

Drought and People's livelihood in the Horn of Africa

Gerald Kairu

Key messages

- Communication, awareness and outreach/ use available platforms and means for information dissemination to have a wider reach- localised consistent and common messaging, non-alarmist, factual and updated on regular basis
- Coordinated early action and government leadership is imperative
- Early warning that triggers early action saves loss of human life and economic damage
- Investing more in risk management and response
- Learning lessons from successful innovative community adaptation actions can cause multiplier effect amongst local stakeholders

1. Bio-Physical and socio-economic characteristics of the Horn of Africa

Regional Bio-Physical context

The Horn of Africa (HoA) region comprises of the countries – Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda. Babikir *et al*, 2015¹, IGAD 2016² describe the region as occupying 5.2 Million km² with a human population of about 230 Million people, growing at a rate of 3%, representing one of the highest population growth rates in the world. The HoA region faces several water constraints and prolonged droughts, with a vast area consisting of majorly Arid and Semi-Arid Lands (ASALs). The annual rainfall in ASALs is less than 600mm IGAD (2013)³. With exacerbation of effects of climate change in the HoA region, drought frequency and intensity is predicted to increase. This is evidenced by the high anomalies in precipitation. Below are climate trends and scenarios for East Africa Fig 1 and 2 and the reduction in levels of precipitation and increase in variability of precipitation (Fig 3) of the September – December Rainfall season coefficient of variability (%)

¹ Babikir, O., Muchina, S., Sebsibe, A., Bika, A., Kwai, A., Agosa, C., &Wakhusama, S. (2015). Agricultural Systems in IGAD Region – A Socio-Economic Review.

² IGAD regional Strategy 2016

³ IGAD, 2013. IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI) Strategy.

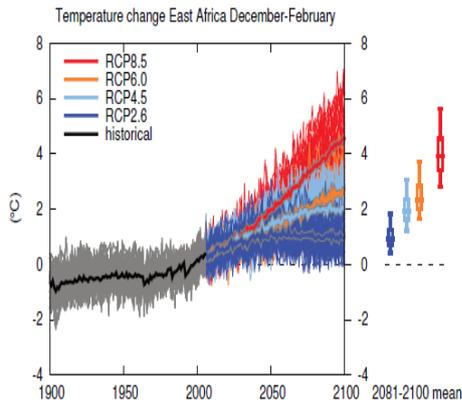


Figure 1: Temperature Change
Source: ICPAC

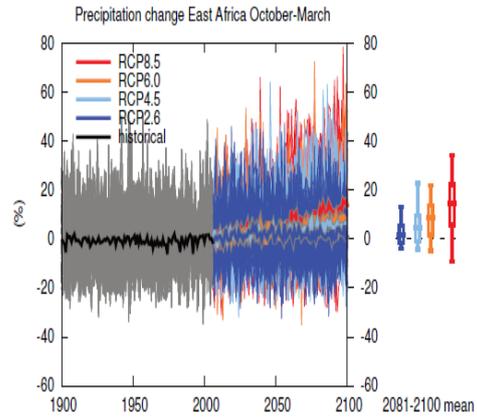


Figure 2: Precipitation Change

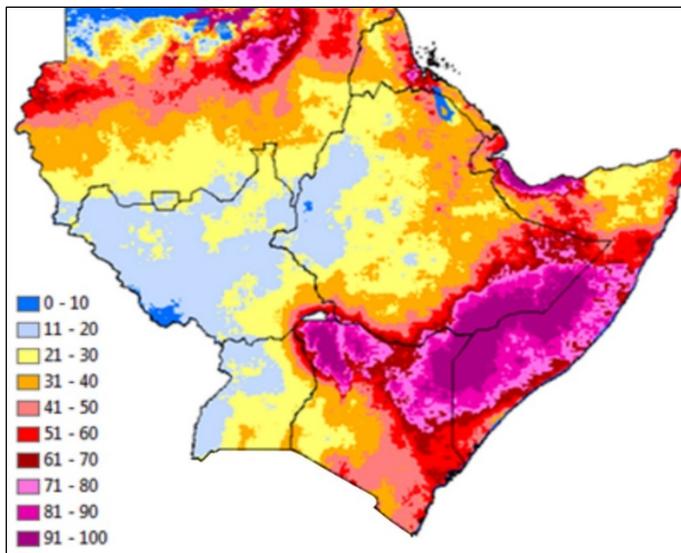


Figure 3: Reduction in levels of precipitation and increase in variability of precipitation
Source: Famine Early Warning Systems Network (FEWSNET)

