IGAD Regional Climate Change Strategy and Action Plan (2023-2030)

PEACE, PROSPERITY AND REGIONAL INTEGRATION

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INTRA~ACP GCCA+ PROGRAMME An initiative of the ACP Group of States funded by the European Union's European Development Fund

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ACRONYMS

ACP	African Common Position
AF	Adaptation Fund
AfDB	African Development Bank
AIDs	Acquired Immune Deficiency Syndrome
AREI.	Africa Renewable Energy Initiative
ASALs	Arid and Semi-Arid Lands
ASAP	Adaptation for Smallholder Agriculture Programme
AU	African Union
BRT	Bus Rapid Transit
BUR	Biennial Update Report
CAADP	Comprehensive Africa Agriculture Development Programme
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CDM	Clean Development Mechanism
CEDAW	Committee on the Elimination of Discrimination Against Women
CERs	Certified Emission Reduction Units
CEWARM	Conflict Early Warning and Response Mechanism
CIDA	Canadian International Development Agency
CIF	Climate Investment Funds
COP21	Conference of Parties 21
CRGE	Climate Resilience Green Economy
CTF	Clean Technology Fund
DFID	Department for International Development
DRR	Disaster Risk Reduction
EDGAR	Emissions Database for Global Atmospheric Research
EUD	European Union Delegation in Djibouti
FAO	Food and Agriculture Organization of the United Nations
FFEM	French Global Environment Facility
FINDA	Finish International Development Agency
GCCA	Global Climate Change Alliance (of the EU)
GCM	Global Circulation Models
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GHA	Greater Horn of Africa
GHG	Greenhouse Gas
GIZ	German Technical Cooperation
GNI	Gross National Income
GoE	Government of Ethiopia
GoDj	Government of Djibouti
GoK	Government of Kenya
GoSS	Government of South Sudan
GTP	Growth and Transformation Plan

HCENR	Higher Council for Environment and Natural Resources, Sudan
HESPI	The Horn Economic and Social Policy Institute
ICPAC	IGAD Climate Change Prediction and Application
ICEPCVE	IGAD Center of Excellence in Preventing and Countering Violent Extremism
ICPD	Conference on Population and Development
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
IDP	Internally Displaced Population
IFAD	International Fund for Agricultural Development
ICF	IGAD Climate Fund
IGAD	Intergovernmental Authority on Development Regional
IGADD	Intergovernmental Authority on Drought and Development
ILO	International Labour Organization
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contribution
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
IPF	IGAD Partners Forum
JI	Joint Implementation
JICA	Japan International Cooperation Agency
KNCCAP	Kenya National Climate Change Action Plan
LDCs	Least Developed Countries
LDCF	Least Developed Countries Fund
LULUCF	Land use, land-use change and forestry
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MRV	Measuring, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NGO	Non-Governmental Organization
NORAD	Norwegian Agency for Development Cooperation
PPCR	Pilot Programme for Climate Resilience
RCM	Regional Climate Model
RCP	Representative Concentration Pathways
REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD+	REDD with Sustainable Management of Forests, Conservation of Forest Carbon Stocks and Enhancement of Forest Carbon Stocks
SCCF	Special Climate Change Fund
SDGs	Sustainable Development Goals
SI	Strategic Intervention
SIDA	Swedish International Development Agency
SLoCat	Sustainable Low Carbon Transport
SREF	Scaling up Renewable Energy Fund

SSC	South-South Cooperation
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UN/ECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNESCO	United National Educational and Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNCCD	United Nations Convention to Combat Desertification
UNFPA	United Nations Population Fund
UNREDD	United National Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization
WMO	World Meteorological Organization

FOREWORD

Human-induced climate change is happening at a faster rate than expected, and its impact is being observed and felt in all corners of the world. The IGAD region has already experienced temperature rises, shift in rainfall patterns, high frequency of droughts and floods, reduced food production, increased risks of health and reduction in water availability. These observed changes are linked to the accumulation of greenhouse gasses emitted from human activities, primarily from fossil fuel burning and deforestation.

The international community has recognized the threat of climate change to sustainable development and adopted three major international agreements to address the threat. These agreements include: the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and the Paris Agreement on Climate Change.

Parties to the international agreements on climate change have made commitments to collectively take actions to limit global warming, mobilize resources and build adaptive capacity to deal with its impact. The scale of the climate challenge is huge, and its solution requires engagement at all levels. Climate solutions are becoming more available, and many are within our reach. We must urgently take action to adopt and scale them up. We must innovate, implement, and re-think our consumption and production patterns, our way of life, individually, in our workplace, in our societies and our families.

Addressing the challenge of climate change has become a top priority for Member States of the IGAD region. They all have adopted the climate agreements and have developed their National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs). Further, they have submitted reports in the form of national communications. However, Member States face significant capacity challenges in terms of scientific information, tools, and knowledge as they strive to implement their adaptation and mitigation plans. IGAD Climate Prediction and Applications Centre (ICPAC) through this strategy will address these gaps and support Member States in their effort to transform their economies into low-carbon and climate-resilient development pathways.

The strategy document outlines the regional climate, including past observed trends and projections for the future. It also provides an analysis of the socio-economic and environmental contexts of the region, along with initiated adaptation and mitigation actions. It proposes strategic actions under four major result areas: creating enabling environment for climate change actions implementation, climate actions in key economic sectors, strengthening knowledge generation and dissemination together with Mitigation and Low Carbon Development.

IGAD through ICPAC is now fully accredited by the UNFCCC as an Observer Organization for the Conference of Parties (CoP). ICPAC reiterates its commitment to support the region to mitigate climate change, cope and adapt to current and future climate risks. Additionally, ICPAC will redouble its effort to provide decision support tools and scientific knowledge that helps stakeholders to develop sound climate change policies and strategies.

Dr Guleid Artan,
Director, ICPAC

EXECUTIVE SUMMARY

This IGAD Regional Climate Change Strategy (IRCCS) is organized around five parts. The first part introduces the evolution of IGAD and its context. It describes the geographical differences and vulnerability of the region and climate impact. Further, an analysis of the socio-economic context, especially poverty, food security, health, gender, conflict, and political instability is presented. The second part provides an overview of the climate in the region, both past and current climate, based on observed data and projected trends of change under different scenarios.

The third part presents frameworks and international agreements related to climate change mitigation, adaptation, as well as disaster risk management/reduction. The section also presents regional climate change responses, including Greenhouse Gas (GHG) inventory, policies and practices related to adaptation and mitigation actions.

The fourth part is the regional climate change strategy. It outlines the rationale, vision, goal, and strategic objectives of the strategy together with guiding principles. The key priority areas and strategic interventions are presented under four major result areas: (i) enabling the environment to implement climate change strategy and actions, including coordination, capacity building and resource mobilization, (ii) climate change strategies and actions are strengthened and mainstreamed in key economic sectors. The priority economic sectors include agriculture, livestock and fisheries, renewable energy and energy efficiency, industry and trade, transport, water resources, ecosystems and biodiversity, marine coastal areas, arid and semi-arid lands (ASALs) and social development and demographic dynamics under climate security; (iii) regional capacity in climate-related knowledge generation and dissemination; (iv) Mitigation and Low Carbon Development.

The fifth part proposes a plan for the implementation of the strategy. The institutional arrangement for implementation, the key stakeholders for implementation and the implementation action plan are discussed in detail. Further, the resource requirements for implementation, potential sources for funding and resource mobilization plan are presented in detail. It also presents monitoring and evaluation for activities to be undertaken. It is important to note that the priority areas of IRCCS are aligned to the priorities of Member States contained in the NDCs and the national growth and transformation plans or visions of the countries. Moreover, IRCCS is designed to serve as a framework for the implementation of the Sustainable Development Goals (SDGs). For this reason, the time span for the implementation of IRCCS is between 2023 and 2030. This will allow the region to synchronize relevant provisions/contents of the various instruments (NAP, NDCs, SDGs, the Paris Agreement, etc.) within a reasonable period.

ACKNOWLEDGEMENTS

The preparation of IRCCS has involved a large number of staff and high-level decision/policy-makers within IGAD, member states, European Union Delegation (EUD) in Djibouti, and the consulting firms. IGAD would like to express its profound gratitude to all those who contributed to the successful realization of this project. In particular, IGAD wishes to thank the EUD for financing and guiding the IRCCS formulation process.

Indeed, the entire work would not have been brought to fruition without the committed leadership of IGAD Executive Secretary Workneh Gebeyehu (PhD), Dr. Artan Guleid, Director IGAD Climate Prediction and Application Centre (ICPAC), the facilitative role of the project staff at ICPAC that has been truly commendable, they deserve IGAD's sincere appreciation.

IGAD would like to extend its heart-felt appreciation to the UNFCCC national focal points of Member States, team of international and national experts that prepared the Strategy.

PART I: BACKGROUND AND CONTEXT

1.1 Background

The Intergovernmental Authority on Development (IGAD) is one of the eight Regional Economic Communities (RECs) of the African Union (AU), with eight Member States. IGAD was launched in 1996, replacing the Intergovernmental Authority on Drought and Development (IGADD) founded in 1986 by Djibouti, Ethiopia, Kenya, Somalia, Sudan, and Uganda. Eritrea and South Sudan joined IGAD in 1993 and 2011 as the seventh and eighth Member States respectively.

The original mandate of "IGADD" was to mitigate the effects of the recurrent droughts and other natural hazard-induced disasters that afflicted the region with famine, ecological degradation, and widespread social and economic hardships. IGAD further expanded areas of cooperation among the Member States in three priority areas: (a) food security and environmental protection; (b) economic cooperation, regional integration, and social development; and (c) peace, security, and humanitarian affairs.

The founding leaders of IGAD were motivated by a vision where the people of the region would develop a regional identity, live in peace, and enjoy a safe environment while alleviating poverty through appropriate and effective sustainable development programmes.

The vision of IGAD is to be the premier Regional Economic Community (REC) for achieving peace and sustainable development in the region. Its mission is to promote regional cooperation and integration to add value to Member States' efforts in achieving peace, security, and prosperity. IGAD has multiple objectives, which include initiating and promoting programmes and projects to achieve regional food security and sustainable development of natural resources and environmental protection and encouraging and assisting efforts of Member States to collectively combat drought and other natural hazard-induced and man-made disasters and their consequences.

The IGAD operates through four hierarchical policy organs: the Assembly of Heads of State and Government, the Council of Ministers, the Committee of Ambassadors, and the Secretariat, which is headed by an Executive Secretary (ES). The Executive Secretary is assisted by four directors responsible for: Agriculture and Environment; Economic Cooperation and Social Development; Peace and Security; and Administration

and Finance. IGAD also has several specialized institutions IGAD Climate Prediction and Application Center (ICPAC), Conflict Early Warning and Response Mechanism (CEWARN), the IGAD Centre for Pastoral Area and Livestock Development (ICPALD), IGAD Foreign Service Institute (IFSI), IGAD Sheikh Technical Veterinary School and IGAD Center of Excellence in Preventing and Countering Violent Extremism (ICEPCVE).

The IGAD Regional Climate Change Strategy is based on successive IGAD strategies that are formulated every five years to guide IGAD to effectively deliver on its mandate. The 2016-2020 IGAD strategy focused on promoting six strategic objectives: attainment of food security; sustainable management of the environment and natural resources; economic cooperation and regional integration; social development; good governance, peace, and security; and enhancement of the corporate capacity of IGAD. The 2022-2031 strategy has five pillars namely: (1) Agriculture, Natural Resources and Environment; (2) Economic Cooperation, Integration; (3) Health and Social Development; (4): Peace and Security, and Humanitarian Affairs; (5): Corporate Development Services.

1.2 Geographical Differences of the Region and Climate

The IGAD region stretches over an area of 5.2 million square kilometres that comprises the countries of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda. The region has about 6960 km of coastline with the Indian Ocean, Gulf of Aden, Gulf of Toudjoura and the Red Sea. Around 70 per cent of the IGAD region is made up of Arid and Semi-Arid Lands (ASALs), which receive less than 600 mm of rainfall annually. The rest of the region has a vast variety of climates and landscapes, including cool highlands, swamp areas, tropical rain forests and other features typical of an equatorial region. Furthermore, the region possesses diverse ecosystems and agro-ecological zones at different altitudes ranging from 150 meters below sea level (Dalul) to about 5199 meters above sea level (Mount Kenya). The region also has large areas of forest, wetlands, and moist highlands in some Member States.

1.3 Socio-Economic Context

1.3.1 Poverty

In the IGAD region, a sizable proportion of the population of the region remains poor. Regionally, inequality is a major issue and varies from country to country. Beyene (2017) reported that the proportion of the population living below $1.90 per day is 42.7 per cent, 34.6 per cent, 33.6 per cent, 33.5 per cent, 22.5 per cent, and 14.92 per cent for South Sudan, Uganda, Kenya, Ethiopia, Djibouti, and Sudan, respectively.

Extreme inequalities are a major obstacle to poverty reduction. Kathleen et al. (2016) report that inequality is rising and is high in Africa compared to that of other continents. Beyene (2017) confirmed similar patterns for the IGAD Member States. The most reported inequality measurement is income inequality. Ethiopia has the lowest Gini index (0.332), showing that it is the most equal society compared to other IGAD members. On the other hand, Kenya (0.555) has the highest Human Development Index (HDI), which is a multidimensional index including health and education, in addition to income (Beyene 2017).

1.4 Food Security

Food insecurity remains the main challenge in the IGAD region. The number of food insecure people due to macro-economic shocks, the COVID-19 pandemic, ongoing conflict, drought together with climate change and variability in the region continues to grow every year[1]. In 2015, approximately 22 million people in the region were estimated to face the risk of food insecurity and associated malnutrition (WHO,2015). Environmental disaster-related food insecure population continued to increase. The 2021 Global Report on Food Crises (GRFC) argues that the number of food-insecure people in the IGAD region has steadily increased to 26.8 million in 2017, 27 million in 2018, 27.6 million in 2019 (excluding Djibouti), and up to 31.4 million in 2020 (FSIN and Global Network Against Food Crises. 2021). This represents 20 per cent of the global number of highly food insecure people in 2020. The recent COVID-19 pandemic has aggravated the food security crisis in the region. In 2020, three of the top ten extreme hunger hotspots were IGAD Member States namely, Ethiopia, South Sudan, and Sudan[2].

1.5 Health

Access to health is incredibly low, with malnutrition and HIV/AIDs still being major challenges within the IGAD region. At least one out of every three children aged less than five years in the region is affected by stunted growth, and the efforts on poor reproductive health did not yield the desired outcomes. As part of the goal of achieving education for all, Member States have been implementing several programmes. While the quantity of enrolment has increased, the quality and retention of students remain a challenge, though there are wide-ranging differences. The proportion of people deprived of child enrolment is 71 per cent in South Sudan, 43.5 per cent in Somalia and 40 per cent in Ethiopia, and 5.2 per cent in Kenya (Beyene 2017).

Access to basic water, sanitation, and hygiene are still minimal in the region, with quite large disparities between Member States. The 2020 data from UNICEF shows that Djibouti has the highest access to basic drinking water (76 per cent) and sanitation (67 per cent), and South Sudan has the lowest access to drinking water (41 per cent) and sanitation (16 per cent)[3].

Indeed, climate change will exacerbate vulnerability to vector (malaria and dengue fever) and water-borne (cholera) diseases. There is emerging evidence that climate change, along with several factors, has an impact on the occurrence and transmission of infectious diseases, comprising vector-borne, rodent-borne, food-borne, and water-borne diseases

1 2021 Global Report on Food Crises, Joint Analysis for Better Decisions Regional Focus, on the Intergovernmental Authority on Development (IGAD) Member States.

2 The Hunger Virus- How COVID-19 is fueling hunger in a hungry world. Oxfam Briefing, July 2020.

3 UNICEF, accessed in Sept 2021: https://data.unicef.org/topic/water-and-sanitation/drinking-water/

(Hinz et al. 2019), including the transmission of infectious diseases like COVID-19 (Rodo et al 2021). Poor access to health and other social infrastructure in the region aggravates such disease transmission. More floods in areas with poor sanitation and inadequate waste management will spread diseases. Rising temperatures will also spread hitherto unknown diseases to the highlands in addition to the geographical appearance of others such as meningitis. The location of hospitals as well as the demand and availability of medical supplies and health practitioners on a seasonal basis will be impacted by climate change.

1.6 Gender

Gender plays an important role in determining economic growth, poverty reduction, and development effectiveness. Both women and men have significant roles in economic activities, though there are some differences across sectors. For example, in the IGAD region, agriculture is a female-intensive sector while industry and services are male-dominated. On the other hand, there are pervasive gender inequalities in various dimensions, including access to education, information, employment, credit, land, inputs, and decision-making power in all IGAD Member States. There are sharp gender inequalities in access to key productive assets including land, labour, financial services, technology, and inputs; coupled with education and health care. These differences directly or indirectly limit economic growth, productivity, and welfare.

The impact of climate change on gender equity and the well-being of women in a male-dominated culture is also immense. In urban areas, low-income groups, particularly women, face climate risks because of inferior quality housing and exposure to floods and other natural hazards as well as man-made disasters. They often occupy informal settlements on the fringes of urban areas vulnerable to floods, fire outbreaks, poor sanitation facilities and weak health systems.

1.7 Environmental Context

According to the IPCC AR6, each of the last four decades has been successively warmer than any decade that preceded it since 1850. The global surface temperature was 1.09 °C higher in 2011– 2020 than 1850–1900, with larger increases over land (1.59 °C) than over the ocean (0.88 °C). The region has a highly diverse environment. It is predominantly covered by Arid and Semi-Arid Lands. The region also has large areas of forest, wetlands, and moist highlands in some Member States. The exposure of societies and ecological systems in the IGAD region varies from one country to another, depending on the environment in which they are located. Continued global warming is compounded by rising sea levels that increase the vulnerability of coastal areas in the region. For instance, 88 per cent and 55 per cent of Djibouti's and Somalia's population, respectively, live along the coastline, hence increasing their susceptibility to the impacts of sea level rise (UNEP, 2000). Moreover, the 2015-2016 El Niño has led to an increase in drought-related famines and intense flooding in the IGAD region, especially in Ethiopia, Kenya, and Somalia.

1.8 Conflict and Political Instability

Some countries in the IGAD region have suffered and continue to suffer from inter- and intra-state conflicts and political instability, which leads to displacement of people. Hence, internal displacement is a major humanitarian problem in the IGAD region (Obila and Pop 2020). According to this report, the population of internally displaced persons (IDPs) across the IGAD Member States has risen significantly since 2014. At the end of 2019, about eight million people were internally displaced in the region because of conflict and violence. People living in places affected by violent conflict are particularly exposed to climate change. Large-scale violent conflict harms assets that facilitate adaptation (infrastructure, institutions, natural resources, social capital, and livelihood opportunities). Such prevalence of conflict and instability and lack of assets that aggravates the vulnerability of the IGAD region to climate change impacts.

1.9 Vulnerability and Impacts

Vulnerability is the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. It is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity," (IPCC, 2001, p. 995).

The IGAD Member States are highly vulnerable to the effects of climate change. The region's and its Member States' vulnerability to climate change and its impact are distinct factors: ecological, socio-economic, and low capacity for investment adaptation and mitigation actions.

Ecologically, the IGAD region is predominantly covered by arid and semi-arid lands (ASALs) (60-70 per cent) and is affected by prolonged droughts and unpredictable rainfall patterns of less than 400 mm annually (Babikir et.al, 2015). Some countries are fully covered by ASAL (e.g., Somalia and Djibouti), while most are characterized as ASAL. For example, more than 80 per cent of the landmass in Kenya and Sudan, and over 60 per cent in Ethiopia, are categorized as ASAL.

Socio-economically, most IGAD Member States belong to the world's Least Developed Countries (LDCs), and their economies are highly dependent on agriculture and natural resources. Agriculture employs over 80 per cent of the labour force and is a major contributor to the GDP for most members, except Djibouti and South Sudan. As indicated in the current IGAD Regional Strategy (2021-2025), agriculture accounts for 34 per cent, 33 per cent and 24 per cent of the GDP for Kenya, Ethiopia, and Uganda, respectively (IGAD 2021). This shows the high reliance of the region on a sector that is highly vulnerable to the impacts of climate change.

PART II: CLIMATE OF IGAD REGION

2.1 Past and Present Climate

The 2020 State of the Climate in Africa report indicates that the near-surface (2 m) air temperature averaged across Africa in 2020 was between 0.45 °C and 0.86 °C. The ranges were above the 1981–2010 average (WMO 2021), depending on the data set used, ranking 2020 between the third and eighth warmest year on record. Africa warmed faster than the global average temperature over land and ocean combined. This is consistent with the Intergovernmental Panel on Climate Change (IPCC) special report on climate change and land, (IPCC 2019) which showed that land areas have consistently warmed faster than the global average.

The temperatures over the IGAD region have been observed to have increased significantly since the early 1980s with fewer chilly days and cold nights and an increasing number of warm days and warm nights (Stern et al.; 2011; Anyah and Qiu, 2012, Omondi, et al., 2013). Recent assessments have consistently predicted with a high level of confidence that the mean temperature and extreme heat events will continue to increase (Hawkins et al., 2020; IPCC, 2021). The increasing trend is also manifested in observed annual maximum temperature anomalies over Djibouti (Figure 1). The inter-annual variability of temperature over the IGAD region exhibits an increasing trend in mean surface temperature. The region has seen a general warming trend in mean annual temperatures since 1900, ranging to approximately 0.7 °C per decade over the analysis period. Analysis shows that the mean surface temperature was higher from 2010 to 2020. The lowest mean temperature was observed in 1965 and the highest in 2020 (Figure 2).

