



**SUDAN**



# **COUNTRY PROGRAMMING PAPER**

## **Consolidating the Path to Resilience and Sustainability**

2019 - 2024



**KHARTOUM, JULY 2019**

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# REPUBLIC OF THE SUDAN

## COUNTRY PROGRAMMING PAPER

### TO BUILD RESILIENCE AND END DROUGHT EMERGENCIES IN THE HORN OF AFRICA

Consolidating the Path to Resilience and Sustainability

2019 - 2024

Khartoum, July 2019


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# ACRONYMS

<b>AfDB</b>	African Development Bank
<b>ARAP</b>	Agricultural Revival Action Plan
<b>AREP</b>	Agricultural Revival Executive Programme
<b>ASAL</b>	Arid and Semi-Arid Land
<b>ASARECA</b>	Agricultural Research in Eastern and Central Africa
<b>AUC</b>	African Union Commission
<b>CAADP</b>	Comprehensive African Agricultural Development Programme
<b>CAHWs</b>	Community Animal Health Workers
<b>CAP</b>	Common Action Plan
<b>CC</b>	Climate Change
<b>CLDWs</b>	Community Livestock Development Workers
<b>CBS</b>	Central Bureau of Statistics
<b>CPF</b>	Country Programme Framework
<b>DECARP</b>	Desert Encroachment and Rehabilitation Programme
<b>DPAs</b>	Drought-Prone Areas
<b>DRM</b>	Disaster Risk Management
<b>DRR</b>	Disaster Risk Reduction
<b>EDE</b>	Ending Drought Emergencies
<b>ECCAS</b>	Economic Community of Central African States
<b>ECOWAS</b>	Economic Community of West African States
<b>EWS</b>	Early Warning Systems
<b>FAO</b>	Food and Agriculture Organisation
<b>FVP</b>	First Vice President
<b>GAANR</b>	General Administration of Agricultural Natural Resources
<b>HCENR</b>	Higher Council for Environment and Natural Resources
<b>HFA</b>	Hyogo Framework for Action
<b>HoA</b>	Horn of Africa
<b>IBAR</b>	Interafrican Bureau for Animal Resources
<b>ICPAC</b>	IGAD Climate Prediction and Applications Centre
<b>IDPs</b>	Internally Displaced People
<b>IGAD</b>	Inter Governmental Authority on Development
<b>ILRI</b>	International Livestock Research Institute
<b>JAM</b>	Joint Assessment Mission
<b>MDGs</b>	Millennium Development Goals
<b>MDTF</b>	Multi-Donors Trust Fund
<b>NAIP</b>	National Agricultural Investment Plan



<b>NBHS</b>	National Baseline Health Survey
<b>NEPAD</b>	New Partnership for African Development
<b>NCS</b>	National Comprehensive Strategy
<b>NGOs</b>	Non-Governmental Organisations
<b>PPP</b>	Public Private Partnership
<b>PRSP</b>	Poverty Reduction Strategy Paper
<b>RECs</b>	Regional Economic Communities
<b>SDGs</b>	Sustainable Development Goals
<b>ToRs</b>	Terms of Reference
<b>UNDAF</b>	United Nations Development Assistance Framework
<b>UNOCHA</b>	United Nations Office of the Coordination of Humanitarian Affairs
<b>UNEP</b>	United Nations Environment Program
<b>UNDP</b>	United Nations Development Program
<b>UNHCR</b>	United Nations High Commission for Refugees
<b>WMO</b>	World Meteorological Organization



# PREFACE

The country programming paper (CPP) of Sudan aims to answer essential questions relevant to policy makers at national and regional levels. The country program paper of Sudan CPP was endorsed in 2013 to enter phase one of the IDDRSI. Its implementation indicated the need for revision and improvements because of the appearing issues during phase (1). Accordingly, the CPP has been subjected to revision in phase (2).

The CPP is structured to answer essential questions relevant to policy makers at national and regional levels. In particular, what can be done to reduce or end drought emergencies? That would mean to realize the drastic effect of drought to member states and the communities and extract the policy actions that can overcome the constraints and challenges confronting implementation.