Vulnerability to climate related impacts

The HoA is a region that is highly vulnerable to climate-related risks (ICPAC 2007⁴, ICPAC and WFP 2017⁵). The causes of vulnerability in the region include: increased frequency of climate related hazards i.e. Droughts, dry spells and floods, pests and diseases that negatively affect agricultural production, human induced environmental and land degradation, poverty, inconsistent and malfunctioning market, human diseases that considerably reduces availability of labour for production of food, weak institutional capacity and poor access to basic services, recurring conflicts over resources i.e. Pastures, water etc. and high population density which is responsible for increasing demand for food and yet production is low.

⁴ ICPAC 2007. Climate Change and Human Development in Africa: Assessing the Risks and Vulnerability of climate Change in Kenya, Malawi and Ethiopia, Nairobi.

⁵ IGAD Climate Prediction & Application Centre (ICPAC) / World Food Programme (WFP) Regional Bureau for East and Central Africa, 2017. Greater Horn of Africa Climate Risk and Food Security Atlas Technical Summary, Nairobi, Kenya. <https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-0000098939.pdf>

The majority of the poor community's livelihood depends on rainfall for farming (ICPAC and WFP, 2017). Overall, the regional agricultural sector (animal husbandry, crop farming and cash crops) covers an estimated 8% of the regions territory (Africa Development Fund 2002)⁶. Central to the well-being of the population in the HoA is enough and sound quality of water. The water resources of the region are such that they flow from well-watered to a more Arid/semi-arid area crossing national administrative boundaries. Therefore, cooperation in equitable transboundary water utilization and management is a critical aspect to people's livelihoods in the region. This is important to manage/increase the size of potentially arable land through irrigation. There are also aggravated instances of food insecurity, water conflicts and inadequate pastures for domestic animals. Most importantly, the regions' natural resources are a major asset for the community's livelihoods whose major reliance is agriculture (crops, livestock and fisheries), forest resources and pasture.

However, the region's food security is threatened by several factors which include: climate variability, land degradation and desertification, pests and diseases, land tenure issues and armed conflicts among others. To illustrate the extent of impact of food security, a recent Global Report on Food Crises (GRFC, 2020), in 2019 alone, an estimated 135 million people in over 55 countries around the world faced food insecurity. Of this population, 20% were residents in the HoA region (GRFC 2020)⁷. The report also highlights increasing levels of food insecurity in the HoA region. Extreme weather events- including droughts contributed significantly to the acute food insecurity. The other drivers are conflicts or insecurity and economic shocks.

Moreover, the wide- spread effects of COVID 19, is likely to drive the numbers affected much higher mainly due to international boundary closures as well as restricted movements. This action is expected to impact more negatively to the vulnerable populations whose livelihoods are under threat. Pastoralism is a common occurrence in the region and is wide-spread in search for better pasture and water. Sudan has the greatest number of pastoralists in the HoA region. Ethiopia has about 10-12 percent of its entire population as pastoralists. Djibouti and Eritrea have 20% and 33% respectively of their populations as pastoralist, while Somalia has 70% (IGAD 2007)⁸. While, for Kenya, two thirds of the livestock population is found in the ASALs (World bank 2015)⁹. Generally, Pastoralists practice transhumance. The livelihood is practiced predominantly in ASALs where pastoralists can exploit land and conditions that normally cannot support rain-fed agriculture. Within the ASALs, livestock management is very vulnerable due to effects of droughts and on grazing land and water for animals. The pastoralists experience significant losses of livestock during droughts, this exacerbates rural poverty due to deprivation of food and income. The unavailability of water ignites migration of the rural communities, mainly pastoralists to water rich areas and this is a source of conflicts. Other challenges at play in the region include deforestation, poor agricultural practices among others. These cause significant reduction in the water retention levels and eventually soil cover loss. Further, the acts lead to increasing vulnerability of communities due to depletion of

⁶ Africa Development Fund 2002. Pilot project on Water harvesting in the IGAD region. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Multinational_-_Water_Harvesting_Pilot_Project_in_IGAD_-_Appraisal_Report.pdf

⁷ GRFC, 2020. Global Report on Food Crises. Regional Focus on the Intergovernmental Authority on Development (IGAD) member states.

