



PEACE, PROSPERITY AND
REGIONAL INTEGRATION



POLICY BRIEF

Priority Intervention Area 5: Research, Knowledge Management and Technology Transfer

Introduction

The Intergovernmental Authority on Development (IGAD)'s Drought Disaster Resilience and Sustainability Initiative (IDDRSI) has since 2013 inspired and guided regional and national priorities to counter drought emergencies in the East and Horn of Africa countries of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. The IDDRSI Strategy (2019-2024) acknowledges that gender issues impact the **research, knowledge management and technology transfer** priority intervention area (PIA 5). A gender analysis was undertaken for the IDDRSI Strategy, Regional Programming Paper and the Country Programming Papers (CPP) (IGAD, 2016).¹ This brief examines the critical gender issues relating to adaptive research, agricultural extension systems and technology transfers and the implications for drought resilience-building efforts in the IGAD region. It is based on the review of the gender analysis report.

Women's experiences and knowledge of drought

Frequent drought is one of the significant challenges in Arid and Semi-arid Lands (ASALs) in the IGAD region, and this affects millions of inhabitants whose livelihood is based on natural resources. The magnitude, frequency, and spatial coverage of droughts, as well as their impact, have increased. For one of the worst affected IGAD Member States, Somalia, six out of seven rainy seasons experienced between 2016 and 2019 have been poor, resulting in livestock deaths and cereal losses (Food and Agriculture Organization, 2019).² Projections are that drought will intensify in the future due to the changing climate.

As a response, IGAD Member States have intensified efforts to mitigate drought impact through emergency assistance. However, by its nature, emergency assistance does not reduce the effects of droughts such as environmental degradation, lack of infrastructure, limited investments in the ASALs, absence of economic opportunities and conflict. Breaking the cycle of emergencies and building resilience of dryland communities to external shocks is of utmost importance in the IGAD region. This is also related to achieving Aspiration 7 of the African Union Agenda 2063 of building environmentally sustainable climate and resilient economies and communities (African Union, 2015).³

The IDDRSI Strategy recognises that both men and women have been victims of socio-cultural factors and traditions, leading to disempowerment. The strategy emphasises that promoting gender equality and women's empowerment is one way of bringing about social transformation and ensuring all individuals develop their potential and contribute to the development processes. So far, women's experiences, knowledge and influence on the region's development goals have inadequate (IGAD, 2016). Much of the research is blind to critical information on women's experiences and expertise in environmental climate change, water resources development and management, conflict prevention, conflict resolution, and peacebuilding.

1. IGAD (2016): Gender Analysis of the Country Programming Papers (CPPs) to End Drought Emergencies in the Horn of Africa. Vol 2.

2. Food and Agriculture Organization (2019): Somalia Drought Action Plan 2019: An Urgent Call for Humanitarian Action in Rural Somalia.

3. African Union (2015): Agenda 2063: The Africa We Want. <https://www.un.org/en/africa/osaa/pdf/au/agenda2063.pdf>

Men and women do not always have equal access to transformative knowledge since social-cultural factors facilitate men's access to information but limit women's access. There is a need to identify and utilise appropriate technologies that address women's time and other strategic requirements. For example, there is a need to expand access to available cheap technologies such as energy-saving cooking stoves and rainwater harvesting or access to information regarding such technologies (IGAD, 2016).

Access to information and knowledge

Access to information is the ability for an individual to seek, receive and impart information effectively. This sometimes includes scientific, indigenous, and traditional knowledge. It may entail building open knowledge resources, preserving digital heritage; respect for cultural and linguistic diversity, such as fostering access to content in local languages. It also includes the development of connectivity and affordable ICTs, including mobile devices, broadband internet, and related infrastructures.

Success in building resilience to drought will be enhanced if technology development considers both Indigenous Technical Knowledge (ITK) and farmers' objectives and constraints. In some cases, ITK is based on knowledge, beliefs, and customs that are internally consistent and logical to those holding them but at odds with the objectively deduced formal science findings. In such cases, scientists need to build upon ITK components, which are not inconsistent with scientific knowledge, seeking to change over time.

Many agro-pastoralists are constrained by limited knowledge and skills for productive livelihoods. This is made worse by limited agricultural services, infrastructure, inputs, and little or no credit access. While IGAD Member States strive to develop their respective agricultural sectors, limited knowledge leaves many households and communities reliant on low-technology, rain-fed crop production that is low in productivity and susceptible to erratic and delayed rains or flooding.

Access to and control of resources such as information strengthens women's influence and ensures social empowerment. The digital divide has exacerbated women's limited knowledge as fewer women than men have access to information and communication technology (ICT). On the other hand, access, control, and management of resources empower women and improve the household's overall welfare. As such, support to women's networks for increased participation is a critical tool for ensuring gender mainstreaming.

The key to developing a comprehensive gender framework is sufficient documentation and the generation of knowledge from both men and women in the seven PIAs. Apart from PIA 5 of research, knowledge management and technology transfer, which is the subject of this brief, the other PIAs relate to: natural resources and environmental management; market access, trade, and financial services; and livelihood support and basic social services; disasters risk management, preparedness, and effective response; conflict prevention, resolution, and peacebuilding; coordination, institutional strengthening, and partnerships; and finally, human capital, gender, and social development. Due to the social and gender roles, women have knowledge based on their experiences on each of the PIAs. This knowledge remains outside the mainstream public policy and development interventions. There is therefore need to take cognisance of gender-aware collation, packaging, and dissemination of information to ensure women's knowledge is mainstreamed at all levels of the PIAs and gender-friendly mechanisms are used for packaging and disseminating the information.