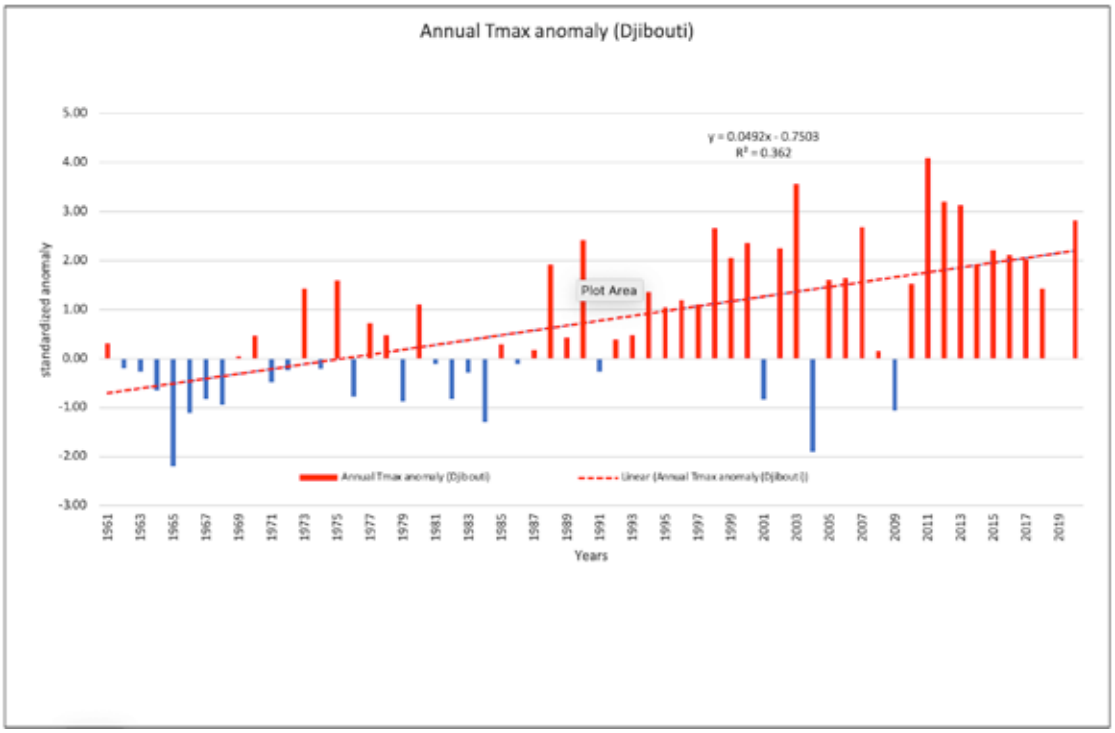


Figure 1: Mean maximum temperature trends for Djibouti (Source ICPAC 2021)

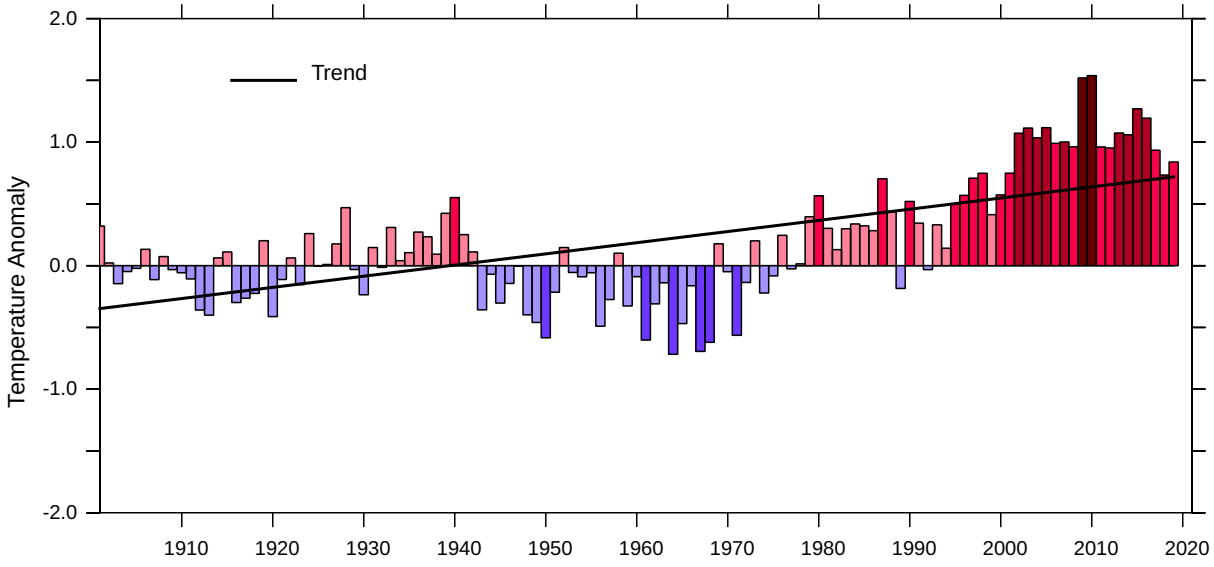


Figure 2: Mean surface temperature anomaly (baseline 1981–2010, °C) over IGAD region (Source: retrieved from CRU data)

The annual and seasonal average temperatures across the region were above the 1981-2010 average in most parts of the region (Figure 3). The largest temperature anomalies were recorded in the north-western parts and equatorial parts of the region. However, near-average temperatures were recorded in eastern parts of the region, central Sudan areas (Figure 3).

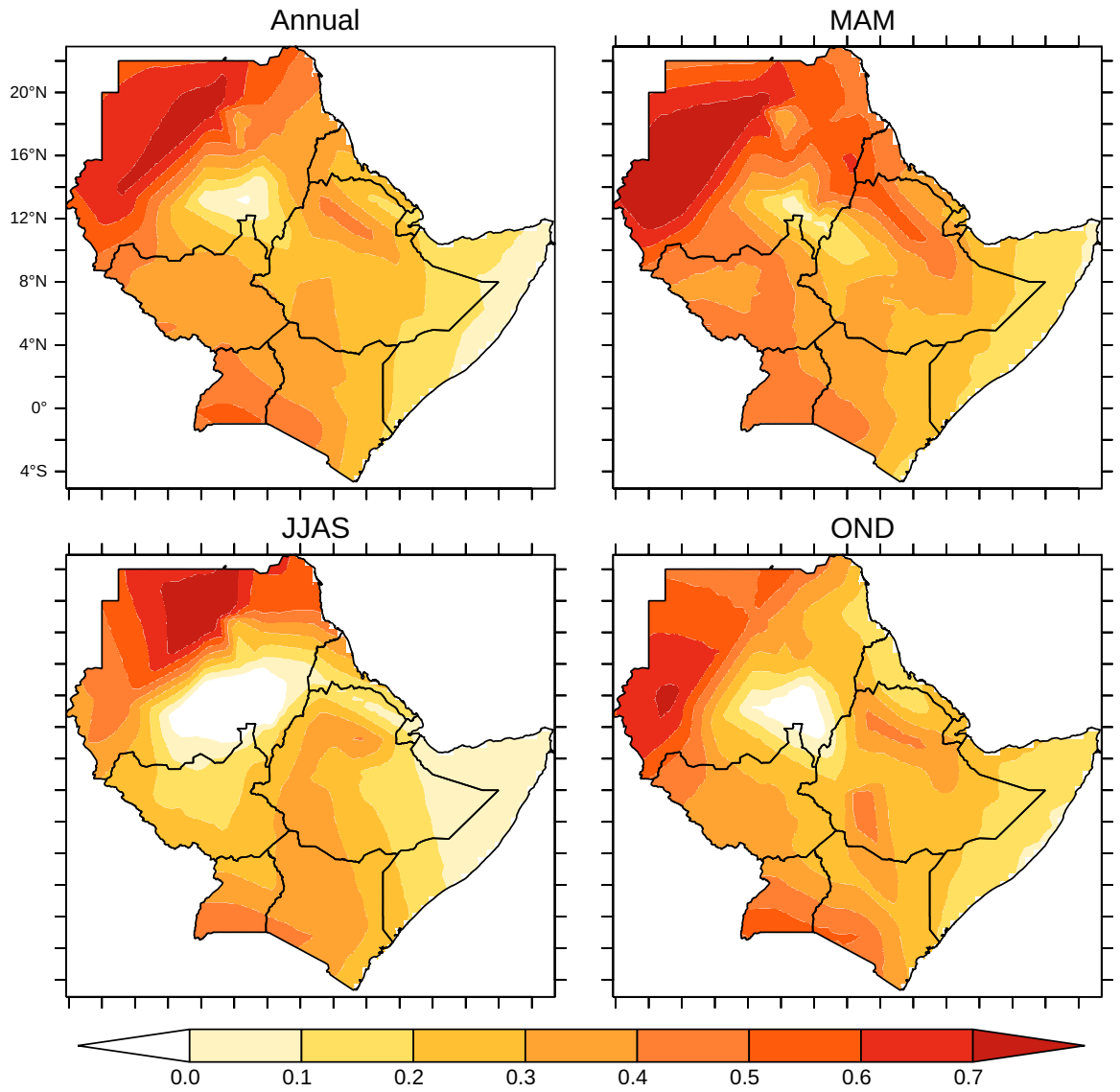


Figure 3: Map of near-surface (a) Annual (b) MAM (c) JJAS, and (d) OND air temperature anomalies relative to 1981-2010 average across IGAD sub-region in degree Celsius/decade (Source: CRU data set)

Precipitation in the sub-region is highly variable in space owing to diverse and complex topographical features and circulation regimes, but also on a temporal scale owing to various large-scale climate drivers. Regional factors within the IGAD sub-region, including lakes, complex topographical features, and maritime influence, modify the large-scale climatic characteristics to create complex climatic patterns in the region. Coupled with the geographic location of the region, these interactions lead to significant spatial seasonal variations with areas of one, two, and three rainfall maxima in the seasonal cycle (Nicholson, 2001; Hession and Moore, 2011; Nicholson, 2017). Seasonal analyses of observed datasets over the past decades have shown significant decreasing trends during both the JJAS MAM and an increasing trend during the OND season (Ayugi et al., 2020). The same results have also been depicted by the observed annual rainfall anomalies over Djibouti (Figure 4). The suggested physical link to the decrease in rainfall is the rapid warming of the Indian Ocean, which causes an increase in convection and precipitation over the tropical Indian Ocean and thus contributes to increased subsidence over eastern Africa and a decrease in rainfall from March to May/June (Williams and Funk, 2011; Lyon and DeWitt, 2012; Ayugi et al., 2020). The moonsoonal precipitation from June-September has also been declining since the 1950s throughout the region (Williams et al., 2012).

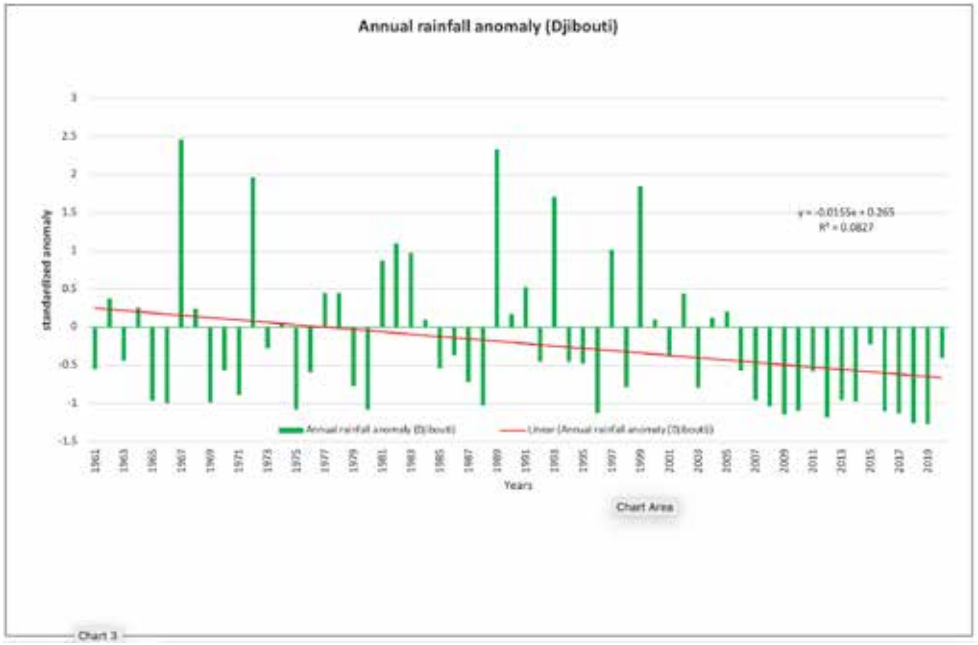


Figure 4: Mean rainfall trend for Djibouti stations (Source ICPAC 2021)

On the other hand, above-normal precipitation was recorded in the northern sector, as shown by the spatial patterns of mean annual and seasonal absolute rainfall for the period 1981-2015 over the IGAD sub-region (Figure 5). There is a slight decrease in rainfall, with most recent years receiving rainfall lower than the long-term mean in the sub-region. Generally, rainfall is increasing in some areas and decreasing in other areas.

This is consistent with the WMO 2021 report that reported East Africa to have recorded precipitation above the long-term 1981–2010 average in 2020, except in north-eastern Somalia, southern parts of Kenya and Lake Victoria, indicating high spatial variability in the sub-region.

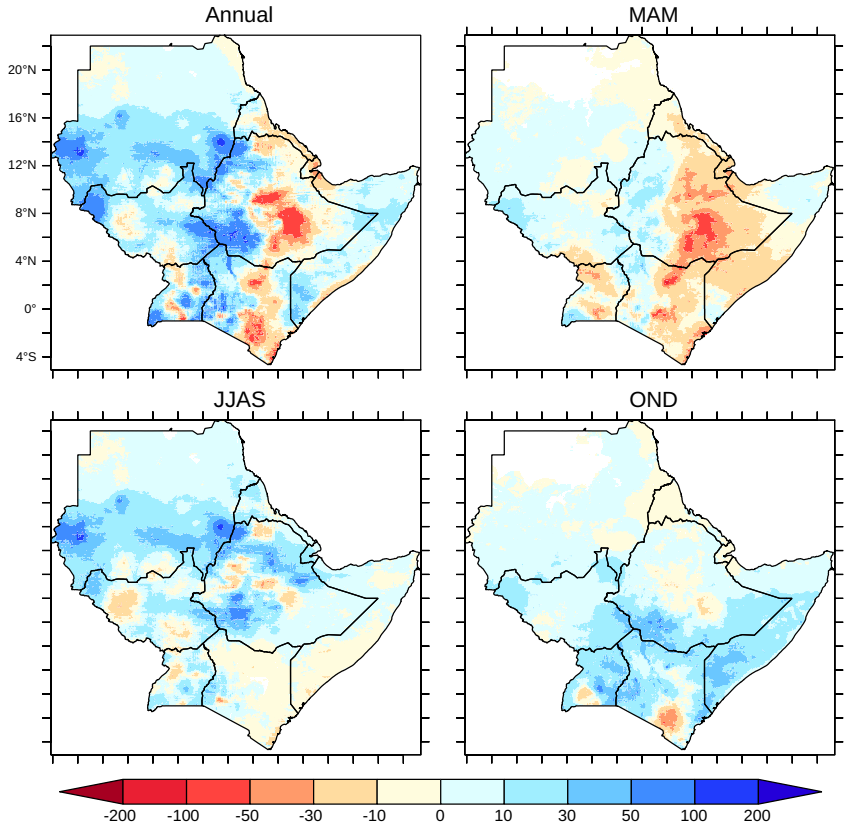


Figure 5: Map of absolute (a) Annual (b) MAM (c) JJAS, and (d) OND precipitation anomalies for 2020 in relation to the 1981–2010 reference period. Blue areas indicate above- average precipitation while brown areas indicate below-average precipitation in mm/decade. Source: (CHIRPS)

2.2 Projected Climate Change in the IGAD Region

The observed trends in temperature are projected to continue and rise faster than the global average increase (James and Washington, 2013; IPCC, 2021), with a likelihood of a higher frequency of heatwaves and higher evaporation rates (Conway and Schipper, 2011). This is confirmed by AR6 and spatial and temporal analysis by ICPAC as shown in Figures 6 and 7, respectively.

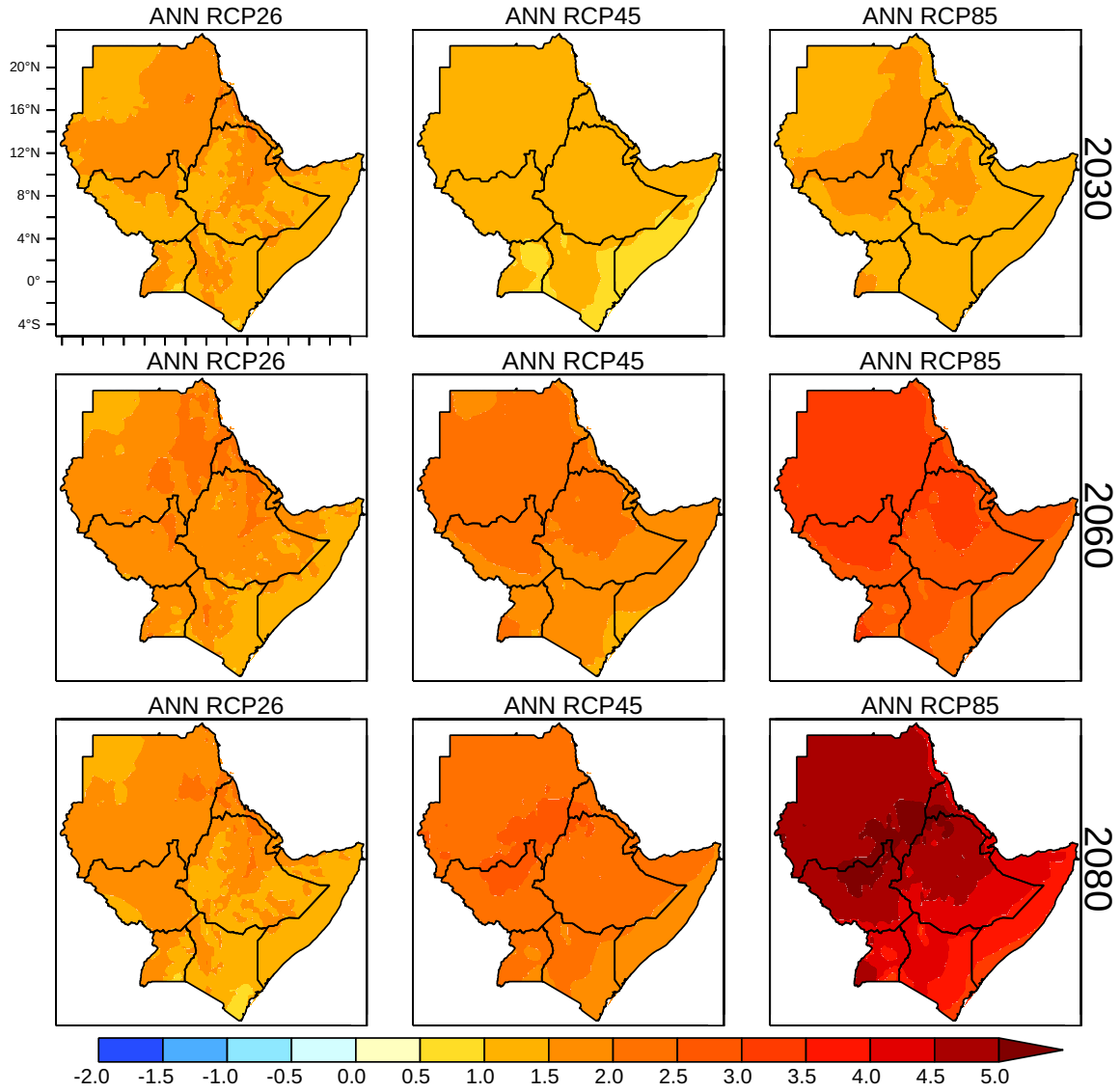


Figure 6: Projected annual temperature changes (Source: ICPAC, 2021)

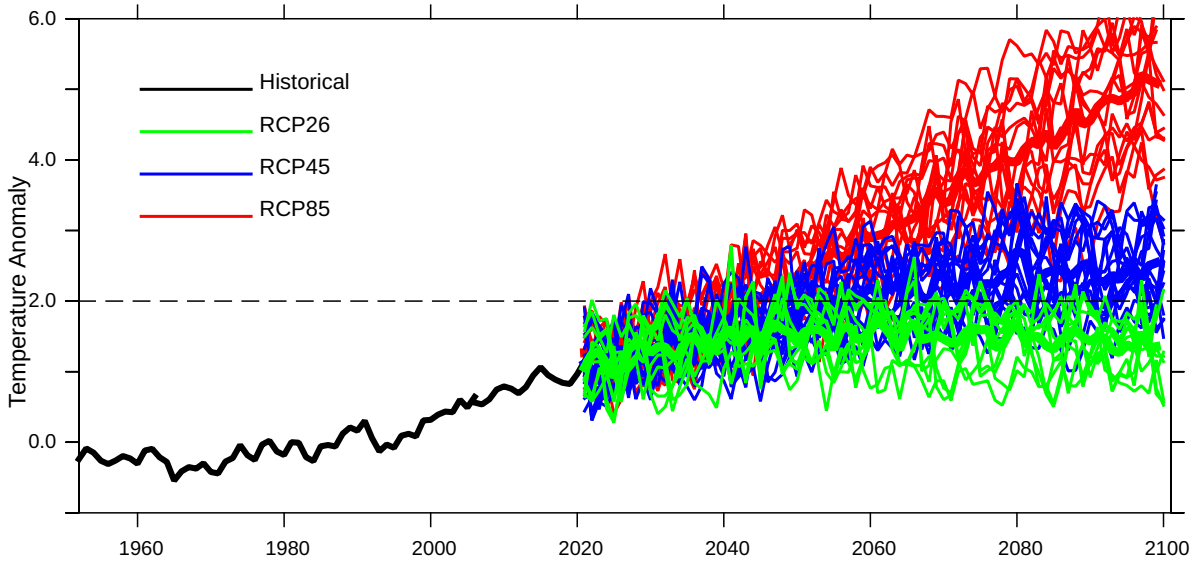


Figure 7: Projected temperature anomalies over the Greater Horn of Africa (GHA) sub-regions for different seasons. The anomalies are taken on a base period of 1950s- 2020 and beyond (Source: ICPAC 2021)

In the case of precipitation, the projections are uncertain (Rowell, 2012; Ayugi et al., 2020) and show more dependency on seasons and locations compared to temperature projections. In different regions, there are projections for increasing precipitation during some seasons and decreases in the same locations in other seasons. The annual precipitation projections exhibit a remarkable decrease over the coming decades (Figure 8), which is also in agreement with the AR6 (IPCC 2021).