⁸ IGAD 2007. IGAD Environment and Natural Resources Strategy

⁹ World bank 2015. Agriculture Global Practice Technical Assistance Paper. Kenya Agricultural Risk Assessment, Washington DC.

water resources (drying up of rivers, streams and aquifers) and ecosystems that are vital to human livelihoods.

Socio-economic landscape

The HoA region comprises a wide vulnerable group to droughts that includes women, children, youth and the elderly. These derive their livelihood from agriculture, that is dominated by production systems from smallholder farmers and pastoralists or semi-pastoralists. The socioeconomic development processes and activities of the vulnerable groups is low. The groups face numerous challenges such as poor access to land and related resources, have limited access to decision-making powers over agricultural production. This is dominated by the men and as such, the vulnerable groups have limited capacity to cope due to high levels of poverty and dependency that render them more susceptible to the damaging effects of drought and climate change and may limit their opportunities for enterprise development. Due to the vulnerable nature of communities, their adaptation to droughts is low. Moreover, they face numerous challenges such as inadequate early warning information to plan for droughts in advance, poor innovative drought adaptation actions and insufficient knowledge and skills in drought management. As there are effects of climate change, it contributes to increased temperatures in the region hence, aggravating drought impacts. The socio-economic setup of the populations is affected by high temperatures that lead to evaporation and reduction in soil moisture, causing failed rains and drier conditions respectively. Eminently, there is crop and pasture failure directly affecting food and livestock production leading to loss of income. From the gender lens, whereas women and men face livelihood challenges and vulnerability to droughts and other disaster risks, women, children, the elderly, and youth are most affected physically, economically as well as socially. The vulnerabilities of these groups are mainly resulting from traditional beliefs and stereotypes that limit their ownership, control of livelihood resources and the increased burden on the domestic gender roles. In terms of coping to the adverse drought effects, the men migrate to seek for opportunities that may increase the income for the family.

Health Risks/COVID19

The populations most affected by drought are the vulnerable communities living the ASALs of the HoA region. The COVID19 pandemic is at the centre of causing more havoc, especially with restricted movements of people within and across country boundaries. First, there is poor access to incomes by the communities who are already constrained by a myriad of challenges. Although, countries in the region are easing movements, there is less hope for the COVID19 pandemic situation to be over in the short or medium term. The situation will soon culminate into a humanitarian food crisis that may require urgent food assistance. FEWSNET has already raised a red flag on an eminent risk of famine due to COVID19 in several countries globally, including in the Horn of Africa¹⁰.

3. Frequency and severity of droughts

The IGAD Climate and Application Centre (ICPAC), an authority in the HoA region in climate predictions and weather forecasting has been and remains at the forefront of

¹⁰ https://fews.net/sites/default/files/Food_Assistance_Peak_Needs_April2020.pdf

characterizing drought in the region. Overall, countries in the region experience drought pressure for quite a long time. The table below illustrates the drought years for some of the countries in the region with widespread impact Table 1 and Fig 4 shows the areas prone to Droughts in the HoA.

Table 1: Drought events in five countries in the IGAD region

Djibouti	Ethiopia	Kenya	Sudan	Uganda
1980	1953	1960-1961	1967-1973	1973
1984	1957-1958	1974-1976	1980-1984	1979
1988	1964-1966	1979	1987	1981
1996	1973-1974	1981	1989	1984
1999	1982	1983	1990	1985
2000	1983-1984	1984	1991	1986
2005	1987-1988	1991/92	1993	1987
2007	1990-1992	1995/96	2011	1992
2008	1993-1994	1999-2000		1993
2010/11	2000	2004		1999
	2002/2003	2011		
	2008			
	2011			
2015/16	2015/16	2015/16	2015/16	

