Nairobi, Kenya,
Email: icpald@igad.int