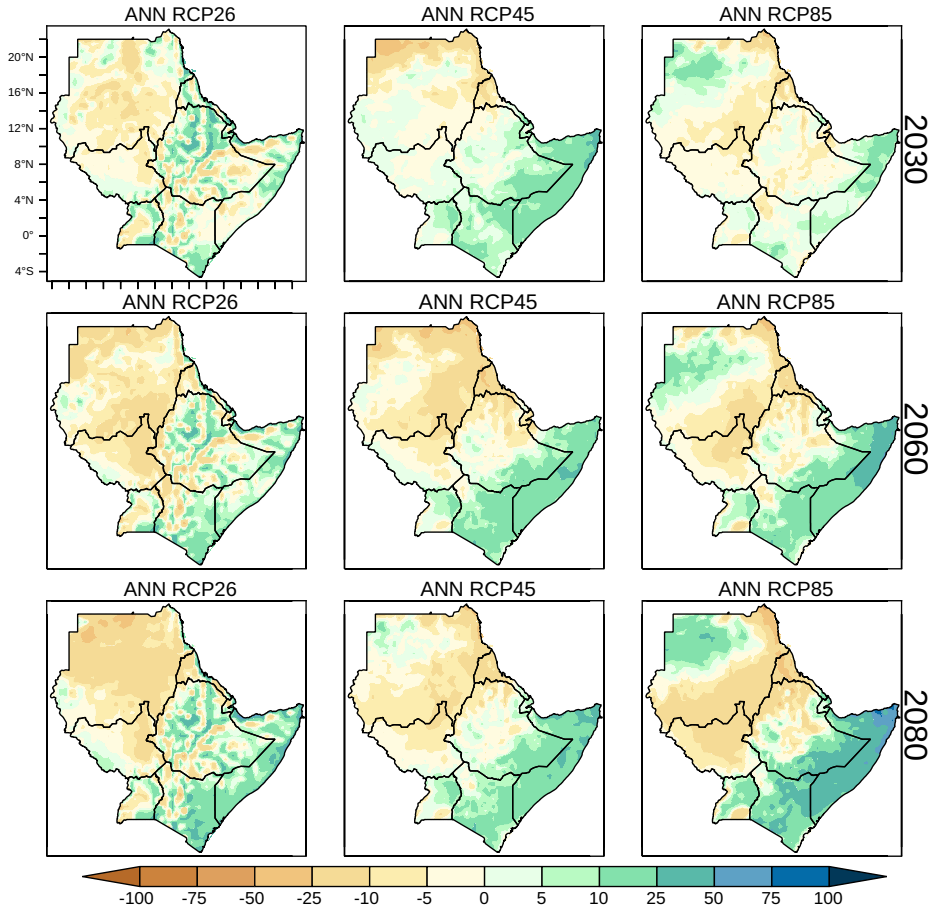
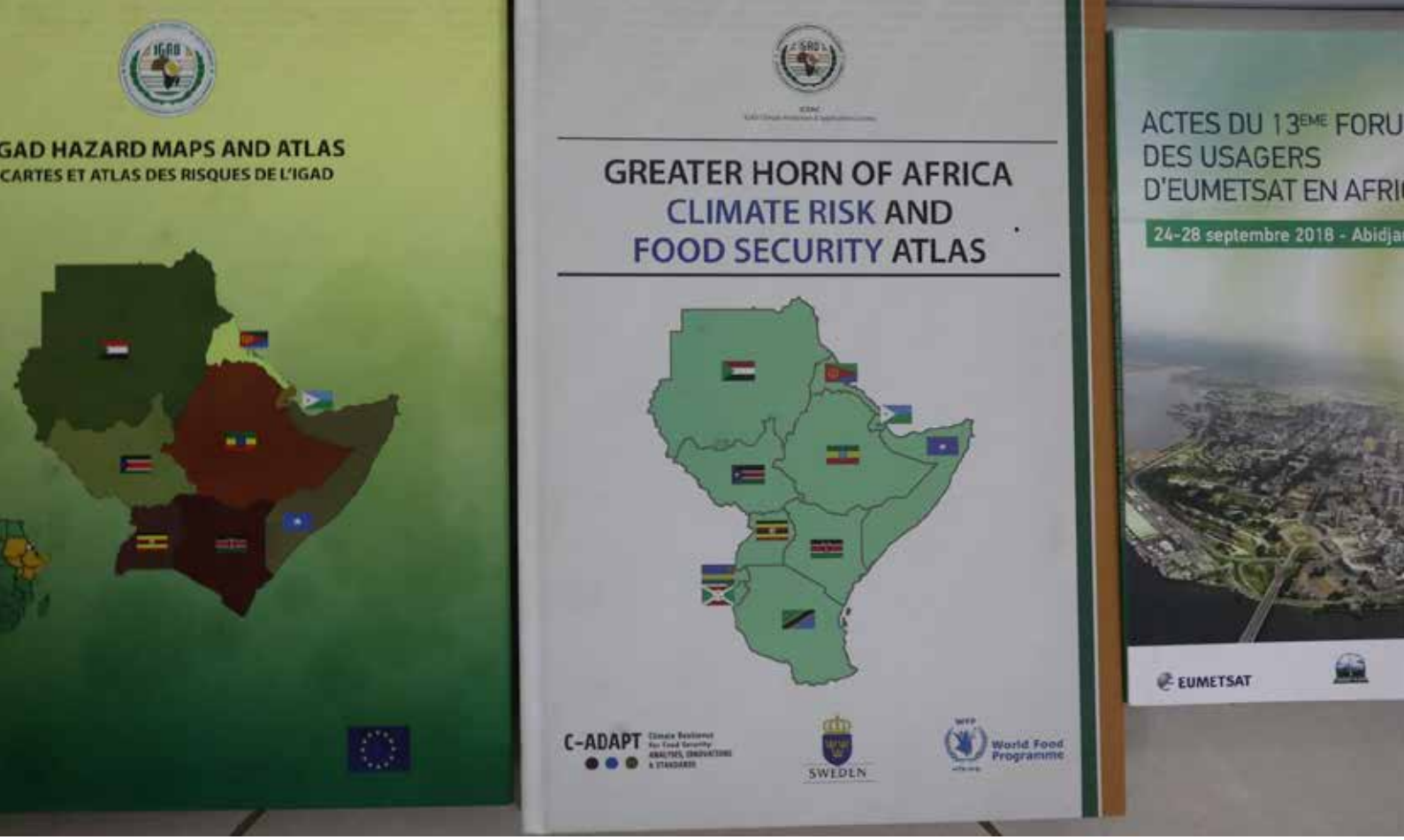


Figure 8: Variations in projected future annual precipitation for Eastern Africa (ICPAC, 2021)



PART III: CLIMATE CHANGE FRAMEWORKS

3.1 The UNFCCC and Its Implementation

The UNFCCC was agreed upon and adopted in 1992 as an international treaty that constitutes the foundational climate agreement that has provided the platform for most subsequent international climate agreements. Ratified by 197 countries, the UNFCCC came into force in 1994. Granted, the ultimate aim of UNFCCC is to prevent anthropogenic activities that increase GHG emissions and interfere with the climate system. It is a framework to begin and support processes for future, and more detailed, agreements to appropriately respond to climate change. The convention is supplemented by a series of protocols and amendments imposing progressively more specific and stringent obligations on the treaty parties.

3.1.1 Kyoto Protocol

The Kyoto Protocol was adopted 11 December 1997 and came to force on 16 February 2005, to which there are 192 Parties. Its objective was to operationalize the UNFCCC by committing industrialized countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets. The Convention itself only asks those countries to adopt policies and measures on mitigation and to report periodically.

The Kyoto Protocol was based on the principles and provisions of the Convention and followed its annex-based structure. It placed a heavier burden on developed countries, based on the principle of "common but differentiated responsibility and respective capabilities", since developed countries are largely responsible for the high levels of GHG emissions in the atmosphere.

It had two commitment periods, 2008-2012 and 2012-2020. Whilst many of the signatories of the Protocol met their emission reduction targets, some countries withdrew from the protocol. However, others opted for the flexibility mechanisms of the Protocol by funding emission reductions in other countries as their national emissions were higher than their targets. This was the genesis of the Clean Development Mechanism and the birth of the carbon market and carbon trading.

3.1.2 Paris Agreement

Parties to the UNFCCC reached a landmark agreement in 2015 in Paris to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future. As of 2021, all UNFCCC members had signed the Paris Agreement and 191 had ratified it[1]. It builds upon the Convention and brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. Except for Eritrea, all IGAD Member States have ratified the Paris Agreement.

1 https://unfccc.int/process/the-paris-agreement/status-of-ratification accessed September 2021

The Paris Agreement also aims to increase the ability of countries to deal with the impacts of climate change, and at making finance flows consistent with low GHG emissions and climate-resilient pathways. This includes appropriate mobilization and provision of financial resources, a new technology framework and enhanced capacity-building by developed countries to support action by developing countries and the most vulnerable countries. The IRCC Strategy is thus aligned with the Paris Agreement.

The Paris Agreement, adopted through Decision 1/CP.21, addresses crucial areas necessary to combat climate change. Some key aspects of the agreement are:

- **Long-term goal of limiting temperature** well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees.
- **Global peaking and 'climate neutrality' Parties** aim to reach global peaking of greenhouse gas emissions (GHGs) as soon as possible, recognizing that peaking will take longer for developing country parties.
- **Mitigation** to establish binding commitments by all parties to prepare, communicate and maintain a nationally determined contribution (NDC) and to pursue domestic measures to achieve them. It also prescribes that parties shall communicate their NDCs every five years and provide information necessary for clarity and transparency.
- **Sinks and reservoirs** that encourages Parties to conserve and enhance, as appropriate, sinks and reservoirs of GHGs, including forests.
- **Voluntary cooperation/Market- and non-market-based approaches** that recognizes the possibility of voluntary cooperation among Parties to allow for higher ambition and sets out principles – including environmental integrity, transparency, and robust accounting – for any cooperation that involves internationally transferral of mitigation outcomes. It also establishes a mechanism to contribute to the mitigation of GHG emissions and support sustainable development and defines a framework for non-market approaches to sustainable development.
- **Adaptation** establishes a global goal on adaptation of enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change in the context of the temperature goal of the Agreement. All Parties should engage in the adaptation by formulating and implementing National Adaptation Plans and should submit and periodically update an adaptation communication describing their priorities, needs, plans, and actions. For the IGAD region, adaptation is especially important since populations continue to live with adverse impacts of climate change often being forced to adapt and currently increasingly faced with loss and damage.
- **Loss and damage** recognizes the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage.
- **Finance** -Article 9, paragraph 3, of the Agreement, stipulates that developed country parties shall provide financial resources to assist developing country parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention. It is important to note here that the USD 100 billion agreed on has not been forthcoming, even though the said amount is grossly insufficient to meet adaptation needs in developing countries in light of climate change.
- **Technology and capacity-building support** -Under Article 10, paragraph 4, parties share a long-term vision on the importance of fully realizing technology development and transfer to improve resilience to climate change and reduce greenhouse gas emissions.
- **Climate change education, training, public awareness, public participation, and public access to information** is also to be enhanced under the agreement.
- **Transparency, implementation, and compliance**- relies on a robust transparency and accounting system to provide clarity on action and support by parties, with flexibility for their differing capabilities. It requires that the information submitted by each party undergoes an international technical expert review. Further, it includes a mechanism that will facilitate implementation and promote compliance in a non-adversarial and non-punitive manner and will report annually.
- **Global Stocktaking** to be done in 2023 and every 5 years thereafter, will assess collective progress toward achieving the purpose of the agreement in a comprehensive and facilitative manner. It will be based on the best available science and its long-term global goal.

3.1.3 Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction (SFDRR) was adopted during the Third UN World Conference on Disaster Risk Reduction at Sendai, Japan in 2015. This is a non-binding framework to reduce risks associated with disasters of all scales, frequencies, and onset rates caused by natural hazard-induced or human-made hazards, along with climate change. The SFDRR outlines targets and priorities for action including 'Understanding disaster risk', along the dimensions of vulnerability, exposure of persons and assets and hazard characteristics.

The framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities, and countries by 2030.

The Sendai Framework outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks. The seven global targets are: (a) Bring down global disaster mortality by 2030; (b) Lower the number of affected people globally by 2030; (c) Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030; (d) Minimise disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030; (e) Increase the number of countries with national and local disaster risk reduction strategies by 2020; (f) Enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the present Framework by 2030; (g) Boost the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

The four priorities are: (i) Understanding disaster risk; (ii) Strengthening disaster risk governance to manage disaster risk; (iii) Investing in disaster reduction for resilience and; (iv) Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation, and reconstruction. IGAD has developed the IDDRSI strategy that is well harmonised and aligned with the Sendai Framework for DRR in 2019.

3.1.4 United Nations Convention on Combating Desertification (UNCCD)

The UN Convention on Combating Desertification (UNCCD) was agreed on in 1992, the same time as the UNFCCC with a focus on land restoration for sustainability. The UNCCD has evolved to look at linkages with climate change, emphasising on land-based action to combat climate change. All countries in the IGAD region are party to the UNCCD.

3.1.5 Convention on Biological Diversity (CBD)

The Convention on Biological Diversity was also agreed on in 1992, the same time as the UNFCCC and UNCCD. It aims at biodiversity conservation, sustainable use of biodiversity and fair and equitable sharing of genetic resource benefits. In recent years, the CBD increasingly looks for ways to address climate change through its provisions. All IGAD Member States are party to the CBD.

3.1.6 Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) were agreed on in 2015 as a successor to the Millennium Development Goals (MDGs). SDG 13, specifically, targets climate action as a key component for sustainable development, calling on all countries to put in measure to tackle climate change. All countries in the IGAD region agreed to this framework and have worked towards localising the SDGs in their national development plans and economic blueprints.

3.1.7 Africa Union Agenda 2063

AGENDA 2063 is Africa's blueprint and master plan for transforming Africa into the global powerhouse of the future. It is the continent's strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African Renaissance.

All IGAD Member States are also members of the African Union and thus committed to realising Agenda 2063 agreed on at the AU. Goal 7 of Agenda 2063 is on climate resilient economies, outlining the AU's aspiration for a climate-resilient future for all African nations.

3.2 Greenhouse Gas (GHG) Synthesis and Regional Inventory Status

The 1992 UNFCCC parties agreed to stabilize GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system (UNFCCC 1992). The Sixth Assessment Report (AR6) of IPCC has concluded with a high level of confidence (IPCC 2021) that climate change is the result of anthropogenic GHG emissions.

The Kyoto Protocol requires each party included in Annex I to conduct an annual inventory of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol. The more recent instrument, the Paris Agreement, requires all parties to regularly report inventory of anthropogenic emissions by sources and removals by sinks of GHG.

All IGAD Member States have been submitting their national communications from the early 2000s, and it has been shown that they are among the least sources of GHG emissions. In 2018, the mean annual GHG emissions per capita of IGAD Member States ranged from 0.046 metric tons in Somalia to 0.511 metric tons in Djibouti[2]. Though the region is a small emitter, Member States have the obligation to regularly submit a national inventory report prepared using good practice methodologies accepted by the IPCC and agreed upon by the Conference of the Parties.

The IGAD Member States have also published documents of evaluation and monitoring of GHG and mitigation measures suggested by UNFCCC, which reflects the efforts done to face the Climate Change problems to date. Member States have set their baseline emissions to 2010 in the NDCs submitted to UNFCCC, which also includes the expected emissions in 2030

2 World Bank data accessed in September 2021: https://data.worldbank.org/indicator/EN.ATM.CO2E.PC

under business-as-usual, and under unconditional and conditional scenarios.

3.2.1 Adaptation Actions

Adaptation to climate change is a cross-cutting theme under the United Nations Framework Convention on Climate Change (UNFCCC) and is referred to in different articles. For example, Article 4.1e of UNFCCC stresses the need for Africa to "cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, affected by drought and desertification, as well as floods" (UNFCCC, 1992).

Adaptation, disaster risk reduction and building resilience are the most effective options in dealing with the inevitable impacts of climate change that mitigation cannot reduce. Indeed, adaptation brings benefits both today and in the future. Therefore, the IGAD region needs to take both the short- and long-term approach to managing climate risks. In this regard, Member States should do more to anticipate and reduce risks, rather than reacting after impacts have occurred. Support for effective disaster relief and recovery needs to continue, but with a focus on long-term development targets. Unfortunately, adaptation is quite expensive and requires the support of developed countries. The international community should support the region in its efforts to adapt and build resilience against the catastrophic effects of climate change and the resulting social crises, including forced migration and displacement.

The IGAD Member States have been developing their climate change adaptation measures for decades. Most Member States' National Programmes of Action (NAPA) and National Adaptation Actions, prioritize the economic sector depending on their vulnerability and importance. Further, for many IGAD countries, adaptation represents the major component of their NDCs.

3.2.2 Mitigation Actions

The IGAD Member States, as parties, are also committed to climate change mitigation actions that would contribute to stabilize GHG concentration in the atmosphere at a level that can prevent and reduce the negative impacts of climate change. To achieve the Paris Agreement long-term temperature goal[3], countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.

The IGAD Member States have developed their climate change strategies and are implementing different activities over the last one decade. These measures are usually included into the range of policies and various economy-wide packages of policy instruments of Member States that have great potential in reducing GHG emissions in different sectors, mainly by creating incentives for mitigation action. Therefore, the success or failure of those measures could be used as benchmarks at national and regional levels to build synergies and best practices on the way forward.

Given the main sources of GHG and the potential of the region as carbon sink, mitigation measures prioritize "avoided deforestation", afforestation, reforestation, promotion of energy efficiency, efficient crop and livestock production systems and efficient transport system, waste management while capturing opportunities in emission reductions in the region provided under Clean Development Mechanism (CDM) of the Kyoto Protocol. Mitigation actions should also be mainstreamed in nature conservation and other ecosystem-based land management.

Member States have also developed strategies and programs to implement their prioritized mitigation actions. Many have national REDD+ programmes and have been implementing jurisdictional REDD+ projects (e.g., Ethiopia) and multiple site-specific projects (e.g., Kenya and Uganda). For countries dominated by ASAL like Djibouti and Somalia, the most important sector for mitigation is the energy sector.

Articles 4.1 and 12.1 of the UNFCCC commits Parties to develop national and, where appropriate, regional programmes and measures that will result in the mitigation of anthropogenic climate change. Countries in the region have outlined these in their NDCs.

The IGAD Member States should contribute to the reduction of future GHG emissions by focusing on clean energy, and low carbon development, and GHG emission removals through afforestation, reforestation, and sustainable land management. Negative emissions can be registered by promoting carbon capture and storage, enhancing afforestation efforts, reduction of energy demand, adopting accounting rules, etc. It should, therefore, coordinate and follow-up the implementation of NAMAs, NAPs, NDCs or other sectoral initiatives that have potential for high emission reduction and removal.

This IRCCS will develop and strengthen the resilience and adaptive capacity of the IGAD region and Member States to climate change events through the promotion of integrated and sustainable development across a wide range of sectors of the economy and society.

3 The Paris Agreement aims to limit global warming to well below 2°C, and preferably to 1.5 °C, compared to pre-industrial levels.

PART IV: IGAD REGIONAL CLIMATE CHANGE STRATEGY

The IRCCS aims to provide a broad outline for harmonized and coordinated regional and national actions to address and respond to the impacts of climate change in line with global and continental objectives. The strategy takes cognizance of the need for enhanced adaptation to the effects of climate change, bearing in mind the diverse and gender-differentiated levels of vulnerabilities that are more pressing for the region.

However, it also aims to trigger and support nationally, and regionally appropriate mitigation outcomes given mitigations' potential opportunities for sustainable development. The IRCCS will guide the implementation of the climate change activities both at Member States and regional levels over eight years, 2023 – 2030.

4.1 Rationale for the Regional Climate Change Strategy

The recent IPCC 6th Assessment Report confirmed with a high level of confidence that human influence has warmed the atmosphere, ocean, and land, and caused climate change. Increased GHG emissions caused by human activities are the main driver of climate change that is affecting every inhabited region across the globe.

The highly vulnerable groups such as women, children, youth etc. are impacted most by climate change because of their geographical location and socio-economic factors. More than 70 to 85 per cent of the population in the IGAD lives in rural areas or poorly developed urban slums (GRFC 2021). They have a low capacity to respond to or cope with damages resulting from climate-related extreme events. Climate-induced disasters, particularly drought and its consequences, force Member States to divert a significant amount of domestic and international resources to provide humanitarian assistance. This, in turn, slows down national development programs.

Realizing the problems that climate change poses in the region, developing strategies and actions that reduce climate change impacts and foster development are crucial. There is, therefore, a need to come up with a way to consolidate climate change actions.

This strategy seeks to implement and support some identified priorities and measures in NDCs and other existing climate policies in the Member States. It is also intended to support Member States' compliance with obligations under the UNFCCC. IGAD share common vulnerabilities to climate change, and therefore this presents an opportunity for a regional approach to addressing adaptation challenges.

It is upon this basis that the IRCCS was developed in order to:

- Develop the most appropriate and effective means of building understanding and generating support for climate change adaptation and mitigation programs.
- Develop and strengthen the resilience and adaptive capacity of the IGAD region to climate change and extreme weather events.

The strategy is intended for IGAD, its specialized institutions, Member States and their agencies responsible for climate change together with sectors affected by climate related impacts. Non-governmental organizations (NGOs), civil society organizations (CSOs), partners and the private sectors, are

encouraged to align their climate change strategies and programmes to this strategy for coherence of climate change actions in the region and Member States.

Vision

A region with the most climate resilient, socio-economic and natural system with low-carbon growth for development1 in the world.