Source: ICPAC

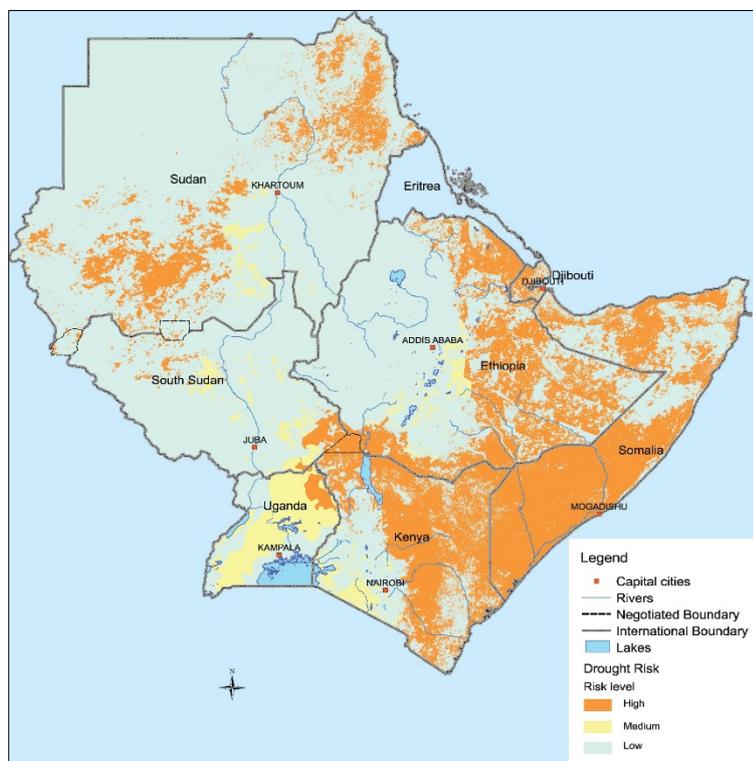


Fig 4: Drought Prone Areas.

Source: United Nations Office of the Coordination of Humanitarian Affairs (OCHA)

Direct and indirect socio-economic and environmental impacts in the region

Drought has impacted directly on agriculture (crops, livestock and fisheries) (Reference). The effect of drought on production systems which include crops losses has caused hikes in food prices eventually kicking people out of employment. Reduction in incomes directly affects the communities who are mainly small-scale farmers and pastoralists because they rely most on reduced food stocks. Moreover, these same communities depend on rain-fed agriculture. They cannot afford the required inputs to enhance the agricultural production and their capacity to withstand drought shocks is low. The communities can adapt to drought effects through appropriate mechanisms and adaptation actions which involve water harvesting and storage infrastructure (localized water tanks, mini water dams, roadside water harvesting and storage structures etc) and water management and protection measures like establishment of community management committees to oversee water source protection and utilization.

Drought has impacted on the key sectors of the economy of the HoA countries in different ways. It has also affected millions of peoples in the region disrupting their livelihoods, businesses and the environment. Key sectors affected include:- *Agriculture sector*: Loss of livestock/reduction in livestock production, increased resistance of livestock to diseases, reduced yields/crop failure; *Water sector*: Drop in groundwater, reduced quantity and quality of water; *Biodiversity*: This has been through habitat and species loss due to high temperatures (Anderegg *et al.*, 2013)¹¹ hence low biological productivity. It has the degradation of ecosystems which reduces its buffer functions, and this leads to loss of important ecosystem services (Munang *et al.*, 2013)¹²; *Tourism*: decline in wildlife and therefore, reduction in foreign exchange; *Social sector*: increased conflicts and hostilities brought about by competition for resources/water between communities; then also amongst pastoralists. The HOA region has been hit severely by drought in 2010/2011, affecting over 13 million people, making people desperate for food due to increased famine levels (UNISDR 2012)¹³. UNISDR, highlighted this drought as the worst in the past 60 years in the HoA region.