Access to early warning systems

Studies have shown that disaster fatality rates are much higher for women than for men due to gendered differences in the capacity to cope with such events (UNDP, 2010).⁴ One of the adaptation methods currently being promoted by the international community is the setup of early warning systems in countries most likely to be affected by climate change (Bowman et al., 2014)⁵. However, women have limited access to such disaster reduction strategies due to low education attainment. Early warning systems should consider

4. UNDP (2010): Gender, Climate Change and Community-Based Adaptation. UNDP, New York.

5. Bowman, K., J. Rice and A. Warner (2014): The Ethics of Early Warning Systems for Climate Change in Reducing Disaster: Early Warning Systems for Climate Change. (Zommers, Z and A. Singh (editors) Springer 2014.

the diverse needs of men and women, such as access to information. Women's generally lower education achievement, limited control of resources and lack of involvement in decision-making may restrict the extent of women's engagement in climate change mitigation and adaptation schemes.

Furthermore, the Kenya CPP notes that humanitarian assistance responses to climate change are characterised by late arrival; this leads to failure to respond appropriately to drought early warning information and over-reliance on emergency food aid, poor mobilisation, and outreach (Kenya CPP, 2018)⁶. Also, the CPP highlights the low levels of involvement by communities and women in public decision-making and cultural barriers to participation in development initiatives, contributing to widespread humanitarian emergencies. Consequently, there is a failure to link humanitarian assistance operations to recovery and long-term development strongly.

Migration as an adaptive strategy to limited technology

Migration is a significant strategy utilised by citizens of IGAD Member States to deal with climate change. The potential conflicts over land have affected the traditional migratory routes. For example, the Sudan CPP notes that insecurities in the South Kordofan and the Blue Nile States' productive southern areas directly impact the conventional seasonal north-south migration of nomadic cattle herders (Sudan CPP, 2019).⁷ On the other hand, the lack of access to these grazing lands increases the concentration of animals in Sudan. As a result, competition over meagre resources of water and grazing pasture may contribute to local disputes over natural resources.

Furthermore, the Sudan CPP notes that large herds' concentration in small areas leads to overgrazing and increased susceptibility to infectious diseases. Migration significantly increases vulnerabilities faced by women. Specifically, women usually have use rights on surplus land, which they do not necessarily own; any migration would affect their access to such free resources.

Recommendations Support for adaptive research Member States

1. Collect gender-disaggregated data that would help measure communities' changes, how the interventions impact men and women, what opportunities are there for men and women, or whether the interventions' intended beneficiaries are reached; identify gender-based best practices and make the data available to the relevant stakeholders.
2. Enhance capacity and deliberate action to harness and integrate indigenous knowledge as a source of innovation for the region. Specifically, increase documentation and analysis of indigenous knowledge and information and synthesise scientific systems to enhance technologies' rigour and effectiveness. After verification, appropriately package and disseminate such technologies for broader use. Also, strengthen adaptive research on issues specific to drought resilience, including drought-resistant food security crop varieties; service delivery mechanisms for mobile communities such as extension services and health services. Through this, identify and utilise appropriate technologies for women in agriculture, energy, and other critical sectors.
3. Develop strong linkages with academic institutions such and gender/women departments, centres, and institutes to access regional specific knowledge.

IGAD

4. Both Member States and IGAD Secretariat need to organise knowledge exchange on gender and resilience to illuminate gendered impacts of drought and the pathways to addressing gender inequalities in resilience-building. This could be achieved through, for example, knowledge fairs.
5. Build a network of relevant academic departments/centres of universities and research institutes, including those that deal with gender issues. Strengthen networking and advocacy platforms at

6 Republic of Kenya (2018): Sector Plan for Drought Risk Management and Ending Drought Emergencies: Third Medium Term Plan 2018-2022.
7 Sudan (2019): Country Programming Paper 2019-2024 – Consolidating the Path to Resilience and Sustainability.

local and regional levels for knowledge exchange and highlighting drought resilience issues and agendas in public forums. Increase funding support to enhance networks in institutions of excellence in research, knowledge, science, technology, and innovations relevant to the IGAD region.

6. Promote gender mainstreaming in the work of regional dryland research centres. Ensure that gender and resilience are part of the research areas undertaken at the regional dryland research centres.

Advisory and extension systems Member states

7. Establish climate-smart pastoral villages for demonstrating technology packages developed for the pastoral system. Such an infrastructure could be considered as a model village for scaling up purposes.

IGAD

8. Reorient capacity building to meet the needs of the regional agricultural sector. Ensure that advisory and extension staff update their skills in improved technologies and strategies to enhance household resilience in drought-prone areas and communities.
9. Strengthen and increase the number of Pastoral Training Centres and Pastoral Field Schools in the ASALs. Organise training and experience sharing for communities, professionals, and paraprofessionals in the ASALs.

Knowledge management and communication Member states

10. Establish knowledge management centres in the dryland communities that can facilitate data access, sharing and utilisation. Also, establish knowledge management rules and procedures.
11. Strengthen information communication technology infrastructure and appropriate application for knowledge management (data collection, sharing and utilisation).
12. Establish a clearinghouse to identify, document, and promote the application of experiences, expertise, and models of acceptable practices along the chain of national and local research and development practitioners in dryland areas.

IGAD

13. Strengthen and support regional, national, and local mechanisms (networking, stakeholders' platforms, etc.) for knowledge sharing to identify and promote the scaling up of best practices to enhance household resilience in drought-prone areas and communities.



Acknowledgement: This publication has been produced with the assistance of the Government of Sweden. The contents of this publication can in no way be taken to reflect the view of the Government of Sweden.