Goal

The goal of the strategy is to provide a framework for integrated and coordinated mechanisms in addressing climate change issues. Specifically, it is designed to improve livelihoods and well-being, strengthen the resilience and adaptive capacity of communities and promote climate smart and low-emission economic development in the IGAD region.

4.2 Strategic Objectives

Strategic objective 1: To strengthen the scientific and technical capacity of the institutions in the region to reduce the vulnerability to climate change.

Strategic objective 2: To promote the integration of climate change aspects into development policies, strategies, programmes and projects at regional and national levels.

Strategic objective 3: To support the development and implementation of the regional and national programmes and projects on adaptation and mitigation to climate change.

Strategic objective 4: To facilitate the collection, analysis and sharing of best practices and experiences of Member States in climate change mitigation, adaptation, and resilience initiatives.

Implementing all these objectives will enable the region to achieve "climate-smart" socio-economic development through:

i. Assessment of vulnerability and institutional capacities to foster community and ecosystem adaptation to the impacts of climate change.
ii. Facilitation of the design of specific programmes and concepts to address climate change adaptation and mitigation.
iii. Enhancement of cross-border collaboration between Member States.
iv. Provision of guidance to the creation of suitable institutional framework (legal, policy and organizational arrangements and collaboration) to promote climate change by identifying adaptation and mitigation requirements and building the requisite capacities for implementation.
v. The promotion of low carbon and climate resilient development.
vi. Establishment of appropriate Monitoring and Evaluation Frameworks to assess progresses made and lessons learnt at national, regional, and international levels.

To achieve strategic objectives above, IGAD will provide leadership to foster harmonization, coordination and cooperation among the Member States and other stakeholders.

4.3 Guiding Principles

The strategy and action plan is guided by the following principles:

1. **Sustainability:** Implementation of the strategy should be guided by multi-level stakeholder participation and engagement to ensure ownership and continuity.
2. **Science, Knowledge, and Practice:** The strategy must continue to draw from the best available science, knowledge, and practice within the international, regional, and national context. This should be based on existing experiences, climate science and traditional knowledge and practices.
3. **Shared Values and Responsibility:** Successful implementation of IRCCS would require collective responsibility and collaborative efforts.
4. **Participation and Cooperation**: A key factor for success in adaptation, mitigation and resilience measures articulated in the strategy to avert and reverse the catastrophic consequences of climate change.
5. **Complementarity and Subsidiarity:** Efforts in implementation should be geared towards addressing climate change-related issues that require joint efforts. This helps in removal of potential duplication and redundancy.
6. **Green and Clean Growth:** Ensure continued economic growth on the one hand and to reduce GHG emissions by using renewable energy sources.
7. **Responsible Production and Consumption:** Sustainability of production through efficient utilization of natural and man-made resources by advocating for clean and green development, continuous improvement of standards that meet the needs of society and the environment.
8. **Gender Equality and Empowerment:** The strategy takes into consideration the differentiated climate change adaptation and mitigation roles, responsibilities and needs of people in society especially women, youth, and other vulnerable groups.
9. **Rehabilitation and Restoration:** Implementation must take into consideration the conservation and restoration of biodiversity and ecosystem services that contribute significantly to both mitigation and adaptation, while simultaneously producing multiple socio- economic co-benefits.
10. **No Regret Measures:** Actions and strategies would be considered with a precautionary sense to respond to possible negative impacts of climate change before they intensify.

1 IGAD Vision: To be the premier Regional Economic Community (REC) for achieving peace and sustainable development in the region.

4.4 Key Priority Areas and Strategic Interventions

Climate change is all about development. Therefore, the thrust of IRCCS will be the overarching priority intervention areas being pursued by the IGAD Member States and the international community as enshrined in the agreement establishing IGAD and the SDGs, respectively. The methodology used to select the key areas follows those used in the NDCs of Member States. These priority areas fall under adaptation and mitigation or both categories of climate action **(Table 1).**

No	Key Priority Area	Category of Climate Action		
		Adaptation (A)	Mitigation (M)	Both A & M
1	Agriculture, Livestock and fisheries	X	X	X
2	Renewable Energy and Energy Efficiency		X	
3	Climate-Resilient Industries and trade		X	
4	Water Resources for irrigation and domestic consumption	X	X	X
5	Transport		X	
6	Forest Resources, Wetlands and Biodiversity	X	X	X
7	Marine resources and coastal areas	X		X
8	Arid and Semi-Arid Lands (ASALs)	X	X	X
9	Security and Displacement	X		
10	Gender and Youth	X	X	X
11	Human Health	X		

Table 1: Key priority areas falling under adaptation, mitigation, and in both

The IGAD region consists of diverse landscapes, ecosystems, and weather systems, with varying effects of climate change. Besides the strategic interventions, creating enabling environments at regional and Member States' levels is critical. Hence, the strategic interventions presented here are broad to include all possible relevant interventions within the region. The actions on the ground in Member States will depend on locally relevant impacts, and only a few can be prioritized from the long list.

Therefore, the IGAD regional Climate Change Strategy (IRCCS) is designed to accelerate sustainable socio-economic development in the region. It serves as a holistic model or framework, based on the realization of the multidimensional factors and consequences of climate change. Figure 9 illustrates the interrelationship between key priority development areas, climate action priorities, strategic interventions, and the desired outcomes.

Figure 9: Constituent elements of IRCCS: An integrative approach

Four result areas, and their corresponding outcomes and strategic interventions or activities, are proposed. These are elaborated in the subsequent sub-section.

Result 1: Enabling environment created to implement climate change strategy and actions

Implementation of the regional climate change strategy involves several stakeholders at national, regional, and international levels. This needs strong coordination across relevant institutions and stakeholders. It also requires mobilization of resources, creating a conducive environment, networking, and building capacities of participating institutions. The first step for the strategy is, therefore, creating an enabling environment both at the regional level and Member State level.

In scaling-up responses to the challenges of climate change in the region, IGAD uses its comparative advantages such as its overarching mandates to coordinate, harmonize and provide advocacy platforms for a wide range of actors: the Member States, international development partners, civil society organizations and the private sector.

To achieve the above outcome, the following strategies will be implemented. By the end of 2030, the following outcomes are expected to be accomplished:

Expected Outcome 1.1: Enhanced coordination, harmonization, and advocacy to scale-up regional climate change adaptation and mitigation efforts.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Undertaking continuous assessment of initiatives and programs of Member States and other stakeholders in the region.
- **SI 2** Encouraging cooperation and collaboration between the different actors and stakeholders.
- **SI 3** Reducing redundancy and duplication of efforts for efficient and maximum utilization of resources.

Expected Outcome 1.2: IGAD and Member States are able to identify niches and priority climate action points for collective response.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Organizing regular consultation to map-out common areas of interest and action by national, regional, and international stakeholders.
- **SI 2** Allocating adequate resources to implement responses to the threats of climate change in the region.
- **SI 3** Developing a road map for the implementation of programs and targets on limiting GHG emissions and enhancing adaptation to climate change; and mobilize concrete support for Member States in their areas of felt- and spelt-needs.

Capacity limitation is one of the formidable challenges of Member States identified during the assessment field missions and in the various documents obtained from each Member State. Countries have two major types of capacity constraints: (a) shortage of trained human resources and (b) financial as well as technological limitations such as computers, modelling equipment and maintenance services. This strategy takes cognizance of these limitations and aspires to build national and regional capacity for effective implementation of the key priority targets.

Expected Outcome 1.3: The capacity built to implement national and regional policies and strategies on climate change adaptation and mitigation.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Conducting detailed assessment of the capacity needs, identifying technical/technological gaps of Member States.
- **SI 2** Supporting Member States in the training of personnel in climate science (e.g., attribution, prediction, projection, impacts, trends analysis and application of climate data etc.) and other cross-cutting issues.
- **SI 3** Compiling and disseminating best practices among Member States on how each country addresses human resources capacity needs.
- **SI 4** Identifying potential sources of support from both internal (national) and external sources.
- **SI 5** Assisting Member States in developing projects proposals for technical assistance.
- **SI 6** Following-up and monitoring implementation of programs aimed at boosting capacity for adaptation and mitigation efforts.

Expected Outcome 1.4: The coordination and leadership role of IGAD and ICPAC improved and strengthened.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Identifying the technical and human resource needs of IGAD/ICPAC.
- **SI 2** Recruiting senior experts and program coordinators within IGAD and ICPAC.
- **SI 3** Creating enabling conditions (by providing the necessary logistical and technical facilities) for existing and incoming staff of IGAD and ICPAC to enhance their coordination and leadership roles.
- **SI 4** Allocating adequate resources within IGAD and ICPAC for effective implementation of climate change programs in the region.

Expected Outcome 1.5: Regional centers of excellence in different sectors are established and promoted.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Creating appropriate forums/mechanisms to share experiences and best practices at different levels (regional, national, and international).

SI 2 Developing common protocols for the training of adequate number of experts at different levels.

Expected Outcome 1.6: Adequate internal and external resources are mobilized for the operationalization of Member States' policies and strategies on climate change adaptation and mitigation.

Responding to climate change and building resilience within communities and nations is an expensive undertaking. Both adaptation and mitigation activities require huge amount of resources, which the Least Developing Countries (LDCs) cannot afford on their own. In line with major international agreements, developing countries in general and the IGAD Member States in particular require support to tackle problems related to global warming due to GHG emission, and ensuing hazard-induced or man-made disasters.

As outlined in the NDCs and national plans, the IGAD countries have put in place measures and strategies to deal with adaptation. Of common interest among the countries is the need for financial and technical support that would enhance both short-and long-term adaptation programs. The focus should therefore be in building the means of implementation in terms of human resources; financial capacity; and appropriate and affordable technology.

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Conducting regular and vigorous awareness creation and advocacy campaigns.
SI 2 Providing technical and expertise support to Member States to develop bankable projects.
SI 3 Strengthening public-private partnership and enhance the contribution of the private sector to climate change adaptation, mitigation and resilience.
SI 4 Providing platforms for the exchange of best practices and lessons learnt in resource mobilization and utilization.
SI 5 Devise appropriate instruments to ensure effective utilization or resource mobilized from internal and externals sources.
SI 6 Design Community Climate Fund Mechanism and invest time and expertise in training for effective and efficient management of community contributions and resources.

Expected Outcome 1.7: IGAD Regional Climate Adaptation and Mitigation Fund established and operationalized.

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Developing appropriate modalities and protocols for the establishment of IGAD Climate Fund (ICF) to finance national/regional adaptation and mitigation efforts.
SI 2 Encouraging Member States and other partners to contribute to the ICF.
SI 3 Establishing the requisite guidelines for access to the ICF by Member States or other national and regional actors engaged in the promotion of mitigation, adaptation and resilience.
SI 4 Establishing transparency and accountability systems in the management of resources from different partners.
SI 5 Designing cost-recovery mechanisms and replenishment strategies.

Expected Outcome 1.8: Increased access to finance and technology.

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Promote climate sensitive public financing and investment.
SI 2 Financing IGAD and its specialized centers.
SI 3 Expand and diversify existing financial services.
SI 4 Enhance access to climate change finance.
SI 5 Unlocking the region's and Member States' mitigation potential.
SI 6 Monetizing the region's natural capital mitigation potential.
SI 7 Payment for ecosystem services.
SI 8 Facilitating carbon trading.
SI 9 Facilitate private investment.

Expected Outcome 1.9: The human, financial and technological capacities of IGAD and its Member States enhanced/ strengthened.

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Undertaking detailed national and regional capacity needs assessment to determine gaps and priority areas in terms of human resources (skills), technologies and resource requirements.
SI 2 Developing strategies and plans of action for human resources development, technology transfer and resource mobilization.
SI 3 Strengthening cooperation between Member States, RECs, the AU, and other institutions in the region and beyond to build national and regional capacities.
SI 4 Creating an enabling environment for the participation of the private sector, the civil society, professional and academic institutions, and the diaspora in innovation, technology transfer and financing climate responsive projects/programs (including education and training).

Result 2: Climate change strategies and actions are strengthened and mainstreamed in key economic sectors.

The thrust of IRCCS will be the overarching priority intervention areas being pursued by the IGAD Member States and the international community as enshrined in the agreement establishing IGAD, and the SDGs and the Paris Agreement, respectively. These priority areas fall under adaptation and mitigation or both categories of climate action.

Key Priority Area 1: Agriculture, Livestock and Fisheries

Agriculture is the dominant sector of the economy of the region. According to the IGAD regional strategy (2021-2025), agriculture employs over 70 per cent of the population and contributes over 34 per cent to the Gross Domestic Product (GDP). Besides employment creation, agriculture also directly supports over 80 per cent of the population and provides the basis for food supplies and export earnings.

The level of vulnerability to future climate changes and variability is evidently high in the agricultural sector owing to increasing cases of extreme climate events, rising temperature and precipitation anomalies that result in changes in land and water regimes. Adapting agriculture to climate change remains a major challenge, given that agricultural systems in the IGAD region are rain-fed and largely susceptible to climate change and variability.

Agriculture will continue to impact climatic conditions and at the same time be affected by it. With the projected scenarios for climate change, there is a need for planned and transformational changes in the agricultural sector to curb food insecurity and regulate climate change. To this end, IGAD countries will need to produce more either through intensification (use of fossil fuels and chemical inputs) or through extensification (bringing more and more land under cultivation). Both approaches, will have considerable adverse implications for the environment.

This can be tackled by (a) adopting effective mitigation strategies, i.e., using low-carbon and green energy sources and (b) promoting adaptation measures to enhance resilience to climate change such as sustainable water management; agroforestry practices and growing of drought-resilient crop varieties and livestock management among others. More focus also needs to be directed toward building climate-resilient agriculture that will shield the IGAD countries from devastating climate-related hazards. The IRCCS would, therefore, be crucial in guiding IGAD countries in aligning food security policies towards adequately addressing the growing food demand in the face of unprecedented population growth, land and soil degradation and climate change.

Expected Outcome 2.1.1: Sustainable crop, livestock and fisheries production and productivity enhanced, and food security ensured.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Strengthening climate resilient agriculture within the framework of IDDRSI and CAADP where these are applicable.
- **SI 2** Promoting inter-state and regional trade in agricultural, livestock and fisheries commodities.
- **SI 3** Enhancing capacity for the control of land degradation, desertification, soil conservation and better integrated soil management.
- **SI 4** Strengthening the capacity of specialized Climate Prediction and Application Centres and enhancing their contribution to the promotion of agriculture and natural resources management.
- **SI 5** Promoting employment flexibility, green jobs, and social protection for the employed workers to make them more resilient and able to adapt their skills to climate change.
- **SI 6** Supporting IGAD Member States to include the Climate Change into their National Development Plans.
- **SI 7** Facilitating reclamation of already degraded lands in the region.
- **SI 8** Enhancing the production and productivity of the livestock and fisheries sectors.
- **SI 9** Improving market access to livestock and livestock products including control of illicit cross-border trafficking and illegal fishing.
- **SI 10** Strengthening research and development on food processing, feed and fodder production, animal and human health, and supply value chains.
- **SI 11** Introduction of agroforestry in areas vulnerable to climate change to enhance agriculture production as well as empower vulnerable communities through their involvement in community forestry activities/products.
- **SI 12** Sustainable and integrated development achieved in the ASAL regions by promoting indigenous knowledge/ technologies and innovations to enhance community resilience and adaptation to climate change.
- **SI 13** Encouraging investment and innovations in water harvesting technologies and promotion of crop, fodder, and livestock varieties resistant to moisture stress.
- **SI 14** Accelerating equitable access to social services and promoting safety-net programs to reduce vulnerability to climate change.

Expected Outcome 2.1.2: The GHG emissions from agricultural activities and deforestation (LULUCF) are significantly reduced.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Designing and implementing forestry policies, plans and strategies that curb deforestation and exports of timber with a view to protecting carbon sinks and promoting local climate stability.
- **SI 2** Facilitating the reduction of emissions from deforestation.
- **SI3** Reducing emissions from forest degradation.
- **SI 4** Encouraging Member States to ensure conservation of forest carbon stocks and means of sustainable livelihoods.
- **SI 5** Mobilizing support for the sustainable management of forests, afforestation and reforestation.
- **SI 6** Designing programs and plans of action aimed at reducing the GHG from agriculture and livestock production focusing on the balance between quality and quantity of herds/products.
- **SI7** Adopting sustainable agricultural and land management practices through climate smart agriculture, capacity building and institutional development.

Expected Outcome 2.1.3: A sound balance between economic growth and natural resources maintained.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Promoting sustainable utilization of land and other natural resources.
- SI 2 Scaling-up conservation measures being implemented by Member States.
- SI 3 Encouraging community participation and enhance public private participation in the management and efficient utilization of natural resources.
- SI 4 Supporting Member States in their efforts to reduce wastage and to add value to agricultural and natural products.
- SI 5 Instituting measures against illegal cutting and illicit trafficking of wood and other forest products.
- SI 6 Promoting water storage infrastructure and water governance for sustainable development.
- SI 7 Strengthening cooperation among Member States in the management, development and efficient utilization of transboundary water and related resources.
- SI 8 Adoption of Agro-pastoral systems and rangelands management techniques to improve feed quality and mitigation actions with high co-benefits for food security, poverty reduction and enhanced resilience of livestock production systems.

Expected Outcome 2.1.4: Appropriate measures are taken to protect natural resources including water, wildlife and biodiversity.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Integrating biodiversity management and protection into climate change adaptation and mitigation strategies and plans.
- SI 2 Providing support for Member States to develop frameworks for implementation of climate resilient and biodiversity programs.
- SI 3 Support Member States to conduct inventory on endangered species and biodiversity resources.
- SI 4 Facilitating cross-border cooperation and harmonization of common policies, laws, and strategies to protect natural resources.

Key Priority Area 2: Renewable Energy and Energy Efficiency

One of the major bottlenecks of development in the IGAD region has been the inadequacy of energy and the high cost of getting it. The majority (up to 85 per cent) of the population in the region uses wood, dung, and forest products for domestic energy supply (Andrew et al., 2021) whereas industries and transport sectors rely on fossil fuels for their operations.

Expected Outcome 2.2.1: IGAD Member States will have increased their investment in the development of diverse energy sources.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Developing an IGAD regional roadmap for the development of renewable energy sources.
- SI 2 Scaling-up investment in renewable energy sources such as solar, wind, geothermal, and urban waste.
- SI 3 Promoting standards for energy efficiency in the region.
- SI 4 Ensuring equitable access to available and potential energy among communities, and between Member States.
- SI 5 Encouraging inter-state and international cooperation for the development of transboundary energy resources.
- SI 6 Encourage private sector through incentives for them to invest in renewable energy.
- SI 7 Identifying comparative advantages of Member States in different energy sectors.

Expected Outcome 2.2.2: Member States and IGAD will have built their human and technological capabilities to harness renewable energy source.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Developing common protocols for the training of adequate number of experts at different levels.
- SI 2 Promoting the use of energy efficient technologies and sources in urban development.
- SI 3 Identifying and promoting endogenous scientific skills, technologies, and innovation capacities to harness and deploy the available renewable energy options.
- SI 4 Specifying prioritized technologies, activities and enabling frameworks to overcome barriers and facilitate the transfer, adoption, and diffusion of selected technologies in the IGAD countries.

Expected Outcome 2.2.3: Regional Centers of excellence in different energy sectors established and promoted.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Establishing energy innovation centres and hubs.
- SI 2 Identifying comparative advantages of Member States in different energy sectors.
- SI 3 Creating appropriate forums/mechanisms to share experiences and best practices at different levels (regional, national, and international).
- SI 4 Promoting energy literacy and awareness programs.

Key Priority Area 3: Climate-Resilient Industries and Trade

The IGAD region is one of the least industrialized regions in Africa. However, some countries are on the road to increased industrialization. In the long run, the region will experience considerable structural transformation from a predominantly agricultural to a moderately industrialized region. Industrialization could lead to increased GHG emissions, and environmental pollution, thereby aggravating climate change thus disrupting trade and market. Industry and trade in the region heavily rely on infrastructure and services like water, transport, and energy, which are heavily vulnerable to disruptions caused by climate events like droughts and heavy rains. The IGAD Member States can tie their industrial aspiration with investment in clean, green, and renewable energy sources.

Expected Outcome 2.3.1: IGAD and Member States will have identified climate-responsive manufacturing and production systems.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Facilitating the adoption and implementation of industrialization policies and legal frameworks for sustainable industrial development in the region.
- SI 2 Encouraging the development of small-scale and medium enterprises with low carbon emissions.
- SI 3 Facilitating skills and capacity building programs for the development climate-responsive industries.
- SI 4 Strengthening Public-Private Partnership (PPP) in the development of industries and the involvement of the private sector in clean and green production processes.
- SI 5 Promoting the linkage across research, industry, and agriculture value chain, with emphasis on making the sector climate friendly.

Expected Outcome 2.3.2: Productivity and quality of industrial products are improved.

This involves implementation of several strategic activities, including:

- SI 1 Providing frameworks for industrial products to meet international standards.
- SI 2 Developing quality assurance mechanisms to improve competitiveness of African products in domestic and international markets, including a "climate change friendly" label.
- SI 3 Establishing environmental impact assessment mechanisms for industries and manufacturing set-ups in the region, that include a mandatory GHG emission analysis as well as mitigation measures.
- SI 4 Promoting indigenous technologies and local manufacturing processes and providing assistance to manufacturers to improve quality and standards.

Expected Outcome 2.3.3: Regional centers of excellence in manufacturing and innovation are identified and promoted.

This involves implementation of a few strategic activities, including:

- SI 1 Developing standards and mapping out regional centers of excellence in industry and manufacturing activities, focusing on climate change friendly initiatives.
- SI 2 Supporting technology generation and transfer programs within and between IGAD Member States as well as other countries.
- SI 3 Establishing green and environment-friendly industrial zones and hubs at national and regional levels.
- SI 4 Promoting green productivity to ensure more efficient use of the natural resources and the long-term competitiveness of African economies.

Expected Outcome 2.3.4: Regional harmonization, standards and quality assurance mechanisms are established.