Cascading and compound impacts, risk of systemic failures

The most vulnerable populations in the HoA are challenged by the high poverty levels. Issues of water scarcity, poor soils as well as high rate of unemployment play a big role in the low agricultural production. With regards to water, the communities largely depend on surface and sub-surface dams for water. Yet, the capacity of the dams (where they exist) to hold enough quantities of water is low due to high evaporation during the dry season. The situation is compounded by the low agricultural production as a consequence of poor climate conditions resulting into excessive food insecurity. In Kenya, for example, clean and safe water has been supplied to over 7000 households amongst the most impoverished communities living in Kikuu sub-catchment area. The Kikuu community lives in Makueni County located in a semi-arid region of Kenya. The county receives varying quantities of rainfall with some areas receiving as low as 300mm per year. Agriculture is the mainstay of the population in

¹¹ Anderegg, W. R. L., j. m. Kane and L. D. L. Anderegg (2013). Consequences of widespread tree mortality triggered by drought and temperature stress. *Nature Climate Change* 3 (2013), 30–36

¹² Munang, R., i. Thiaw, k. Alverson, j. Liu and z. Han (2013). The role of ecosystem services in climate change adaptation and disaster risk reduction. *Current opinion in environmental sustainability* 5 (2013), 1-6.

¹³ UNISDR 2012. United Nations International Strategy for Disaster Reduction Regional Office for Africa. Africa Informs, special issue on drought, Nairobi.

Makueni (GoK 2014)¹⁴, with at least 78% of the population in the county depending on rain fed agriculture (MoALF. 2016)¹⁵. The water supply has resulted into the community members minimizing trekking long distances in search for water from the distant river. The initiative that was made possible by the Kenya Water Trust fund with technical support from Kenya Water Partnership, a multistakeholder network of Global Water partnership Eastern Africa is one among others in the region supporting similar communities. This intervention resulted into the Kikuu community having diversified activities that included tree planting, chicken rearing, growing green grams, diary farming as well as catchment conservation thus, improving the livelihoods of over 15,000 families. Furthermore, the Kikuu community explored engagement into producing agricultural produce/mangoes for sale; (planting napier grass as cattle feed due to increased water supply.) This is in addition to constructing sunken dams to help in water storage and use during the drought. One sunken dam has the capacity of serving 21 groups of 60 people each engaged in agribusiness such as growing of watermelons and vegetables (spinach and cabbage). From the records available, the agribusiness intervention has realized Khs 15 Million or USD \$150,000 from the sale of the produce. The intervention also has supported the community in policy engagement and advocacy, capacity building, and improved farming methods. After the interventions, the communities have registered an increase in production of agriculture products e.g. mango production with their sales in 2018 going up to Ksh 15.4 million or USD \$154,000) from Khs 700,000 or USD \$7000 in 2012. This has been mainly due to adapting better techniques in soil and water conservation.

Civil unrest and conflict

The low precipitation levels in the region have caused numerous challenges within communities, such as food insecurity, civil strife for water and pastures, drying up of water sources (rivers, stream, aquifers). Yet the HoA region is home to pastoral and agro-pastoral communities. These groups of people are poor and hunger stricken-affected most by famine. Droughts has made them to frequently interact with farmers as they seek for pastures and water for their livestock. This has led to the intensification of conflicts between the farmers and pastoralists. Moreover, this situation cuts across the board with conflicts happening within the countries and across country borders in the region. The result has been social instability leading to inter-communal conflicts hence, disrupting livelihoods. This situation further weakens the already strained, but fragile livelihoods.

4. Management options (mitigation and adaptation)

At regional level, IGAD developed an IGAD Drought Resilience and Sustainability Initiative (IDDRSI) framework, resulting from the Nairobi declaration of the IGAD Heads of State Summit held in 2011 (IGAD 2013b)¹⁶. The framework was developed by the IGAD member states to prevent, mitigate as well as adapt to drought impacts. To operationalize the IDDRSI framework, a Regional Programming Paper (RPP) was developed to detail and guide in the implementation of the drought related actions. The IDDRSI framework feeds into the IGAD regional strategy for the environment and

¹⁴ GoK. 2013. Makueni County First County Integrated Development Plan 2013-2017. Government of Kenya, Nairobi

¹⁵ MoALF. 2016. Climate Risk Profile for Makueni. Kenya County Climate Risk Profile Series. The Kenya Ministry of Agriculture, Livestock and Fisheries (MoALF), Nairobi, Kenya.