This involves implementation of a number of strategic activities, including:

- SI 1 Institutionalizing harmonization and coordination mechanisms for a climate-responsive industrial development in the region.
- SI 2 Developing an IGAD regional Research and Development (R&D) program for the promotion of climate-focused innovations and inventions.
- SI 3 Strengthening collaboration between Member States to respond to industrial accidents or threats to the environment.
- SI 4 Encouraging Member States to follow the principles of sustainability, equity, participation (inclusiveness), and efficiency in their industrialization programs.

Key Priority Area 4: Water Resources for Irrigation and Domestic Consumption

Most IGAD countries are characterized by water insecurity since they have not developed adequate physical or socioeconomic infrastructure. In particular, there has been a considerable loss of surface water due to decreasing rainfall and increasing demand for water due to population pressure, rapid urbanization, and evapotranspiration. Access to water in the IGAD countries is among the lowest globally[2] (Mirghani, 2014). Several studies have also confirmed the strong relationship between climate change and dwindling water resources, impacting the development of the region in many ways. Therefore, IRCCS should address the protection, management, efficient utilization of water and hydrological resources.

2 Mirghani, Muna (2014) Climate Change Policy and Capacity Needs to achieve water security in the IGAD region. IGAD

Expected Outcome 2.4.1: Efficient utilization of water resources for sanitation and domestic use promoted.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Conducting regional assessment of the state of IGAD water resources to develop strategies for their conservation, rehabilitation and/or restoration.
- SI 2 Promoting sustainable utilization of water and hydrological resources.
- SI 3 Ensuring equitable access to water for use.
- SI 4 Enhancing leadership on water security especially for communities in ASALs and water stressed rural areas.

Expected Outcome 2.4.2: Sustainable irrigation projects enhanced in areas and countries affected by frequent drought, floods and food-insecurity.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Establish water harvesting techniques.
- SI 2 Encouraging Member States to develop appropriate water use policies and strategies.
- SI 3 Promoting inter-state and regional cooperation on the use of trans-boundary water resources.
- SI 4 Encouraging the public-private partnership in the development of water resources.
- SI 5 Establishing/strengthening regional institutions and fora to foster dialogue and experience sharing on efficient utilization of water and hydrological resources.
- SI 6 Introduction of revolving micro-credit funds to support implementation of small water harvesting projects

Expected Outcome 2.4.3: Proper management and recycling of wastewater in urban and industrial areas promoted.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Improving wastewater treatment and management systems in the region.
- SI 2 Scaling up best practices in the recycling and efficient utilization of liquid waste in urban and industrial zones.
- SI 3 Providing support for Member States with limited human and technological capacities in the treatment and management of water resources including desalination of water from saltwater seas, lakes, etc.
- SI 4 Preventing contamination of water sources; agricultural inputs, dumping in water sources etc.

Key Priority Area 5: Transport

The main emission in the transport sector comes from road transport, particularly freight and construction vehicles. However, countries have limited capacity to generate adequate and accurate data on the magnitude of emissions from vehicles and other means of transport. At the same time, some IGAD Member States have launched projects for the development of clean and green transport systems.

Expected Outcome 2.5.1: Low carbon and efficient transportation systems are promoted.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Encouraging investment in low-carbon transportation systems that utilize clean and renewable energy.
- SI 2 Establishing climate standards in the design and architecture of transport systems (airports, roads, bridges, railways, ports, maritime transport).
- SI 3 Promoting policies and strategies for climate sensitive transport systems.
- SI 4 Adopting regulations governing importation of vehicles and other means of transport to limit GHG.
- SI5 Developing smart cities best practices.
- SI 6 Improving fuel efficiency of vehicles and reducing reliance on fossil fuel.

Expected Outcome 2.5.2: Promote the design and implementation of measures to reduce emissions in the transportation sector.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Conduct assessment studies for multimodal transport.
- SI 2 Promote green public transport networks and multimodal transport.
- SI 3 Increase access to public transport.
- SI 4 Harmonize regulations on vehicle emissions.

Key Priority Area 6: Forest Resources, Wetlands and Biodiversity

The IGAD region has lost a considerable amount of its forest cover due to centuries of deforestation and land degradation aggravated by climate and land use changes. This loss is likely to continue unless countries in the region and their development partners as well as IGAD step up their efforts to reverse degradation, depletion and complete loss of natural resources and biodiversity. In particular, arid and semi-arid lands, marine ecosystems and wetlands will continue to experience further deterioration unless timely action is taken to avert the devastating impacts of global warming and climate change.

Expected Outcome 2.6.1: Adequate protection, rehabilitation and conservation of forest resources and biodiversity strengthened.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Mainstreaming climate change mitigation and natural resource management and sustainable utilization with clear and achievable targets to reduce GHG emissions.
- SI 2 Developing regional and national capacities to scale-up the restoration of degraded ecosystems.
- SI 3 Encouraging investment in reforestation and

afforestation programs through enhanced public-private participation.

SI 4 Strengthening community involvement in the management and development natural resources.

SI 5 Enhancing the role of forests as carbon sinks and implementing different programs on carbon trading as part of the sustainable development efforts of countries in the region.

SI 6 Promoting the use of forests in the protection of watershed/catchments and ecosystem.

SI 7 Support measures to enhance the carbon sequestration capacity of mangroves and seagrasses

SI 8 Establishing linkages with regulated and voluntary carbon markets to promote and encourage forestry mitigation projects in the region; secure financial assistance from donor organizations and international sources to formulate regional programme for avoiding deforestation and promoting forest restoration.

SI 9 Providing incentives and alternative fuel and livelihood options to forest dependent communities to prevent deforestation.

SI 10 Protecting, conserving and managing wetlands and their ecosystems.

Expected Outcome 2.6.2: Endangered and near extinct species and resources preserved/conserved.

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Identifying endangered species and resources and preventing their risks of extinction with a focus on restoring or multiplying these species.

SI 2 Promoting the cultivation and plantation of indigenous species of trees and plant resources adapted to the specific local environment future climate conditions.

SI 3 Facilitating the implementation of major international instruments for the promotion, protection, and management of fragile ecosystems.

Key Priority Area 7: Marine Resources and Coastal Areas

Five of the eight IGAD countries, namely, Kenya, Somalia, Djibouti, Eritrea, and Sudan, are bordered by more than 6000 km of coastlines along the Indian Ocean and the Red Sea. Moreover, Kenya, Uganda, South Sudan and Ethiopia share the Nile at different points and have considerable inland riverbanks.

"Over-utilization and degradation of marine and coastal ecosystems together with climate change impact with most of them being attributed to the outcomes of ocean warming and increased sea levels are inevitably resulting in the degradation and destruction of the ecosystems, saltwater intrusion, and damaging and destruction of infrastructure, with implications on food security, economic growth, and livelihoods" (AU, 2014).

Expected Outcome 2.7.1: The resilience of coastal areas enhanced, and the protection of marine ecosystems strengthened.

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Promoting a sustainable management of marine resources and coastal areas.

SI 2 Conducting comprehensive assessment of the status of coastal and marine resources in the region.

SI 3 Developing appropriate strategies for the rehabilitation, conservation, and restoration of deteriorated coastal lands and marine resources.

SI 4 Strengthening measures to reduce the threat of sea level rise, flush flooding and sea and river water pollutions due to toxic waste and urban waste.

SI 5 Preventing the dumping of industrial and radioactive waste coming illegally from external sources.

SI 6 Increasing the resilience of ecosystems and communities through the restoration of the productive bases of salinized lands in the region.

SI 7 Supporting countries in their efforts to avert the threats and damages of rising sea levels, excessive heatwaves, and shrinking resources that impact on the survival of endangered species.

SI 8 Support measures to enhance the carbon sequestration capacity of mangroves and seagrasses

Key Priority Area 8: Arid and Semi-Arid Lands (ASALs)

Arid and Semi-Arid Lands (ASALs) of the Greater Horn of Africa hosts approximately 25 million pastoralists and cover 60 -70 per cent of the region's land area. Over 30 per cent of the population live in the ASALs, and 80 per cent of livestock is affected by recurrent droughts, water, and food insecurity. Pastoralism is one of the main activities practised in almost ASALs of all the countries in the region. But due to the unpredictable climate, access to pasture and water for livestock, livestock development remains at risk. As such, pastoralists face frequent risks of loss of livelihood in the process.

Expected Outcome 2.8.1: Sustainable and integrated development achieved in the ASAL regions

This involves implementation of different Strategic Interventions (SI) including:

SI 1 Promoting indigenous knowledge/technologies and innovations to enhance community resilience and adaptation to climate change.

SI2 Introducing climate change literacy and awareness among people in the ASALs.

SI 3 Encouraging investment and innovations in water harvesting technologies and promotion of crop and livestock varieties resistant to moisture stress.

SI 4 Accelerating equitable access to social services and promoting safety-net programs to reduce vulnerability to climate change.

Key Priority Area 9: Security and Displacement

The IGAD region is one of the conflict-affected areas in Africa where almost all the countries have experienced one or more conflicts causing thousands of people to lose their lives and livelihoods. The chronic conflicts in the region are often linked to scarcity and competition for natural resources (Babikir, et al., 2015) such as water and arable land. The expected increase in global temperatures is likely to fuel human conflict.

Threats to human security in the region include economic underdevelopment and poverty, inter and intra state conflicts, refugees, illegal migrants and internally displaced persons, the development and consolidation of regional disaster management mechanisms.

Climate change will only compound these threats as climate change acts as a" threat multiplier" because of its potential to exacerbate many of the current challenges and threats already being faced in some countries such as infectious diseases and conflict over scarce resources. Decreasing the availability of resources due to regional effects of climate change — like drought and desertification — leads to intensified competition for these resources. It can contribute to instability, lead to displacement and migration, worsen existing conflicts and threaten global security.

Human security issues related to climate change include water stress, land use and food security, natural disasters, and environmental migration. Adaptation is, therefore, a priority to ensure human safety in all spheres of life.

Expected Outcome 2.9.1: The negative impacts of climate change-triggered conflicts minimized or significantly reduced.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Conducting continuous assessment of the interaction between climate change-induced vulnerabilities and conflicts over scarce resources such as water, grazing land, etc.
- **SI 2** Strengthening the prediction, analysis, and application capacity of institutions on the social and economic consequences of environmental degradation and scarcity of useable resources within or between communities.
- **SI 3** Promoting indigenous distributive justice and conflict resolution mechanisms as well as enhancing communal response to climate change.
- **SI 4** Encouraging the role of community/religious leaders in preventing/resolving conflicts and reducing the negative impacts of climate and weather variability.
- **SI 5** Accelerating post-conflict reconstruction and preventing relapse to conflicts.
- **SI 6** Strengthening the management and efficiency of humanitarian interventions resulting from conflicts and/or natural disasters.
- **SI 7** Vulnerability assessment was then followed by identification of adaptation strategies, including policies, technologies, and programme interventions.

Expected Outcome 2.9.2: Promote harmonization of regional immigration policies institutionalism to reduce vulnerability to extreme climate events.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Develop regional guidelines for emergency evacuation plans resulting from climate change extreme events.

Expected Outcome 2.9.3: Strengthen traditional systems focused on practices for adaptation to climate change

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Promote and strengthen indigenous knowledge (IK) systems for climate change adaptation.

Key Priority Area 10: Gender and Youth

Gender customs and power structures play a critical role in determining how women and men of different backgrounds are impacted by, and respond to, climate change. Impacts of climate change affect women and men differently with the poorest being the most vulnerable. Women are disproportionately affected; at the same time, they play a crucial role in climate change adaptation and mitigation actions. Women and poor men are more vulnerable to climate shocks due to their role in subsistence rain-fed agriculture and weaker access to resources and decision-making power (UNFCCC, 2015)3. Addressing inequalities is an essential part of building resilience and addressing climate and environmental challenges. Women and girls require support tailored to their specific needs to mitigate the changes that threaten their social and economic wellbeing.

In the same vein, young people who constitute more than 60 per cent of the population in the IGAD region are at the receiving end of the negative consequences of climate change in terms of poverty, unemployment, and food security.

The 'Africa We Want' articulated in Agenda 2063 has a strong focus on children and the youth of today, as they are the elders and leaders of tomorrow and the key to the survival of mankind. African youth are projected to experience the worst impacts of climate change. As a result, their welfare and interests should not only be provided for, but their voices should also be heard – and they should play key roles in the development and implementation of solutions to the challenges they face – from today and going into the future (AUC 2022).

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3 UNFCCC, 2015

Expected Outcome 2.10.1: The disproportionate impact of climate change on women and girls alleviated/reduced.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Mainstreaming gender equality and equity in the national and regional programs on climate change.
- SI 2 Enhancing the participation of women and girls in adaptation and mitigation efforts.
- SI 3 Addressing the differential impacts of climate change, poverty and food insecurity on women and girls with a focus on implementing gender-responsive and climate resilient economic growth.
- SI 4 Reducing the vulnerability of women and girls during man-made and natural disasters.
- SI 5 Building the life-skill capacity of women to respond to climate change-induced disasters and emergencies.
- SI 6 Strengthening the leadership role of women in climate resilient and clean economic growth and transformation plans.
- SI 7 Facilitating the implementation of international instruments on gender equality, equity, and women's empowerment such as Convention of the Elimination of all forms of Discrimination against Women (CEDAW) in the context of climate change.
- SI 8 Promoting gender sensitive adaptation measures to address the impacts of climate change on women and girls.

Expected Outcome 2.10.2: The protection of young people from the negative impacts of climate change enhanced.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Developing youth-focused climate change adaptation and resilience programs.
- SI 2 Building the skills and competencies of young boys and girls to develop self-confidence and engage in gainful employment activities.
- SI 3 Scaling-up safety-net programs that can alleviate climate change driven social problems affecting young people's survival and development.

Expected Outcome 2.10.3: The constructive role of women and young people in tackling climate change strengthened/ elevated.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Developing strategies to involve the youth in the management and protection of natural resources and rehabilitation of degraded ecosystems.
- SI 2 Encouraging women and youth innovation in climate change adaptation mitigation, and resilience efforts.
- SI 3 Promoting entrepreneurship and self-employment among women, including ecotourism, non-timber forest products, and climate- responsive business activities.
- SI 4 Promoting gender and youth mainstreaming into climate change frameworks as well as sectoral policies and programs.
- SI 5 Strengthening the role of women and youth in peacebuilding and conflict resolution.
- SI 6 Promoting measures to prevent climate change affected young people from becoming innocent victims of human-trafficking, transnational organized crimes, and violent terrorism.

Key Priority Area 11: Human Health

Climate change affects the social and environmental determinants of health in terms of access to clean air, safe drinking water, sufficient food, and secure shelter. Climate change will increase deaths that result from malnutrition, malaria, diarrhoea, and heat stress (WHO – www.who.int). Increased temperatures will likely increase the areas in which diseases such as malaria occur, thereby increasing the potential infections of the human population (SADC 2015).

It estimates that globally, the costs of inaction on global public health range between 2 to 4 billion USD annually by 2030. In particular, the burden of climate change-triggered diseases such as malaria, acute dehydration due to drought and water insecurity, and malnutrition due to declining food production, has been very high in the ASALs of the IGAD region.

A comprehensive approach to reducing malnutrition and disease must include increasing access to sanitation and safe water services, addressing hygienic behaviour and tackling climate-related stressors. These and similar best practices should be scaled-up to ensure that climate change triggers do not hamper development efforts in the region.

Expected Outcome 2.11.1: Improve the health, food, and nutrition security of people in the region, especially those in pastoralist communities of ASALs.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Improving health infrastructures and services – mostly in ASAL and pastoralist communities – to respond to the negative impacts of climate change.
- SI 2 Reducing the incidence and prevalence of epidemics and endemic diseases due to climate change.
- SI 3 Promoting food, nutrition, and hygiene literacy in different communities and settings.
- SI 4 Scaling-up disaster-preparedness and preventive measures during sudden loss of food crops and livestock during erratic rains, dry-spells and unexpected floods.
- SI 5 Promoting the concept and application of "one-health" among pastoralist and rural communities.
- SI 6 Reducing the impact of extreme heatwaves, flood emergencies and sudden outbreak of epidemic.
- SI 7 Promoting enhanced and equitable water service provision to reduce malnutrition, diseases, and improved sanitation.

Result 3: Regional capacity in climate related knowledge generation and dissemination are strengthened.

The research and knowledge generation capacity in Africa in general, and the IGAD region, in particular, is very low. A review of scientific publications shows that Africa generates less than 1 per cent of the world's research4. When it comes to climate change related research, the region's contributions can be even much lower.

Climate change related scientific knowledge is dynamic, and requires strong institutions, human resource, and technology. The reality of insufficient capacity development and resources at national and regional levels to keep up with this dynamic issue must be recognized and resolutely addressed. The region needs to build its capacity to cope with new evidence and knowledge that informs climate change actions in the region and influences global discussions and agreements that bind all Parties.

Other Areas 1: Data and Information Sharing

Planning climate change interventions should be based on accurate information derived from good quality multi-sectoral data. However, from the country consultations, it was evident that the meteorological services do not have optimum station networks to capture adequate in situ data. On the other hand, the socio-economic data available is very limited in both spatial and temporal distribution.

Expected Outcome 3.1.1: Availability of adequate and quality regional multi-disciplinary data required for trans-disciplinary research in climate change.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Strengthening the human, financial and technical capacity of ICPAC and the national and hydrometeorological services of the Member States to generate adequate quality climate data.
- SI 2 Facilitate the enhancement of the capacity for observation, collection and archiving of socio-economic data.
- SI 3 Facilitate the harmonization of data policies across sectors to enhance the free flow of data.
- SI 4 Promote improved data collection and information sharing.
- SI 5 Improve capacity for data collection and management.

Other Areas 2: Education, Research, Awareness and Advocacy

The baseline assessment revealed that most Member States have limited human and technical capacities to adequately drive their research and innovation agenda. While research and innovation boost the capacity for the generation of reliable climate information, education, advocacy, and awareness programs ensure the effective utilization of the generated information for decision and policymaking. Institutions and users of climate information should be adequately equipped with knowledge on how such information flows can be harnessed to design relevant investment programmes. The development and transfer of appropriate technology form an integral part of any effort to adapt and mitigate climate change impacts. To address this, both soft and hard technology development should be enhanced. Technology transfer barriers, including rules of trade tariffs and intellectual property rights, should be collectively addressed, and technology cooperation between the Member States should be encouraged.

Expected Outcome 3.2.1: Exchange of best practices and information sharing systems for availability of modelling capacity, regional climate change scenarios, technology and other instruments required for trans-disciplinary research in climate change improved.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Coordinating enhanced networking and facilitate the provision of support to regional climate centres, universities, and research institutions to contribute to capacity building at local, national, and regional levels.
- SI 2 Promoting the development of innovative research, education, awareness raising and advocacy for climate change interventions.
- SI 3 Preserve and upgrade monitoring, data analysis, research, and management of information.
- SI 4 Develop a regional framework for research and development.
- SI 5 Establish regional institutions to support research and development.

Expected Outcome 3.2.2: Enhanced trans-disciplinary capacity for climate variability and climate change resilience building.

This involves implementation of different Strategic Interventions (SI) including:

- SI 1 Assessment of science and technology capacity needs; curriculum guidelines and standards.
- SI 2 Development of a framework for advocacy, training, education, awareness in partnerships with the Member States in support of multi- and trans-disciplinary capacity development, including scientists, technicians,

4 https://www.elsevier.com/connect/africa-generates-less-than-1-of-the-worlds-research-data-analytics-can-change-that (Accessed in September 2021)

and users of climate risk information.

Expected Outcome 3.2.3: Knowledge to address climate change challenges and harness the opportunities available and widely used.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Promote the integration of climate-proofing development plans and strategies.
- **SI 2** Support regional mechanism for the development and transfer of technology
- **SI 3** Support collaboration of the private sector, universities, research institutions, community-based organizations and the public and for development of new climate change tools and innovations for disaster risk reduction in various areas.

Other Areas 3: Regional System for Climate Change Information Dissemination

ICPAC is playing an important role in climate change research and dissemination of weather-related information in the region. This initiative has been strengthened to cover all climate change-related information, including prediction and early warning for multiple causes of disaster, best practices in climate adaptation and mitigation, and regional and global policies and development trends.

Expected Outcome 3.3.1: Mechanism to disseminate appropriate, understandable information that leads to early action by the users and minimize impacts of disasters in the IGAD region strengthened.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Establishing a Regional Early Warning Mechanism to coordinate efforts in responding to existing and emerging natural hazard-induced as well as man-made disasters.
- **SI 2** Mainstreaming Early Warning System and disaster risk preparedness in all sectors and institutions of IGAD and Member States.
- **SI 3** Strengthening cooperation with institutions and entities dealing with Early Warning activities/initiatives and disaster preventions.

Other Areas 4: Domestication of Regional and International Climate Change Instruments

Expected Outcome 3.4.1: African Common Position on Climate Change is effectively operationalized in the IGAD Region.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Popularizing the African Common Position (ACP) on the post-2015 development agenda.
- **SI 2** Ensure integration of climate-related targets of the ACP into regional adaptation and mitigation programs.
- **SI 2** Facilitating the attainment of the African target of holding global average temperature rise below 2 degrees or 1.5 degrees above pre-industrial levels.
- **SI 4** Enhancing national and regional negotiation capacities through scientific evidence-based assessments and baselines for monitoring climate impact and development actions.
- **SI 5** Promoting establishment of innovative regional climate funds, including regional carbon markets as well as knowledge/ information sharing and thematic data banks.

Resilience to climate change induced disaster risk

In the IGAD region, disaster is often triggered by natural hazards like drought, flood, tropical cyclones, and landslides. Other disaster hazards include infectious disease epidemics, and pest infestations. These hazards are further aggravated by conflicts and political violence. Incidents of disaster cause losses and damages, and human suffering. Interventions regarding disaster risk reduction and resilience catered for in the IGAD Regional Strategy for Disaster Management 2019-2030 and the IDDRSI strategy of IGAD[5].

Result 4: Mitigation and Low Carbon Development.