¹⁶ IGAD 2013b. Drought Disaster Resilience and Sustainability Initiative (IDDRSI): The IDDRSI Strategy. Intergovernmental Authority on Development (IGAD), Djibouti. IGAD

natural resources (IGAD 2007)¹⁷. While at country Level, with the aim of ending drought emergencies, the HoA member states prepared the Country Programming Paper (CPP), to localize the drought actions. Specifically, the CPPs were geared towards understanding vulnerability context of drought in the countries and propose appropriate actions, including areas of investment in relation to drought resilience. More recently, the institutional and drought frameworks have received a lot of attention from the HoA countries by developing new drought frameworks (policies, plans or guidelines) or revised related frameworks to streamline drought. This is largely due to the negative impact's droughts are creating to the countries' economy and peoples livelihoods. Important to note, is that partners are coming in to support countries develop drought plans to better manage the drought situation. For example, support is coming through the United Nations Convention to Combat Desertification (UNCCD), in partnership with the World Meteorological Organization (WMO), the Food and Agriculture Organization of the United Nations (FAO) and the Global Water Partnership (GWP) Integrated Drought Management Programme in the Horn of Africa (IDMP HOA). The institutions agreed on a framework to collaborate in supporting the UNCCD Country Drought Initiatives. Two countries i.e. Ethiopia and Sudan have already developed their National drought plans through a participatory and consultative process. In developing the national drought plans, countries are adopting the 10-step process of drought management¹⁸. Countries in the region have embraced the national existing institutional and drought framework, which include:

- **Djibouti:** The Ministry of Agriculture, Water, Livestock and fisheries is the focal point of drought related activities in the country. In terms of frameworks, Djibouti has the Public Investment Plan and the National Plan for Climate Change adaptation whose key priorities are focused on interventions highlighted in the Country Programming Paper with clear interventions in the environment sector.
- **Eritrea:** Approximately 80% of the population in Eritrea depend on agriculture for a livelihood¹⁹. Yet the country is drought prone and relies much on rainfall. Consequently, this has adverse effects on food security and income of the people. Traditional farming systems are used, and these are most affected by the recurrent droughts and an increasing environmental degradation²⁰. Eritrea subscribed to the Horn of Africa regional Disaster Resilience and Sustainability Strategy framework aimed at reducing disasters, mainly drought. Furthermore, the country has implemented the Drought Resilience and Sustainable Livelihoods Program in the Horn of Africa (DRSLP II).
- **Ethiopia:** National Policy on Disaster Risk Management, 2013²¹. This is a revised policy resulting from an amendment of the National Policy on Disaster Prevention and Management (1993)²². The new policy is intended to support disaster measures including drought risks to be implemented in an integrated manner to minimize disaster risks and ensure sustainable development. The new policy is comprehensive involving multisectoral approaches and provide an opportunity for the country to shift from reactive crisis management response to a proactive

¹⁷ IGAD Regional strategy for the environment and natural resources (IGAD 2007)

¹⁸ World Meteorological Organization (WMO) and Global Water Partnership (GWP), *National Drought Management Policy Guidelines: A Template for Action* (D.A. Wilhite). *Integrated Drought Management Programme (IDMP) Tools and Guidelines Series 1*. 2014: WMO, Geneva, Switzerland and GWP, Stockholm, Sweden.

¹⁹ <https://www.ifrc.org/docs/appeals/05/05EA002.pdf>

²⁰ FAO 2016. Country Programming Framework for the State of Eritrea 2017-2021

²¹ National Policy on Disaster Risk Management, 2013

²² National Policy on Disaster Prevention and Management, 1993

drought management. Further, the policy led to the culmination of the DRM Strategic Framework and Investment Program (DRMSFIP). Due to recurrent nature and negative impact of droughts, a shift in approach is necessary (FDRE, 2018²³). Global report on food crises 2017²⁴ highlighted the immediate need to support people and reduce their reliance on food assistance due to recurrent hazards, such as drought. Ethiopia has also embraced the Sustainable Land Management Investment Framework aimed at alleviating poverty-through building resilience of ecosystems and peoples' livelihoods; and the Climate-Resilient Green Economy Strategy (CRGE, 2011) for development and sustainability through the green economic growth path. This is further complemented by the National Adaptation Plan (2016-2030), intended to build adaptive capacity and resilience as a way of minimizing vulnerability to the impacts of climate change. More recently, Ethiopia has developed the National Drought Plan- NDP, 2019 through the support of UNCCCD and partners. The Ethiopia NDP has focused mainly on drought preparedness and response measures. The Ministry of Water Resources, Irrigation and Electricity is at the centre of coordinating the various legislations and frameworks related to drought.