Mitigation is essential to meet the objectives of stabilizing GHG concentration in the atmosphere at a level that would prevent and reduce the negative impacts of climate change. There are technical and economic potentials to mitigate GHG emissions, which could offset the projected growth of global emissions. This will enable the region to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHG in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.

There is a great opportunity for the integration of climate change mitigation into the development activities. This process of integration requires a carefully planned strategy demonstrating strong technical knowledge of the impacts of climate change and its mitigation, and involving a broad range of stakeholders.

In this regard, the mitigation analysis is done with the aim of identifying GHG mitigation options that can both serve national development priorities and contribute to the global mitigation efforts to achieve the overall objectives of the UNFCCC.

Expected Outcome 4.1.1.: Ensure an energy secure and low-carbon development of the economy.

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5 https://resilience.igad.int/resource/the-igad-drought-disaster-resilience-and-sustainability-intiative-iddrsi-strategy-2019-2024the-igad-drought-disaster-resilience-and-sustainability-intiative-iddrsi-strategy-2019-2024/

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Study the future energy needs of Member States and find out the least cost energy supply path that satisfies future energy demand based on the desired growth path of the economy
- **SI 2** Raise energy efficiency in power production, transmission and distribution through appropriate investments
- **SI 3** Raise energy efficiency in agricultural and industrial processes through appropriate policies and investments
- **SI 4** Raise energy efficiency in domestic and commercial/ service sectors through appropriate policies and investments
- **SI 5** Raise energy efficiency in transport sector through appropriate policies and investments

Renewable energy development

The scope for developing renewable energy supplies (e.g., solar, wind, geothermal and modern biomass technologies) has not been explored well in the region.

There is some use of solar power for limited domestic purposes. The main barrier to expanded solar energy use is the capital cost. However, since the cost of solar cells and solar panels in global markets is expected to gradually fall, Member States should encourage entrepreneurs who wish to start solar projects, possibly through incentives.

Expected Outcome 4.1.2.: Maximizing the use of renewable energy sources to lower GHG emission and ensuring energy security.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Investments to scale up solar power programmes
- **SI 2** Research and investment to harness wind energy.
- **SI 3** Study of the techno-economic, social and institutional constraints to adoption of improved biomass stoves and other technologies

Lower emissions from agricultural land

Emission of greenhouse gases (GHGs) from agricultural land is a major concern. Wet agricultural land produces methane (CH4). Nitrogenous (N2) fertilizers also contribute to GHG emissionThis aims to lower emissions through improved cropland management

Expected Outcome 4.1.3.: Raise productivity of agricultural land and lower emissions of methane.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Support to research and on-farm trials of new water management technology on crop (including rice) land
- **SI 2** Support to agricultural extension service to popularize new water management techniques for rice production

Management of urban waste.

Expected Outcome 4.1.4.: Ensure livable cities while lowering GHG (methane) emissions.

This involves implementation of different Strategic Interventions (SI) including:

- **SI 1** Design of urban waste dumps so that methane can be captured in all major urban areas
- **SI 2** Using CDM mechanism to set up small power plants by capturing the produced methane from waste dumps.

PART V: IMPLEMENTATION OF THE STRATEGY

The Implementation Mechanism of IRCCS involves several key activities such as coordination and cooperation, mobilization of adequate internal and external resources, as well as establishing climate resilient green economy funds at appropriate levels. It also involves vigorous advocacy and sensitization campaigns aimed at building the capacity of Member States to accelerate the realization of mitigation and adaptation programs. This can be achieved through regular forums for sharing of experiences and best practices. To achieve these goals, IGAD should strengthen/promote research and knowledge management programs, public-private partnerships, and monitoring and evaluation. In general, the implementation of the IRCCS will involve the indicative key activities outlined in the succeeding sections.

5.1 Institutional Arrangement for IRCCS Implementation

Implementation of this strategy will require a dynamic and enabling institutional framework. The importance of clear, manageable, and cost-effective organizational arrangement is unquestionable. The governance structure for IRCCS shall be based on existing IGAD organizational structure and its specialized institutions. Since the implementation requires a lot of resource mobilization and partnership building, additional units under ICPAC shall be created for effective coordination and ease of funds mobilization.

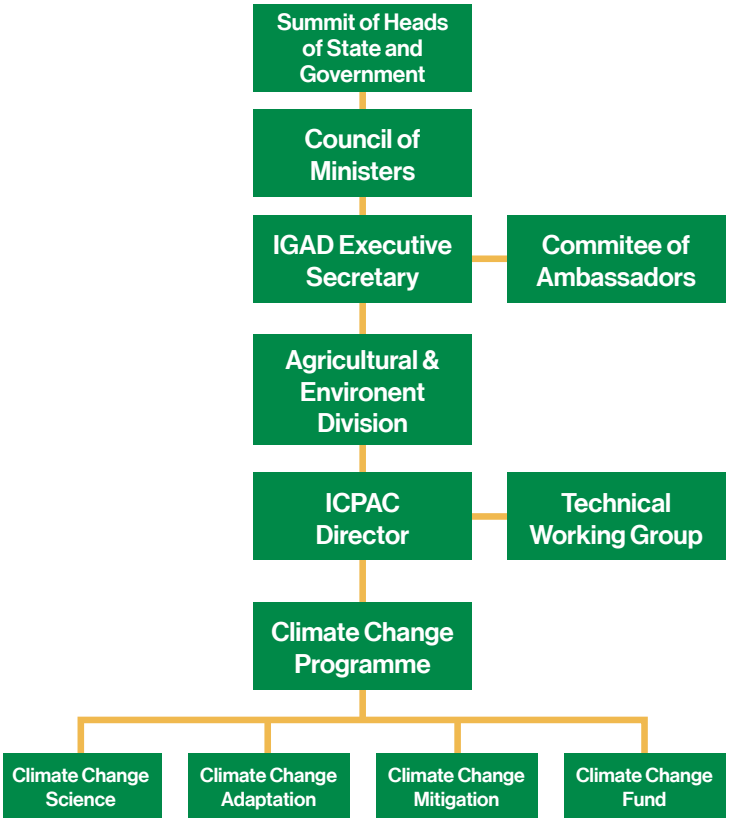

Figure 10: Proposed Institutional Arrangement for IRCCS.

As indicated in the organogram (Figure 10), the highest decision-making body in IGAD is the 'IGAD Assembly of the Heads of State and Government'. Operation of the IRCCS requires the decisions of the IGAD Assembly of the Heads of State and Government on exceptional cases that require high

level political decisions. The structures lower than the Heads of State, however, are crucial for effective implementation and smooth governance of the IRCCS. ICPAC is the key IGAD specialized institutions responsible for the implementation of program management units.

ICPAC: shall be the host of the IRCCS Programs Coordination Unit and Climate Change Fund since it is IGAD's specialized center with excellence on climate change predictions and applications. ICPAC works on broad areas related to climate change including climate forecasting, disaster risk management, water resources, climate information dissemination, agriculture and food security, environmental monitoring, scenario development and vulnerability assessment, adaptation, mitigation, and capacity development. It also has implemented and continues to implement several projects, mostly on capacity building, research and, monitoring, and has experiences in coordinating multi-stakeholders. Other specialized agencies of IGAD shall work closely with ICPAC and lead on implementation of their respective sectors.

Technical Working Group: composed of Member States' representatives in charge of Climate Change and Environment and ICPAC staff. It shall be chaired by ICPAC Director. The Group will play key roles in implementing the strategy, prioritization of actions, technical proposals and reports. The group will be chaired by ICPAC Director.

The roles of the Technical Working Group include:

i. Review and prioritize strategic actions or interventions identified in the IRCCS for implementation at different levels.
ii. Review program/project documents and provide recommendations for approval by the IGAD Executive Secretary.
iii. Identify donors and partners that can support/ finance the prioritize Climate Actions.
iv. Supports the IGAD in approaching multi-lateral and bilateral donors/partners.
v. Approach and engage strategic partners like the private companies and foundations.
vi. Review progress annually and recommended actions to achieve the goals of the strategy.

The IGAD Council of Ministers: will provides high level leadership. The key roles of the council include the following:

i. Review and approve proposed actions.
ii. Recommend actions for approval by the heads of state and governments.
iii. Engage with resource partners/ donors.
iv. Decide on Member States contributions to the regional climate change actions.
v. Decide equitable allocation centrally mobilized resources to Member States.
vi. Review progress and recommend further actions.

5.2 Key Stakeholders for Implementation of IRCCS

Responding to climate change requires collaborative efforts. As a regional intervention mechanism, IRCCS aspires to encourage the active participation of the Member States, development partners and civil society, the private sector and community institutions. The following indicate roles and responsibilities are suggested for the different stakeholders of IRCCS.

5.2.1 IGAD and Its Specialized Institutions

IGAD has several specialized institutes and divisions. The specialized institutions include: IGAD Foreign Service Institute (IGAD FSI), Conflict Early Warning and Response Mechanism (CEWARN), IGAD Climate Prediction and Application Centre (ICPAC), IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), IGAD Sheikh Technical Veterinary School and IGAD Center of Excellence in Preventing and Countering Violent Extremism, which are in different Member States. In addition, IGAD has four major divisions: Agriculture and Environment; Peace and Security; Economic Cooperation; and Health and Social Development. There are also a few specialized programs, like IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI).

These specialized institutes, divisions and programs have been engaged for effective implementation that avoids redundancy, enhance complementarity and resource use efficiency, including human resources. Joint effort is required to:

i. Harmonize and coordinate climate change responses between regional and national levels.
ii. Mobilize adequate resources for the implementation of IRCCS.
iii. Establish appropriate institutional structures and systems.
iv. Build the capacity of Member States and other actors to speed-up the implementation of IRCCS.
v. Establish an IGAD Climate Fund (ICF) to promote climate resilient development.
vi. Create an IGAD Regional Climate Change Panel/ Forum.
vii. Ensure proper implementation of IRCCS.
viii. Facilitate regular follow-up and periodic monitoring and evaluation of progresses in the implementation of adaptation and mitigation actions.
ix. Mainstreaming climate change adaptation/ mitigation in their programs.

In doing so, ICPAC will specially have the following roles:

i. Serve as chair of the technical working group.
ii. Coordinator and lead implementation of regional climate actions, and overall implementation of the regional strategy.
iii. Build technical capacity of Member States in climate change, prioritization of actions.
iv. Provide closer support to Member States that have weak institutions or low capacity.
v. Lead regional programs–monitoring and evaluation.

Similarly, the ICF will have the following specific roles:

i. Lead resources mobilization and partnership building.
ii. Disburse fund to implementers.
iii. Financial reports to resource partners.

Member States: The National Focal Points of UNFCCC serve as first contacts in the Member States regarding implementation and reporting. They shall be members of the Technical Working Group and shall nominate their technical persons who can represent them in any assignment. The key roles of Member States focal institutions shall include:

i. Serve as first contacts in the members states regarding implementation and reporting.
ii. Provide updates of national programs in the Member States.
iii. Serve in the Technical Working Group
iv. Coordinate climate change actions in their respective countries.
v. Ensure implementation of the IRCCS and related international, regional and national policies, and strategies.
vi. Mobilize and allocate adequate resources for the implementation of IRCCS and related initiatives.
vii. Create awareness among the broad masses on the root causes and consequences of climate change.
viii. Develop climate resilient institutions and systems at all levels.
ix. Ensure gender equality and empowerment of women in all climate-related interventions.
x. Link climate priority actions with opportunities for employment creation and income generation among the youth, women and persons with disabilities.
xi. Establish an IRCCS Focal Point for effective coordination and facilitation of implementation.
xii. Ensure national ownership of the strategy and integrate its key components into national action plans.
xiii. Submit annual, mid-term and final report implantation progress of IRCCS to IGAD.

5.2.2 The African Union

The African Union (AU) has line institutions responsible for climate change. Implementation of the IRCCS significantly contributes to that of the continental strategy. Hence, the envisaged roles of the AU includes:

i. Support the efforts of IGAD and Member States in the implementation of IRCCS.
ii. Provide advocacy and resource mobilization platforms for low carbon and climate resilient interventions.
iii. Encourage the international community to build the capacity of IGAD and Member States.

5.2.3 IGAD Technical Partners

The technical partners mainly include the UN Agencies (UNDP, UNEP, UNECA, FAO, and WFP) and other technical cooperation partners like the GGGI). Their key roles include:

i. Provide technical support on program design.
ii. Jointly mobilize resources from multi-lateral sources like GCF, GEF and Adaptation Fund that require accredited entities.
iii. Provide program/ project implementation support.
iv. Build the capacity of national and regional actors for the effective implementation of IRCCS.
v. Contribute to the IGAD regional Climate Fund.

5.2.4 IGAD Resources Partners

Resource partners are donors that provide financial support for implementation of the regional and national climate actions of the IRCCS. These include existing partners (bilateral, multilateral and development banks). The key roles include:

i. Provide finance for prioritized climate actions through contributions to ICF and Member States implementing entities.
ii. Provide technical support on transformative actions to IGAD and Member States.

5.2.5 Civil Society and Community Organizations

Civil society organizations are key partners in implementation of actions on ground. Their key roles include:

i. Popularize IRCCS at different levels.
ii. Mobilize resources and technical support to IGAD and Member States for the implementation of IRCCS.
iii. Establish a regional climate action civil society/ community network.
iv. Enhance advocacy on climate resilient development.
v. Participate in the monitoring and follow-up on the implantation of IRCCS.
vi. Strengthen linkage between humanitarian intervention and climate-responsive development.

5.3 IGAD Regional Climate Change Action Plan

Table 2: Enabling environment

Result 1: Enabling Environment Created to Implement Climate Change Strategy and Actions							
The objective is to create an enabling environment to implement the strategy at regional and Member States levels							
Priority Area/Sector	Expected Outcome	Strategic Interventions		Expected Outputs	Indicator of success	Timeline[1]	Responsibility
Coordination, Harmonization, and Advocacy	1.1. Enhanced coordination, harmonization and advocacy to scale-up regional climate change adaptation and mitigation efforts.	SI 1 SI 2 SI 3	Undertaking continuous assessment of initiatives and programs of Member States and other stakeholders in the region. Encouraging cooperation and collaboration between the different actors and stakeholders. Reducing redundancy and duplication of efforts for efficient and maximum utilization of resources.	a. Continuous assessment of initiatives and programs of Member States and other stakeholders in the region undertaken. b. Cooperation and collaboration between the different actors and stakeholders strengthened. c. Existing ongoing climate change interventions in the region documented.	a. Coordination mechanisms established at national and regional levels. b. Number of networks established, and coordination activities conducted.	Medium Term	IGAD ICPAC
Niches and Priority Climate Action Points	1.2 IGAD and Member States can identify niches and priority climate action points for collective response.	SI 1 SI 2	Organizing regular consultation fora to map-out common areas of interest and action by national, regional, and international stakeholders. Allocating adequate resources to implement responses to the threats of climate change in the region.	a. Common areas of interest and action by national, regional, and international stakeholders mapped out.	a. Cooperation agreements and their implementation pace. b. Number of common areas of interest mapped out.	Medium Term	ICPAC Member States

1 Short Term: within 5 years from the approval of the plan; Medium Term: between 5 and 10 years from the approval of the plan and Long Term: more than 10 years from the approval of the plan.

Priority Area/Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicator of success	Timeline[1]	Responsibility
Niches and Priority Climate Action Points	1.2 IGAD and Member States can identify niches and priority climate action points for collective response.	SI 3 Developing a road map for the implementation of programs and targets on limiting GHG emissions and enhancing adaptation to climate change; and mobilize concrete support for Member States in their areas of felt- and spelt-needs.	c. The relations between ICPAC and the ministries of Finance and Environment strengthened to increase resources for climate change. d. Road map for the implementation of programs and targets on limiting GHG emissions to climate change developed.	a. Cooperation agreements and their implementation pace. b. Number of common areas of interest mapped out.	Medium Term	ICPAC Member States
National and Regional Policies and Strategies	1.3 The capacity built to implement national and regional policies and strategies on climate change adaptation and mitigation.	SI 1 Conducting detailed assessment of the capacity needs, identifying technical/technological gaps of Member States. SI 2 Supporting Member States in the training of personnel in climate science (e.g., attribution, prediction, projection, impacts, trends analysis and application of climate data etc.) and other cross-cutting issues. SI 3 Compiling and disseminating best practices among Member States on how each country addresses human resources capacity needs. SI 4 Assisting Member States in developing projects proposals for technical assistance.	a. Technical/ technological gaps of Member States in climate change identified through capacity needs assessment. b. Project proposals for technical assistance developed for Member States. c. Capacity of Member States in climate science i.e., attribution, prediction, projection, impacts, trends analysis and application of climate data strengthened.	a. Number of national/ regional needs assessment conducted. b. Changes in human, institutional, capacities of Member States/ IGAD. c. Cooperation agreements and their implementation pace.	Long Term Short Term Medium Term	ICPAC Member States

Priority Area/Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicator of success	Timeline[1]	Responsibility
Coordination and Leadership Role	1.4 The coordination and leadership role of IGAD and ICPAC improved and strengthened.	SI 1 Identifying the technical and human resource needs of IGAD/ICPAC. SI 2 Recruiting senior experts and program coordinators within IGAD and ICPAC SI 3 Creating enabling conditions (provide the necessary logistical and technical facilities) for existing and incoming staff of IGAD and ICPAC to enhance their coordination and leadership roles.	a. The number of climate change technical staff in ICPAC increased. b. Resources for climate change increased through rigorous resource mobilization.	a. Number of climate change technical staff in ICPAC recruited. b. Amount of money allocated to climate change by Member States.	Long Term	IGAD ICPAC
Regional Centers of Excellence	1.5 Regional centers of excellence in different sectors are established and promoted.	SI 1 Creating appropriate forums/ mechanisms to share experiences and best practices at different levels (regional, national and international). SI 2 Developing common protocols for the training of adequate number of experts at different levels.	a. The number of forums for sharing experiences and best practices at different levels (regional, national and international increased.	a. Number of regional centers of excellence identified and promoted. b. Experience-sharing, collective-learning programs instituted. c. Level of awareness created at community, national and regional levels.	Long Term	IGAD
Internal and External Resources	1.6 Adequate internal and external resources are mobilized for the operationalization of Member States' policies and strategies on climate change adaptation and mitigation.	SI 1 Providing technical and expertise support to Member States to develop bankable projects. SI 2 Strengthening public-private partnership and enhance the contribution of the private sector to climate change adaptation, mitigation, and resilience. SI 3 Design Community Climate Fund Mechanism and invest time and expertise in training for effective and efficient management of community contributions and resources.	a. Regular and vigorous awareness creation and advocacy campaigns conducted. b. Bankable project proposals developed for Member States. c. Public-private partnerships on climate change established.	a. Number of regular awareness creation and advocacy campaigns conducted. b. Number of bankable project proposals developed for Member States. c. Number of public-private partnerships on climate change established.	Medium Term	IGAD ICPAC

Priority Area/Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicator of success	Timeline[1]	Responsibility
Adaptation and Mitigation Fund	1.7 IGAD Regional Climate Adaptation and Mitigation Fund established and operationalized.	SI 1 Developing appropriate modalities and protocols for the establishment of IGAD Climate Fund (ICF) to finance national/regional adaptation and mitigation efforts. SI 2 Establishing transparency and accountability systems in the management of resources from different partners. SI 3 Designing cost-recovery mechanisms and replenishment strategies.	a. Appropriate modalities and protocols for the establishment of IGAD Climate Fund (ICF) to finance national/regional adaptation and mitigation efforts developed. b. Cost-recovery mechanisms and replenishment strategies established.	a. Number of guidelines for access to the ICF by Member States or other national and regional actors developed. b. Protocols developed for the establishment of IGAD Climate Fund (ICF) to finance national/regional adaptation and mitigation efforts.	Long Term	IGAD ICPAC
Finance and Technology	1.8 Increased access to finance and technology.	SI 1 Promote climate sensitive public financing and investment. SI 2 Enhance access to climate change finance. SI 3 Payment for ecosystem services. SI 4 Facilitating carbon trading. SI 5 Facilitate private investment.	a. The existing financial services to climate change within IGAD expanded and diversified.	a. Enhanced finance flow into IGAD climate fund kitty. b. Increased use of technology.	Short To Medium Term	IGAD ICPAC

Priority Area/Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicator of success	Timeline[1]	Responsibility
Human, Financial and Technological Capacities	1.9 The human, financial and technological capacities of IGAD and its Member States enhanced and strengthened.	SI 1 Undertaking detailed national and regional capacity needs assessment to determine gaps and priority areas in terms of human resources (skills), technologies and resource requirements. SI 2 Developing strategies and plans of action for human resources development, technology transfer and resource mobilization. SI 3 Strengthening cooperation between Member States, RECs, the AU, and other institutions in the region and beyond to build national and regional capacities.	a. Regional capacity gaps and priority areas in terms of human resources (skills), technologies and resource requirements identified. b. Strategies and plans of action for human resources development, technology transfer and resource mobilization developed. c. Strengthen cooperation between Member States, RECs, the AU, and other institutions in the region.	a. Increased manpower in climate change field. b. High level use of technology in climate change arena.	Medium Term	IGAD ICPAC Member States

Table 3: Climate change strategies and actions are strengthened and mainstreamed in key economic sectors