- **Kenya:** the focal point institution for drought related programmes in Kenya is the National Drought Management Authority (NDMA) of Kenya. The NDMA is mandated to coordinate all matters related to drought in the country, including implementing policies and programmes in that regard. Other frameworks in Kenya to compliment drought efforts include the Disaster Management Policy and Strategy with aim to strengthen the disaster management institutions and other partnerships as well as mainstreaming disaster risk reduction processes in Kenya Development plan to enhance resilience of vulnerable communities. The above frameworks feed into the overall Kenya vision 2030 that is well articulated and has mainstreamed Disaster Risk Management into its operations. To operationalize the actions, Kenya has introduced a devolved management structure, where most of the actions including those related to drought are managed at county governments.
- **Somalia:** Significant progress has been made by the Somali government to coordinate drought actions and livelihood programmes. The country is applying the Integrated Water Resources Management approach to intervene and manage the current situation. The World Bank under the Global Facility for Disaster Reduction and Recovery (GFDRR) has also supported Somalia Drought PDNA²⁵ and Recovery Framework 2017-18. This framework was launched in 2019 and is aimed at ensuring long-term recovery as well as risk reduction following a prolonged drought that affected Somalia and resulted in a displacement of over 895,000 people since 2016.
- **South Sudan.** The country with the support of Food and Agricultural Organisation have developed the South Sudan Resilience Strategy 2019-2021 (FAO 2019)²⁶. The strategy is quite comprehensive and aligned to the existing country frameworks, including contributing to the Intergovernmental Authority on Development Drought Disaster Resilience and Sustainability Initiative (FAO 2019). Furthermore, the strategy aims at strengthening the resilience and livelihoods of vulnerable stakeholders in the country.

²³ Federal Democratic Republic of Ethiopia, Office of the Prime Minister 2018

²⁴ Global report on food crises 2017. <http://www.fao.org/3/a-br323e.pdf>

²⁵ Post Disaster Needs Assessment

²⁶ FAO. 2019. *South Sudan Resilience Strategy 2019–2021*. Rome

- **Sudan:** The country has several drought related frameworks. For example, the Irrigation and Drainage Act, 1990²⁷; the Water Resources Act, 1995²⁸; the Groundwater Regulation Act (1998)²⁹ among others. These frameworks provide a fertile ground to the support ongoing efforts in operationalization of the just developed National Drought Plan 2019 of Sudan (NDP 2019)³⁰.
- **Uganda:** Drought related emergencies are coordinated by the department of Disaster Preparedness and Management in the office of the Prime Minister. The National Climate Change Policy 2013³¹ and the Disaster Management and Preparedness Policy 2010³² provide the enabling framework to manage drought related interventions in the country.

The HoA has had several existing drought programs aimed at enhancing drought resilience of the vulnerable population. First, is the Drought Resilience and Sustainable Livelihoods Programme (DRSLP) implemented in 2012. The focus of the programme was to develop conditions for resistance to drought of pastoralist's communities through reducing dependency on rainfall. The program established mechanisms for increasing water resources for both livestock and humans. The outcome was reduced conflicts between farming communities and pastoralists due to limited transboundary livestock movements. DRSLP contributed to poverty reduction, food security and economic development due to the increased incomes brought in by the project in rural areas.

DRSLP was implemented in three countries (Ethiopia, Eritrea and Somalia). Other programmes geared towards tackling food insecurity and risk management include; the Regional Food Security and Risk Management Programme implemented in five countries in the HoA region. The countries include Ethiopia, Eritrea, Kenya, Somalia, Sudan and Uganda.

Lessons and good practices have been learned to replicate similar interventions in the region going forward and to design new well-tailored projects and programmes with adaptation actions intended to address emerging issues. Example of on-going projects include: the Agricultural Climate Resilience Enhancement Initiative (ACREI), funded by the Adaptation Fund and implemented by the World Meteorological Organization (WMO) in partnership with the Food and Agriculture Organization (FAO) and the Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre (ICPAC) is focusing on improving adaptive capacity and resilience to current climate variability and change among targeted farmers, agro-pastoralists and pastoralist communities in three countries of the HoA i.e. Ethiopia, Kenya and Uganda.; Enhancing Drought Resilience of Smallholder farmers and Pastoralists in the IGAD region (DRESS-EA)- supported by the Adaptation Fund and implemented by Sahara and Sahel Observatory. This is a project executed at regional level by the Global Water Partnership Eastern Africa and the four riparian countries in the region i.e. Djibouti, Kenya, Sudan and Uganda. DRESS-EA is focusing on building the resilience of vulnerable communities to droughts, mainly small-holder farmers and pastoralists through establishment of early warning systems and implementation of drought adaptation actions.

²⁷ Irrigation and Drainage Act 1990

²⁸ Water Resources Act, 1995

²⁹ The Groundwater Regulation Act (1998)

³⁰ Sudan National Drought Plan 2019

³¹ Climate Change Policy 2013

³² Disaster Management and Preparedness Policy 2010

The above initiatives provide strategic foundations for the countries in the region to position themselves to enlighten the stakeholders on sustainable drought mitigation and adaptation actions that will improve peoples' livelihoods while fostering increased resilience to environmental hazards like drought. In addition, to the regional efforts, the Famine Early Warning Systems Network is providing useful information on early warning and analysis on food insecurity.

Achieving Sustainable Development Goals in Drought prone HoA

Extreme climatic events such as drought are posing a great challenge to sustainable development in the region (UNECA 2015)³³. The HoA countries have endeavored to promote environmentally friendly policy frameworks and to address the natural calamities, however, more effort is required to combat drought through shifting from reactive to proactive drought management approaches. Social challenges such as the escalating poverty catalyzed by drought amongst the vulnerable groups like women, elderly and the youth remains a stumbling block to achieving sustainable development. Therefore, focus must be directed towards poverty reduction through initiation of programmes that involve the active participation of the vulnerable groups to engage in enterprise development.

One of the most pressing social challenges to achieving sustainable development is poverty, especially among women and other vulnerable social groups. Development cannot be sustainable without poverty eradication. Countries in the subregion should focus on reducing poverty by initiating programmes that enable vulnerable groups to engage in income-generating activities.

The Role of drought frameworks

The drought frameworks have been useful in guiding the regional stakeholders to support actions to reduce drought risks, but at the same time increase resilience. Crossman 2018³⁴ elaborated the importance of drought frameworks, and the linkage of the drought actions to the three pillars of integrated drought management (drought monitoring and early warning systems, Assessment of drought vulnerability and Implementation of measures to limit impacts of drought).

Mitigating droughts

Developing new legislations and or enforcing the existing ones is an approach utilised to implement mitigation and response actions. There are already existing land use plans in several countries, which require to be amended to incorporate drought management principles. The other ways the stakeholders are using to mitigate drought events are strengthening the monitoring actions to close the gaps and using outreach and awareness raising on drought.

Pathways to enhance drought resilience

To increase resilience and minimize risks, Integrated approaches are used to deflect the pressure and manage the droughts risks. These approaches include: Community participation in drought related actions from policy influencing and prioritization of their needs to support their own development agenda; Understanding that the ASALs are the worst hit, therefore, countries are refocusing their investment priorities, for example,

³³ United Nations Economic Commission for Africa, 2015 Addis Ababa, Ethiopia

³⁴ Crossman, N.D. (2018). Drought Resilience, Adaptation and Management Policy (DRAMP) Framework, Australia https://www.unccd.int/sites/default/files/relevant-links/2018-08/DRAMP_Policy_Framework.pdf

investing in rural/community infrastructure (markets, appropriate enterprise development- income generating activities); access to timely early warning climate (drought) information by end users and early response; conflict resolution/grievance mechanism to mitigate farmer-pastoral issues and developing acceptable stock routes agreements; training in appropriate drought technologies to increase stakeholder capacities in food production for consumption and sale; developing pro-community drought adaptation actions and, as well, creating linkages between practitioners and researchers on drought related issues. Other pathways to enhance drought resilience include: establish women empowerment schemes like, providing soft loans/women credit schemes for their investments, provision of drought resistant high yielding crop varieties and most importantly avenues that are targeted towards equal access to information for both women and men.