Result Area 2: Climate change strategies and actions are strengthened and mainstreamed in key economic sectors						
The objective is to ensure that interventions developed and implemented within key economic sectors address climate change issues through activities of mitigation and adaptation						
Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Agriculture, Livestock and Fisheries	2.1.1 Sustainable crop, livestock and fisheries production and productivity enhanced, and food security.	SI 1 Strengthening climate resilient agriculture within the framework of IDDRSI and CAADP where these are applicable. SI 2 Strengthening the capacity of specialized Climate Prediction and SI 3 Application Centre and enhancing their contribution to the promotion of agriculture and natural resources management. SI4 Supporting IGAD Member States to include the Climate Change into their National Development Plans. SI 5 Enhancing the production and productivity of the livestock and fisheries sectors. SI 6 Improving market access to livestock. Strengthening research and development on food processing, feed and fodder production, animal and human health, and supply value chains.	a. Climate resilient agriculture within the framework of IDDRSI and CAADP strengthened. b. Capacity of ICPAC to implement climate change interventions for the region strengthened. c. Climate Change in IGAD Member States mainstreamed into National Development Plans.	a. Amount of budget from domestic resources allocated for the agricultural sectors in line with the AU decision. b. Per centage increase in crop and livestock production and productivity. c. Number of countries that have integrated agricultural development and adaptation and mitigation measures. d. Level of improvement in the capacity of IGAD Member States to predict and respond to vulnerability of agricultural production to climate change and variability. e. Amount/type of support by IGAD and other partners to Member States/ communities to strengthen their capacities.	Short to Medium Term	IGAD ICPAC Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Agriculture, Livestock and Fisheries	2.1.2 The GHG emissions from agricultural activities and deforestation (LULUCF) are significantly reduced.	SI 1 Designing and implementing forestry policies that curb deforestation and exports of timber with a view to protecting carbon sinks and promoting local climate stability. SI 2 Facilitating the reduction of emissions from deforestation. SI 3 Reducing emissions from forest degradation. Encouraging Member SI4 States to ensure conservation of forest carbon stocks and means of sustainable livelihoods. SI 5 Mobilizing support for the sustainable management of forests, afforestation, and reforestation. SI 6 Designing programs and plans of action aimed at reducing the GHG from agriculture and livestock production focusing on the balance between quality and quantity of herds/products. SI 7 Adopting sustainable agricultural and land management practices through climate smart agriculture.	a. Forestry policies that curb deforestation and exports of timber with a view to protecting carbon sinks and promoting local climate stability designed and implemented in IGAD Member States. b. Programmes that facilitate reduction of emissions designed. c. Programmes on sustainable management of forests, afforestation and reforestation designed. d. Programs and plans of action aimed at reducing the GHG from agriculture and livestock production designed	a. Percentage of decrease in GHG emissions from agricultural and related sources. b. Percentage of forests coverage. c. Conservation and reforestation measures taken, and changes observed. d. Number and type of interventions to support Member States and local communities in reducing GHG. e. Awareness creation forums organized and their effectiveness.	Medium to Long Term	Member States
Agriculture, Livestock and Fisheries	2.1.3 A sound balance between economic growth and natural resources maintained.	SI1 Promoting sustainable utilization of land and other natural resources. SI2 Scaling-up conservation measures being implemented by Member SI3 States. Encouraging community participation and enhance public private participation in the management and efficient utilization of natural resources. SI4 Instituting measures against illegal cutting and illicit trafficking of wood and other forest products.	a. Sustainable utilization of land and other natural resources promoted. b. Public private partnerships established in Member States and strengthened.	a. Sustainability benchmarks developed and implemented. b. Measures take to reduce the impact of illegal cutting and transporting forest products. c. Number of people benefit-ing from participation in community forestry. d. Percentage of rehabilita-tion of degraded areas.		IGAD ICPAC

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Agriculture, Livestock and Fisheries	2.1.4 Appropriate measures are taken to protect natural resources including water, wildlife, and biodiversity.	SI1 Integrating biodiversity management and protection into climate change adaptation and mitigation strategies and plans. SI2 Providing support for Member States to develop frameworks for implementation of climate resilient and biodiversity programs.Support SI3 Member States to conduct inventory on endangered species and biodiversity resources. SI4 Strengthening cooperation among Member States in the management, development and efficient utilization of transboundary water and related resources. SI5 Adoption of Agro-pastoral systems and rangelands management techniques to improve feed quality and mitigation actions with high co-benefits for food security, poverty reduction and enhanced resilience of livestock production systems. SI6 Facilitating cross-border cooperation and harmonization of common policies, laws, and strategies to protect natural resources.	a. Programmes integrating biodiversity management and protection into climate change adaptation and mitigation strategies and plans designed. b. Frameworks for implementation of climate resilient and biodiversity programs developed by Member States with support from IGAD. c. Inventory on endangered species and biodiversity resources established. d. Cross-border projects/ initiatives on the protection and promotion of transboundary resources/wildlife developed. e. Common policies, laws, and strategies to protect natural resources cross-border cooperation harmonized.	a. Number of measures taken to protect natural resources. b. Number of climate resilient biodiversity programs adopted and implemented. c. Level of support given to Member States by IGAD and its development partners. d. Number of cross-border projects/initiatives on the protection and promotion of transboundary resources/wildlife.	Short Term	IGAD Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Renewable Energy and Energy Efficiency	2.2.1 IGAD Member States will have increased their investment in the development of diverse energy sources.	SI1 Developing an IGAD regional roadmap for the development of renewable energy sources. SI2 Scaling-up investment in renewable energy sources such as solar, wind, geothermal, and urban waste. SI3 Promoting standards for energy efficiency in the region. SI4 Ensuring equitable access to available and potential energy among communities, and between Member States. SI5 Encourage private sector through incentives for them to invest in renewable energy.	a. An IGAD regional roadmap for the development of renewable energy sources developed. b. Investments in renewable energy sources such as solar, wind, geothermal, and urban waste increased. c. Agreements/MOUs on Inter-state and international cooperation for the development of transboundary energy resources signed.	a. Percentage of increase in resource allocation for investment in renewable energy sources. b. Volume of energy generated from renewable sources. c. Adoption and implementation of regional roadmap/framework. d. Percentage of rural and poor households having sustainable access to domestic energy.	Long Term	Member States
Renewable Energy and Energy Efficiency	2.2.2 Member States and IGAD will have built their human and technological capabilities to harness renewable energy source.	SI1 Developing common protocols for the training of adequate number of experts at different levels. SI2 Promoting the use of energy efficient technologies and sources in urban development. SI3 Identifying and promoting endogenous scientific skills, technologies, and innovation capacities to harness and deploy the available renewable energy options.	a. Common protocols for the training of experts in Member States at different levels developed. b. Indigenous scientific skills, technologies, and innovation capacities to harness and deploy the available renewable energy identified and promoted.	a. Number of common protocols developed for the training of experts in Member States at different levels. b. Number of indigenous scientific technologies, and innovation capacities developed to harness and deploy the available renewable energy.	Long-Term	IGAD ICPAC
	2.2.3 Regional centers of excellence in different sectors are established and promoted.	SI1 Establishing energy innovation centres and hubs.	a. Energy innovation centres and hubs established in Member States established.	a. Number of regional centres of excellence identified and promoted. b. Experience-sharing, collective-learning programs instituted.	Medium Term	IGAD ICPAC

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Renewable Energy and Energy Efficiency	2.2.3 Regional centers of excellence in different sectors are established and promoted.	SI2 Identifying comparative advantages of Member States in different energy sectors. SI3 Creating appropriate forums/ mechanisms to share experiences and best practices at different levels (regional, national, and international).	c. Forums/mechanisms to share experiences and best practices at regional, national, and international levels established and strengthened.	a. Number of regional centres of excellence identified and promoted. b. Experience-sharing, collective-learning programs instituted. c. Level of awareness created at community, national and regional levels.	Medium Term	IGAD ICPAC
Climate-Resilient Industries and Trade	2.3.4 IGAD and Member States will have identified climate-responsive manufacturing and production systems.	SI1 Facilitating the adoption and implementation of industrialization policies and legal frameworks for sustainable industrial development in the region. SI2 Encouraging the development of small-scale and medium enterprises with low carbon emissions. SI3 Facilitating skills and capacity building programs for the development climate-responsive industries.	a. Member States supported to adopt and implement industrialization policies and legal frameworks for sustainable industrial development in the region. b. Small and medium enterprises with low carbon emissions developed.	a. Number of climate-responsive industrial policies and strategies adopted. b. Number of small-scale and medium enterprises enabled to reduce emission. c. Level of climate-responsive skills and competencies created/ sustained. d. Number of programs/ initiatives to strengthen PPP. e. Changes in interconnectivity between agriculture and industries.	Long-Term	Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Climate-Resilient Industries and Trade	2.3.4 IGAD and Member States will have identified climate-responsive manufacturing and production systems.	SI4 Strengthening Public-Private Partnership (PPP) in the development of industries and the involvement of the private sector in clean and green production processes.	f. Public-Private Partnership (PPP) in the development of industries and the involvement of the Private Sector in clean and green production processes strengthened.		Long-Term	Member States
	2.3.5 Productivity and quality of industrial products are improved.	SI1 Providing frameworks for industrial products to meet international standards. SI2 Developing quality assurance mechanisms to improve competitiveness of African products in domestic and international markets, including a "climate change friendly" label. SI3 Establishing environmental impact assessment mechanisms for industries and manufacturing set-ups in the region, that include a mandatory GHG emission analysis as well as mitigation measures.	a. Quality assurance mechanisms to improve competitiveness of African products in domestic and international markets developed. b. GHG emission analysis and mitigation measures and mechanisms established. c. Indigenous technologies and local manufacturing processes developed.	a. Percentage of productivity and efficiency enhanced/ achieved. b. Number of quality assurance protocols/ guidelines developed and adopted. c. Number and types of indigenous technologies generated. d. Amount of money allocated for productivity and efficiency of industrial products.	Long-Term	IGAD Member Sates
	2.3.6. Regional Centers of excellence in manufacturing and innovation are identified and promoted.	SI1 Developing standards and mapping out regional centers of excellence in industry and manufacturing activities, focusing on friendly initiatives. SI2 Supporting technology generation and transfer programs	a. Regional centres of excellence identified. b. Best practices shared and adopted. c. Green and environment-friendly industrial zones and hubs at all levels.	a. Number of green and climate-responsive industrial zones established. b. Number of regional centres of excellence in industry identified within the region.	Long-Term	IGAD

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
	2.3.7. Regional harmonization, standards and quality assurance mechanisms are established.	SI1 Institutionalizing harmonization and coordination mechanisms for a climate-responsive industrial development in the region. SI2 Developing an IGAD regional Research and Development (R&D) program innovations and inventions. SI3 Strengthening collaboration between Member States to respond to industrial accidents or threats to the environment.	a. Coordination mechanisms for a climate-responsive industrial development in the region established. b. IGAD regional Research and Development (R&D) program for the promotion of climate-focused innovations and inventions developed.	a. Number of harmonization standards developed and implemented. b. Number of harmonization and coordination mechanisms established at national and regional levels. c. Percentage of changes observed in quality and standard products/ services.	Short Term	IGAD Member States
Water Resources for Irrigation and Domestic Consumption	2.4.1: Efficient utilization of water resources for sanitation and domestic use promoted.	SI1 Conducting regional assessment of the state of water resources to develop strategies for their conservation, rehabilitation and/or restoration. SI2 Promoting sustainable utilization of water and hydrological resources. SI3 Ensuring equitable access to water for use. SI4 Enhancing leadership on water security especially for communities in ASALs.	a. Strategies for conservation, rehabilitation and/or restoration of water resources developed. b. Sustainable utilization of water and hydrological resources promoted. c. Framework for equitable use of water resources established.	a. Number of assessments conducted/facilitated. b. Regional capacity to coordinate joint programs and projects. c. Percentage of rural/ pastoralist and poor households having access to adequate and clean water supply.		IGAD Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
	2.4.2: Sustainable irrigation projects in areas and countries frequently affected by drought, floods and food-insecurity enhanced.	SI1 Establish water harvesting techniques. SI2 Encouraging Member States to develop appropriate water use policies and strategies. SI13 Promoting inter-state and regional cooperation on the use of trans-boundary water resources. SI4 Encouraging the public-private partnership in the development of water resources. SI5 Establishing/strengthening regional institutions and fora to foster dialogue and experience sharing on efficient utilization of water and hydrological resources. SI6 Introduction of revolving micro-credit funds to support implementation of small water harvesting projects.	a. Regional institutions and fora to foster dialogue and experience sharing on efficient utilization of water and hydrological resources established and strengthened. b. Public-private partnership in the development of water resources established. c. Revolving micro-credit funds to support implementation of small water harvesting projects established.	a. Number of water-use policies/strategies developed and implemented. b. Number of inter-state cooperation programs/ projects. c. Volume of public-private investment in increasing access to water for both irrigation and domestic consumption. d. Number of regional fora organized/conducted on efficient utilization of hydrological resources.	Long Term	ICPAC Member States
Transport Sector	2.5.1 Low carbon and efficient transportation systems are promoted.	SI1 Encouraging investment in low-carbon transportation systems that utilize clean and renewable energy. SI2 Establishing climate standards in the design and architecture of transport systems (airports, roads, bridges, railways, ports, maritime transport). SI13 Promoting policies and strategies for climate sensitive transport system. SI4 Adopting regulations governing importation of vehicles and other means of transport to limit GHG. SI5 Developing smart cities best practices. SI6 Improving fuel efficiency of vehicles and reducing reliance on fossil fuel.	a. Investment in low-carbon transportation systems that utilize clean and renewable energy promoted. b. Climate standards in the design and architecture of transport systems (airports, roads, bridges, railways, ports, maritime transport). c. Smart cities best practices developed. d. Low carbon and efficient transportation systems promoted.	a. Volume of investment from internal and external sources. b. Emission standards developed and utilized. c. Policies and strategies to limit transport related emissions. d. National and regional capacity to measure climate impacts of the transport sectors. e. Projects to develop/adopt/ adapt/introduce energy efficient transport.	Medium Term	Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
	2.5.2: Promote the design and implementation of measures to reduce emissions in the transportation sector.	SI1 Conduct assessment studies for multimodal transport. SI2 Promote green public transport networks and multimodal transport. SI3 Increase access to public transport. SI4 Harmonize regulations on vehicle emissions.	a. Green public transport networks established in Member States cities. b. Regulations on vehicle emissions established.	a. Number of assessment studies for multimodal transport. b. Number of green public transport networks established in Member States cities. c. Number of Member States with regulations vehicle emissions.		
Forest Resources, Wetlands and Biodiversity	2.6.1: Adequate protection, rehabilitation and conservation of forest resources and biodiversity strengthened.	SI1 Mainstreaming climate change mitigation and natural resource management and sustainable utilization with clear and achievable targets to reduce GHG emissions. SI2 Developing regional and national capacities to scale-up the restoration of degraded ecosystems. SI3 Encouraging investment in reforestation and afforestation programs through enhanced public-private participation. SI4 Strengthening community involvement in the management and development natural resources. SI5 Enhancing the role of forests as carbon sinks and implementing different programs on carbon trading as part of the sustainable development efforts of countries in the region. SI6 Secure financial assistance from donor organizations and international sources to formulate regional programme for avoiding deforestation and promoting forest restoration.	a. Regional and national capacities to scale-up the restoration of degraded ecosystems developed. b. Public private partnerships established for reforestation and afforestation. c. linkages with regulated and voluntary carbon markets to promote and encourage forestry mitigation projects in the region established.	a. Level of emissions related to deforestation reduced. b. Regional and national capacities developed. c. Amount of investment in forests as carbon sinks. d. Percentage of changes in vegetation cover/ afforestation.	Medium Term	IGAD ICPAC Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
		SI7 Protecting, conserving, and managing wetlands and their ecosystems.			Medium Term	IGAD ICPAC Member States
	2.6.2: Endangered and near extinct species and resources preserved and conserved.	SI1 Identifying endangered species and resources and preventing their risks of extinction with a focus on restoring or multiplying these species. SI2 Promoting the cultivation and plantation of indigenous species of trees and plant resources adapted to the specific local environment future climate conditions. SI3 Facilitating the implementation of major international instruments for the promotion, protection, and management of fragile ecosystems.	a. Endangered species and resources and preventing their risks of extinction with a focus on restoring or multiplying these species identified. b. Plantation of indigenous species of trees and plant resources adapted to the specific local environment future climate condition promoted.	a. Number of plant and animal species restored. b. Number and varieties of indigenous plants re-introduced. c. Number of projects to reduce vulnerability to sea-level rise and flooding. d. Number of beneficiaries of such projects.	Long Term	IGAD ICPAC Member States
Marine and Coastal Areas	2.7.1: The resilience of coastal areas enhanced, and the protection of marine ecosystems strengthened.	SI1 Promoting a sustainable management of marine resources and coastal areas. SI2 Conducting comprehensive assessment of the status of coastal and marine resources in the region. SI3 Developing appropriate strategies for the rehabilitation, conservation, and restoration of deteriorated coastal lands and marine resources. SI4 Supporting countries in their efforts to avert the threats and damages of rising sea levels, excessive heatwaves, and shrinking resources that impact on the survival of endangered species.	a. Comprehensive assessment of the status of coastal and marine resources in the region conducted. b. Appropriate strategies for the rehabilitation, conservation, and restoration of deteriorated coastal lands and marine resources developed. c. The resilience of ecosystems and communities through the restoration of the productive bases of salinized lands in the region increased.	a. Local, national, and regional capacities to respond to climate impacts in coastal areas. b. Number of assessments made. c. Policies and measures adopted to increase resilience of ecosystems and communities. d. Dumping attempts prevented. e. Extent of salinized lands recovered.	Medium Term	ICPAC Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Climate Arid and Semi-Arid Lands (ASALs)	2.8.1: Sustainable and integrated development achieved in the ASAL regions.	SI1 Promoting indigenous knowledge/ technologies and innovations to enhance community resilience and adaptation to climate change. SI2 Introducing climate change literacy and awareness among people in the ASALs. SI3 Encouraging investment and innovations in water harvesting technologies and promotion of crop and livestock varieties resistant to moisture stress. SI4 Accelerating equitable access to social services and promoting safety-net programs to reduce vulnerability to climate change.	a. Indigenous knowledge/ technologies and innovations to enhance community resilience and adaptation to climate change promoted. b. Climate change literacy and awareness among people in the ASALs introduced. c. Programs to encourage community participation in peacebuilding and conflict resolution efforts established.	a. Number of assessments made. b. Local, national, and regional capacities created to predict and timely respond to climate related conflicts. c. Number of activities/ programs to encourage community participation in peacebuilding and conflict resolution efforts. d. Number of community/ religious leaders involved. e. Number of initiatives launched/implemented.	Medium Term	ICPAC Member States
Security and Displacemen	2. 9.1: The negative consequences of climate change on population reduced/ alleviated.	SI1 Conducting continuous assessment of the interaction between climate change-induced vulnerabilities and conflicts over scarce resources such as water, grazing land, etc. SI2 Strengthening the prediction, analysis, and application capacity of institutions on the social and economic consequences of environmental degradation and scarcity of useable resources within or between communities. SI3 Promoting indigenous distributive justice and conflict resolution mechanisms as well as enhancing communal response to climate change.	a. Reports of a continuous assessment of the interaction between climate change-induced vulnerabilities and conflicts over scarce resources such as water, grazing land. b. Prediction, analysis, and application capacity of institutions on the social and economic consequences of environmental degradation and scarcity of useable resources within or between communities strengthened.	a. Number of assessments of the interaction between climate change-induced vulnerabilities and conflicts over scarce resources such as water, grazing land conducted. b. Number of indigenous distributive justice and conflict resolution mechanisms and communal response to climate change promoted.	Short Term	ICPAC Member countries

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Security and Displacement	2. 9.1: The negative consequences of climate change on population reduced/ alleviated.	SI4 Encouraging the role of community/ religious leaders in preventing/ resolving conflicts and reducing the negative impacts of climate and weather variability. SI5 Strengthening the management and efficiency of humanitarian interventions resulting from climate related conflicts.	c. Local conflict resolution mechanisms and communal response to climate change promoted d. Adaptation strategies and programme interventions identified and promoted.		Short Term	ICPAC Member countries
	2.9.2 Promote harmonization of regional immigration policies institutionalism to reduce vulnerability to extreme climate events.	SI1 Develop regional guidelines for emergency evacuation plans resulting from climate change extreme events.	a. Regional guidelines for emergency evacuation plans resulting from climate change extreme events developed.	a. Number of regional guidelines for emergency evacuation plans resulting from climate change extreme events developed.		
	2.9.3: Strengthen traditional systems focused on practices for adaptation to climate change.	SI1 Promote and strengthen indigenous knowledge (IK) systems for climate change adaptation.	a. Indigenous knowledge (IK) systems for climate change adaptation established and strengthened.	a. Indigenous knowledge (IK) systems for climate change adaptation established.		
Gender and Youth	2.10.1: The disproportionate impact of climate change on women and girls alleviated/ reduced.	SI1 Mainstreaming gender equality and equity in the national and regional programs on climate change. SI2 Enhancing the participation of women and girls in adaptation and mitigation efforts. SI3 Building the life-skill capacity of women to respond to climate change-induced disasters and emergencies.	a. Strategies and policies and action plans on mainstreaming gender equality and equity in the national and regional programs on climate change developed.	a. Number of programs and initiatives on gender equality, equity, and women/girl's empowerment. b. Local, national, and regional capacities created in narrowing gender gaps. c. Number of women and girls in leadership position at different levels.	Short Term	Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Gender and Youth	2.10.1: The disproportionate impact of climate change on women and girls alleviated/ reduced.	SI4 Strengthening the leadership role of women in climate resilient and clean economic growth and transformation plans. SI5 Facilitating the implementation of international instruments on gender equality, equity, and women's empowerment such as Convention of the Elimination of all forms of Discrimination against Women (CEDAW) in the context of climate change.	c. Vulnerability of women and girls during man-made and natural disasters reduced d. Gender-sensitivity of adaptation and mitigation measures established.	d. Gender-sensitivity of adaptation and mitigation measures established. e. Number of women and girls participating in climate change initiatives increased.	Short Term	Member States
	2.10.2: The protection of young people from the negative impacts of climate change enhanced.	SI1 Developing youth-focused climate change adaptation and resilience programs. SI2 Building the skills and competencies of young boys and girls to develop self-confidence and engage in gainful employment activities. SI3 Scaling-up safety-net programs that can alleviate climate change driven social problems affecting young people's survival and development.	a. Youth-focused climate change adaptation and resilience programs developed. b. Skills and competencies of young boys and girls to develop self-confidence and engage in gainful employment activities built.	a. Number of programs/ initiatives focusing youth and climate change. b. Skills and capabilities built. c. Number of young people benefitting from youth-focused safety-net programs in the region.	Short Term	Member State ICPAC
	2.10.3: The constructive role of women and young people in tackling climate change strengthened/ elevated.	SI1 Developing strategies to involve the youth in the management and protection of natural resources and rehabilitation of degraded ecosystems. SI2 Encouraging women and youth innovation in climate change adaptation mitigation, and resilience efforts.	a. Strategies to involve the youth in the management and protection of natural resources and rehabilitation of degraded ecosystems developed.		Short Term	Member States

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
	2.10.3: The constructive role of women and young people in tackling climate change strengthened/ elevated.	SI3 Promoting entrepreneurship and self-employment among women, including ecotourism, non-timber forest products, and climate-responsive business activities. SI4 Promoting measures to prevent climate change affected young people from becoming innocent victims of human-trafficking, transnational organized crimes, and violent terrorism.	b. Gender and youth mainstreaming into climate change frameworks as well as sectoral policies and programs promoted. c. The role of women and youth in peacebuilding and conflict resolution promoted.	a. Number of programs/ initiatives focusing on women/youth and climate change. b. Skills and capabilities built. c. Number of young people benefitting from youth-focused (especially girls) safety-net programs in the region. Number of women in leadership position in projects related to climate change. d. Number of countries adopting/implementing regional and international instruments. e. Number of measures adopted/implemented.	Short Term	Member States
Human Health	2.11.1: The health, food, and nutrition security of people in the region, especially those in pastoralist communities of ASALs, improved.	SI1 Improving health infrastructures and services – mostly in ASAL and pastoralist communities – to respond to the negative impacts of climate change. SI2 Reducing the incidence and prevalence of epidemics and endemic diseases due to climate change. SI3 Promoting food, nutrition and hygiene literacy in different communities and settings. SI4 Scaling-up disaster-preparedness and preventive measures during sudden loss of food crops and livestock during erratic rains, dry-spells, and unexpected floods.	a. Health infrastructures and services – mostly in ASAL and pastoralist communities – to respond to the negative impacts of climate change improved. b. Incidence and prevalence of epidemics and endemic diseases due to climate change reduced. c. Food, nutrition and hygiene literacy in different communities and settings promoted.	a. Level of improvements in health infrastructures. b. Percentage of people who have access to health and social protection services/ facilities. c. Disaster preparedness and response measures taken d. Number of people protected from heatwaves and floods. e. Percentage of people having access to clean and adequate amount of water and sanitation services.		

Priority Area/ Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
		SI5 Promoting the concept and application of "one-health" among pastoralist and rural communities. SI6 Reducing the impact of extreme heatwaves, flood emergencies and sudden outbreak of epidemic	f. The impact of extreme heatwaves, flood emergencies and sudden outbreak of epidemic reduced. g. Disaster-preparedness and preventive measures during sudden loss of food crops and livestock during erratic rains, dry-spells and unexpected floods established.		Short term	ICPAC Member States

Table 4: Regional capacity in climate change related knowledge generation and dissemination strengthened

Result Area 3: Regional capacity in climate change related knowledge generation and dissemination strengthened						
The objective is to strengthen capacity in climate change knowledge generation and dissemination in the Member States						
Priority Area/Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Low Carbon Development economy	4.1.1: Ensure an energy secure and low-carbon development of the economy.	SI1 Study the future energy needs of Member States and find out the least cost energy supply path that satisfies future energy demand based on the desired growth path of the economy SI2 Raise energy efficiency in power production, transmission and distribution through appropriate investments SI3 Raise energy efficiency in agricultural and industrial processes through appropriate policies and investments SI4 Raise energy efficiency in domestic and commercial sectors through appropriate policies and investments	a. Improved energy efficiency in production and consumption of energy. b. High energy efficiency in domestic and commercial sectors c. Guiding policies on energy efficiency d. Enhanced efficiency in agricultural and industrial production e. High energy supply with low carbon emission	a. Number of assessment studies for energy sectors. b. Number of green energy sources established in Member States cities. c. Number of Member States with green energy sources d. Number of assessment studies on agricultural and industrial productions.	Medium to long-term	ICPAC Member States Ministry of Energy, Universities and Research Organizations
Renewable energy development	4.1.2: Maximizing the use of renewable energy sources to lower GHG emission and ensuring energy security.	SI1 Investments to scale up solar power programmes SI2 Research and investment to harness wind energy. SI3 Study of the techno-economic, social and institutional constraints to adoption of improved biomass stoves and other technologies	a. Enhanced solar power projects enhanced b. Research findings on probable areas for green energy published c. Improved biomass technology enhanced	a. Number of solar energy power established at country levels b. Number of wind power plants established at country levels c. Number of geothermal power plants established d. Number of modern biomass technologies established	Short-term to medium	ICPAC Member States Private entrepreneurs.

Priority Area/Sector	Expected Outcome	Strategic Interventions	Expected Outputs	Indicators of success	Timeline	Responsibility
Emissions from agricultural land	4.1.3.: Raise productivity of agricultural land and lower emissions of methane.	SI1 Support to research and on-farm trials of new water management technology on crop (including rice) land SI2 Support to agricultural extension service to popularize new water management techniques for rice production	a. Reduction in methane emissions from agricultural practices b. Increased water use efficiency c. Reduction in burning of diesel that produces carbon dioxide emissions	a. Cut in use of diesel driven irrigation implements b. Research findings on low emission implements	Medium to long-term	ICPAC Member States Ministry of Agriculture & Agricultural extension services
Management of urban waste	4.1.4.: Ensure livable cities while lowering GHG (methane) emissions	SI1 Design of urban waste dumps so that methane can be captured in all major urban areas SI2 Using CDM mechanism to set up small power plants by capturing the produced methane from waste dumps	a. Enhanced management of urban waste	a. Methane captured for subsequent use b. Waste incinerated to produce electricity c. Carbon market traded	Immediate	ICPAC Member States Ministry of Local Government Private entrepreneurs

5.3.1 IRCCS Implementation Plan

The IRCCS will serve for a period of 8 years (2023-2030). This is synchronized with the time for the implementation of the SDGs, the NDCs, the Paris Agreement, the Africa Climate Change Strategy and similar regional and international commitments of IGAD Member States.

The 2021 IPCC 6th Assessment report has reiterated the urgent need to take climate change actions and make deep cuts in GHG emissions to avoid irreversible climate catastrophes.

The IRCCS has identified many strategic interventions that require massive efforts in resources mobilization, institutional reforms, broader partnership, and active participation of all relevant stakeholders.

A phased approach is proposed for implementation of the IRCCS (Table 5). The 8 years implementation will have two phases: the readiness phase, the pilot implementation and scaling-up and scaling out phase. The key activities under each phase are presented below.

1. Readiness Phase:

a. Create enabling environment, including institutional arrangement.
b. Prepare proposals for readiness actions.
c. Awareness on the strategy at Member States level and to relevant stakeholders.
d. Refine and prioritize climate actions at different levels.
e. Prepare proposals for pilot phase implementation of top priority actions.

2. Pilot Implementation Phase:

a. Start with implementation of three prioritized projects at regional scale during the first two years: a capacity building project and two transboundary projects: resilience of livelihoods borderline communities (agriculture, livestock, and water) and mitigation project (energy efficiency, forestry, ecosystem).
b. Support Member States to start implementation of two projects during the first two years (nationally prioritized climate adaptation and mitigation actions).
c. Scale-up implementation of interventions to a wider geographic areas and target groups.
d. Initiate new programs on the remaining sectors, result areas and strategic interventions.

3. Cross-cutting Intervention Actions:

a. Monitoring, evaluation, and learning.
b. Conduct baseline assessment.
c. Report progress of intervention every quarter, i.e., narrative, and financial reports.
d. Conduct annual reviews and documentation of implementation practices, and lessons.
e. Facilitate exchange visits for south-south cooperation (best practices) and north-south cooperation (technology transfer).
f. Conduct mid-term and end-line review of implemented actions and generate ideas for scaling up.
g. Identify new problems/ challenges and recommend actions.

5.4 Resources Requirements for the Implementation of IRCCS

5.4.1 Estimated Resource Requirement

Adaptation and mitigation interventions are capital intensive. The shift from fossil fuels to clean and green energy sources would require considerable investment in all the IGAD Member States. Similarly, conservation of existing forests to reduce emissions and restoring and re-establishing forests and other natural ecosystems to sequester GHGs, while providing alternative and more attractive livelihoods for the community also requires considerable investment and transformation of development practices. Climate actions should be in all sectors, and priorities may vary from one Member State to another.

Most IGAD Member States, however, are at the lowest levels of industrialization, though some have embarked on investments for industrializing and investment to boost growth and accelerate development. Each country will need structural transformation to feed its growing population and to create employment opportunities for millions of youths, who constitute between 60 and 70 per cent of the population. Unemployed people also tend to migrate or can easily be manipulated in fueling conflicts. Both are dangerous to national, regional, and global peace and stability. It is, therefore, imperative to invest in areas that have the capacity both to facilitate development and promote adaptation and resilience to climate change. That is why the IRCCS identified the key priority areas and cross-cutting issues that are at the heart of the sustainable development agenda of the region.

The resources required for the implementation of IRCCS in regional and Member States are both technical and financial. First, this will be needed to create an enabling environment and platform for multi-sector and multi-stakeholder coordination and cooperation, and investment in prioritized actions. Most adaptation and mitigation actions are at national levels and Member States shall mobilize their resources on their own with the support of IGAD and other development partners. The budget presented in Table 6 is only an estimate of the fund to be mobilized at the regional level for coordination, capacity building and implementation of some models and cross-border climate actions.

For coordination of the regional climate change response, implementation of selected cross-border programs and provision of technical support to Member States, reasonable financial investment is required. About US$10 billion in total investment is required, of which about 90 per cent would be external funding from development partners, while the remaining 10 per cent is expected to be Member States' contribution.

Type	2021 (Million USD)	Readiness- 2022 (Million USD)	2023 to 2031 (Million USD)	Total
Adaptation Actions	-	5	2,400	2,405
Mitigation actions	-	5	1,600	1,605
Coordination	0.1	1	8,000	8001.1
Member States' contribution (10%)	0.01	1.1	400.8	401.91
External Funding (10%)	0.09	9.9	3,607.2	3,617.19
Total per year	**0.20**	**22**	**16,013**	**16,030.2**

Table 5: Estimates of investment required at regional level for IRCCS

5.4.2 Potential Sources

IGAD and its Member States are working with many development partners and donors. The development partners include multilateral donors, multilateral development banks, bilateral donors, private companies, and foundations. Table 7 presents potential sources of funding for the IRCCS.

No.	Donor Category	Name of donors and partners
	Multilateral	Adaptation Fund (AF), Joint Implementation (JI), CDM, Green Climate Fund (GCF), Global Environmental Facility (GEF), Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), UNREDD, UNDP, UNEP. FAO, Climate Investment Funds (CIF) and Global Green Growth Institute (GGGI)
	Multilateral Banks	African Development Bank (AfDB), World Bank (WB)
	Bilateral	Germany, Sweden, Canada, United Kingdom, France, Japan, European Union, United States, Norway, Finland, Denmark, Netherlands, South Korea, Ireland.
	Private companies and Foundations	Private Banks, Oil Companies- on renewable energy, Gates Foundation, The David and Lucile Packard Foundation, William and Flora Hewlett Foundation, The Rockefeller Foundation, Bezos Earth Fund, Volkswagen Foundation, SAfA (Foundations Alliance for Africa), ClimateWorks Foundation, Doris Duke Charitable Foundation, Ford Foundation, Gordon and Betty Moore Foundation, MacArthur Foundation and IKEA Foundation.
	NGOs	CARE, Oxfam, WWF and IUCN

Table 6: Potential technical and resource partners

5.5 IRCCS Resource Mobilization Plan

The interventions identified in the IRCCS are broad, and the estimated required resources are also very high. Resource mobilization requires a well-organized and coordinated effort. As this is a new initiative at IGAD, it requires building internal capacity and that of the Member States. This involves creating enabling environment, building trust and partnership with the existing partners, and reaching out for more new partners.

For this, a phased approach is proposed. Three phases are envisaged. The 1st phase is short and mainly planning, where preparatory works and proposal developments of top priority interventions are developed. At this phase, IGAD and its Member States shall mainly engage, negotiate with, and attract readiness resources from existing partners. Besides, IGAD should strengthen its partnership with UN agencies accredited to multilateral agencies that fund climate actions like Adaptation Fund, GCF and GEF to get readiness funds, and start its accreditation process for these funds.

The second is the implementation phase, which includes implementation of the projects that have got finance from existing partners, reporting of progress to resource partners and mobilization of project funds from existing and resource partners. It is the phase in which lessons are continuously reviewed, and resource mobilization activities done at full scale. The timeline of the different activities in each phase is depicted in Table 8.

No.	Actions/ Activities	Phase 1: Readiness	Phase 2: Implementation: reviews, reporting documentation of lessons and continuous resources mobilization															
		2022	2023		2024		2025		2026		2027		2028		2029		2030	
1	Institutionalize resources mobilization																	
2	Review lessons learned and refine action plans																	
3	Targeting resource partners – for specific interventions, including GCF & GEF accredited partners like UNDP																	
4	Conduct accreditation process for direct access of multilateral funds like GCF, GEF & AF.																	
5	Mobilize readiness fund																	
6	Situational analysis of external resource environment																	
7	Resources requirement of projects/ program																	
8	Sensitize and mobilize partners on action plan																	
9	Prepare proposals/ program documents for action																	
10	Present to potential partners with matching interest																	
11	Converge pledges from existing donors/ partners																	
12	Secure pledges from 'returning' traditional partners																	
13	Build capacity of ICPAC and Member States for stronger engagement and more pro-active outreach																	
14	Get support of existing donors for outreach to new donors/ partners																	
15	Leverage global platform like UN conventions COP meetings to mobilize new donors																	
16	Consult partners for input to action plan																	
17	Provide inputs to partners' strategies for cooperation with IGAD and Member States																	
18	Explore and develop partnership on innovative mechanisms to leverage new sources of fund for climate action																	
19	Manage and regularly report																	

Table 7: Resource Mobilization Plan

No.	Actions/ Activities	Phase 1: Readiness	Phase 2: Implementation: reviews, reporting documentation of lessons and continuous resources mobilization															
		2022	2023		2024		2025		2026		2027		2028		2029		2030	
20	Communicate results to resource partners																	
21	Review and document best practices																	
22	Refocus targets and intervention actions and scale up based on lessons and emerging challenges																	
23	Develop replenishment strategy, and new investment strategy																	
24	Develop donor/ partner specific strategy/ investment case																	
25	Mobilize new partners																	
26	Make presentations at higher political level and global platform to secure replenishment and investment on new cases																	
27	Visit donor capitals or head quarter offices to present results, impacts, and resource needs for scale up																	

5.6 IRCCS Monitoring and Evaluation Plan

The M&E framework must be built into the design of interventions that shall be developed to implement the IRCCS. Regional and national targets that are prioritized and proposed for implementation shall be subject to M&E to assess progress towards achievement.

The baseline of the target area and best practices of similar interventions in Africa can be used as benchmarks. Regional and national entities will champion multi-country and cross-border projects and initiatives in close collaboration with other development partners.

The M&E Framework should also be jointly developed with the participation of all stakeholders and partners for ownership, better implementation traction, synergy, and value for money. Baselines must be established in a participatory manner during the design of interventions to set realistic targets that can be readily assessed and measured.

The purpose of the M&E Framework is to ensure the successful implementation of activities and lead to the achievement of results of the strategy. The climate change landscape is changing all the time as results of research and studies are released, or new evidence comes to light. Hence, the IRCCS should be a living document that can be updated as necessary to take into account any changes in the implementation environment.

The overall responsibility for the implementation and reporting on the progress of the IRCCS lies with the ICPAC, which is the coordinating institute at the IGAD level. Reports will be received from other specialized units of IGAD, Member States and other development partners that are implementing climate actions and contributing to the strategy. Independent consultants may be recruited to carry out external monitoring.

Evaluations are preferably undertaken by external experts for independent and impartial assessment. Midterm reviews of programs shall be conducted to generate lessons that can be used to improve performance, building on best practices, and designing scale-up programs. The terminal evaluation is recommended for impact assessment to generate lessons of best practices that can be used for scale-up and development of new programs or projects.

To this end, ICPAC and partner implementing entities shall develop an appropriate monitoring and evaluation framework. Different types of indicators shall be developed for the various key priority areas and strategic interventions. Also, an indicative monitoring and evaluation matrix will be developed.

ANNEXES

ANNEX 1. REFERENCES

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ANNEX 2. DEFINITION OF TERMS

- **Adaptation:** adjustment in human and natural systems to an environment that has been transformed or is being transformed by climate change events; such adjustment may be preventive or reactive, private or public, autonomous or planned.

- **Adverse effects of climate change:** changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.

- **Biennial Update Report:** BURs provide an update of the information presented in NCs, in particular on national GHG inventories, mitigation actions, constraints and gaps, including support needed and received. The first BUR should be submitted by December 2014, or consistent with the Party's capabilities or level of support, and every two years thereafter as a summary of their NC or a stand-alone report.

- **Clean Development Mechanism:** is the instrument contemplated in the Kyoto Protocol (Art. 12), by which projects that mitigate greenhouse gas emissions undertaken in developing countries (non-Annex I of the Protocol), and considered by the host country to be environmentally sustainable, result in the creation of credits for Certified Emission Reduction units (CERs), which the developed countries can use to meet their targets within the scope of the international agreement mentioned.

- **Climate:** situation of a climate system, including the statistical description, taking into account averages and variations in temperature, rainfall, winds and other relevant meteorological factors in a given period.

- **Climate change:** a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

- **Climate Variability:** variations in the mean state and other statistics (such as standard deviations, the occurrence of extremes, etc.) of the climate on all temporal and spatial scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability).

- **Greenhouse gases:** "Greenhouse gases" means those gaseous constituents of the atmosphere, both natural and anthropogenic that absorb and re-emit infrared radiation.

- **Global Warming:** intensifying greenhouse effect resulting from anthropogenic actions, where the consequence is an increase in the concentration of greenhouse gases, aerosols or their predecessors in the atmosphere, which absorb part of the infrared radiation emitted by the Earth's surface, thus increasing the average temperature on the planet and causing adverse climatic phenomena.

- **Intended Nationally Determined Contributions (INDCs):** Further to the negotiations under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), the Conference of the Parties (COP), by its decision 1/CP.19, invited all Parties to initiate or intensify domestic preparations for their INDCs towards achieving the objective of the Convention as set out in its Article 2, without prejudice to the legal nature of the contributions, in the context of adopting a protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties. The COP, by its decisions 1/CP.19 and 1/CP.20, invited all Parties to communicate to the secretariat their INDCs well in advance of COP 21 (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates the clarity, transparency and understanding of the INDC. In decision 1/CP.20 the COP also invited all Parties to consider communicating their undertakings in adaptation planning or consider including an adaptation component in their intended nationally determined contributions. In decision 1/CP.20 it is further specified that in order to facilitate clarity, transparency and understanding, the information to be provided by Parties communicating their intended nationally determined contributions may include, as appropriate, inter alia, quantifiable information on the reference point (including, as appropriate, a base year), time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals, and how the Party considers that its intended nationally determined contribution is fair and ambitious, in light of its national circumstances, and how it contributes towards achieving the objective of the Convention as set out in its Article 2.

- **Mitigation**: the reduction of the causes of a given impact, allied to the precautions and attitudes for reducing the undesirable risk to the minimum possible.

- **Nationally Determined Contributions (NDC):** is a climate action plan to cut emissions and adapt to climate impacts. Each Party to the Paris Agreement is required to establish an NDC and update it every five years.

- **National Communications:** In accordance with Article 4, paragraph 1 and Article 12, paragraph 1, each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information:

  a. A national inventory of anthropogenic emissions by sources and removals by sinks of all

greenhouse gases not controlled by the Montreal Protocol, to the extent its capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties.

b. A general description of steps taken or envisaged by the Party to implement the Convention.
c. Any other information the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends.

- **Nationally Appropriate Mitigation Action:** NAMAs refer to any action that reduces emissions in developing countries and is prepared under the umbrella of a national governmental initiative. They can be policies directed at transformational change within an economic sector, or actions across sectors for a broader national focus. NAMAs are supported and enabled by technology, financing, and capacity-building and are aimed at achieving a reduction in emissions relative to 'business as usual' emissions in 2020. NAMAs are defined in two contexts:

  - At the National Level as a formal submission by Parties declaring intent to mitigate greenhouse gas emissions in a manner commensurate with their capacity and in line with their national development goals;
  - At the Individual Action Level as detailed actions or groups of actions designed to help a country meet their mitigation objectives within the context of national development goals.

- **National Adaptation Programmes of Action (NAPAs):** In implementing Article 4.9 of the Convention, the COP, in 2001, established an LDC work programme that included NAPAs, to support LDCs to address the challenge of climate change given their particular vulnerability. The COP also established a Least Developed Countries Fund (LDCF) to fund the preparation and implementation of NAPAs and an LDC Expert Group to provide technical support and advice to the least developed countries (LDCs). NAPAs provide a process for the LDCs to identify priority activities that respond to their urgent and immediate needs with regard to adaptation to climate change–those needs for which further delay could increase vulnerability or lead to increased costs at a later stage. The rationale for NAPAs rests on the limited ability of the LDCs to adapt to the adverse effects of climate change. In the NAPA process, prominence is given to community-level input as an important source of information, recognizing that grassroots communities are the main stakeholders.

- **Resilience:** the ability of a system to adapt to climate change, whether by taking advantage of the opportunities or by dealing with their consequences; the analysis of adaptation identifies and evaluates the different options, benefits and costs of the measures.

- **Sink:** any process, activity or mechanism that removes greenhouse gases, aerosols or precursors of greenhouse gases from the atmosphere.

- **Sustainable Development:** development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

- **Vulnerability:** the degree of susceptibility or inability to protect oneself from the negative effects of climate change, a function of the type, magnitude and frequency of the climate events to which a system is exposed, in addition to its sensitivity to and capacity for adaptation.

PEACE, PROSPERITY AND
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