A description of eight priority investment areas provides options for the various societal sectors to contribute to drought disaster resilience sustainably. These options form the core of this paper.

The paper combines information from technical studies, strategies, practices, success stories and exercises to come with measures for stabilization of food security, livelihoods and trade that facilitate ending of emergencies. Policies and measures to achieve drought resilience action both at the national, regional and sub-regional levels have the role of linking relevant sectors and institutions to the implementation process.

The link between drought resilience, adaptive measures and sustainable development has been elaborated through the paper.

To ensure follow up of the implementation process, the use of monitoring and evaluation procedure is taken as important and the use of relevant indicators is focused upon in order to facilitate assessment of the progress and reach confidence towards implementation of the program. Through this process, the CPP which was endorsed in 2013 has been updated in July 2019.

# ACKNOWLEDGEMENTS

Sudan Country Programme Paper (CPP) review has been a product of an appreciated effort from a large number of stakeholders, individuals and experts. Despite the fact that this effort has been collectively contributed to, by all who are concerned, yet certain institutions and stakeholders deserve special appreciation for their unique and valuable effort. In this respect acknowledgement goes to the ministers who are members of IDDRSI Platform at federal and state levels for their valuable contribution which added much to the update and ownership of this document.

Thanks are also extended to Undersecretary of the Ministry of Agriculture and forests for his genuine support and encouragement during different stages of review process. Special appreciation is extended to the technical group of experts, academics, civil societies and other partners without whom this work would have not been achieved. The support provided by IGAD shall never be forgotten because it makes the production of this document easy throughout the course of this CPP review in different workshops and meetings.



# EXECUTIVE SUMMARY

The Republic of the Sudan is one of the member states in IGAD region, characterized by its location with long borders and large portion as dry land. It has rich experience in environment management. Sudan has great chance to build up experiences for enriching drought resilience, including successful lessons for enhancing the resilience of rural and urban communities to drought events and shocks. The resilience enhancement and management achievement is based on the support and encouragement of production diversification and use of rotation to improve livelihoods at household level.

Lessons learnt from pilot development projects revealed the importance of boosting access to production inputs and promoting product outlets, which are part of the marketing process in those remote areas. In this regard, the government of Sudan has formulated the different layers for engaging with the international community's windows of assistance for long term investments to strengthen the resilience capacities for land users including pastoralists and smallholder food producers in the traditional rain-fed sector of the country. Outcomes included also rehabilitation and development of basic infrastructures and reduction of conflicts and disputes attributed to competition over natural resources and access issues.

Sudan entered the first phase of the IDDRSI by endorsing the CPP in 2012, the objective of which is, to delineate the climate change implications, like drought and disaster facing the livelihood and food security at national and in IGAD region. It is meant to build drought resilience and end drought emergencies. The implementation of the CPP during phase I reflected the need for revision and improvement through streamlining the past experience and new vision for the future. Land use practices and drought resilience will be strengthened by policies, strategies and practical experience and alignment with the environment conventions, agreements, protocols, SDGs and African strategy.

The mechanism followed to prepare the CPP involved almost all stakeholders at national and regional levels. The CPP is structured in chapters and sections that start with the introduction (chapter one) and ends at the monitoring and evaluation part. From chapter (one) to chapter (10) the CPP presents intensive background context that reflect the past and present situation of the Sudan and the future vision with respect to environmental conditions and associated policies and legal framework. The introduction shows the country and regional context containing initiatives, agreements, trends environmental components and interventions, indicating the rationale for the country programme with associated opportunities and constraints. These aspects are then linked with Sudan economic framework on which the programme is build. Review of opportunities and challenges for Economic Reform Programme in relation to internal and external trade appear to be significant.

A list of strategies and papers support the review of the economic context. The Interim Poverty Reduction Strategy Paper (IPRSP), the 3-Year Reform Economic Program (2011-2013) and the 5-Year Development Plan (2012-2016) are examples. Based on these background issues, the humanitarian interventions are linked with the government to ensure production of food sources in order to enable domestic multiplication for crop cultivation, and to establish sustainable livestock extension services and setting up an operational mechanism for development of resources.

The background review supports the preparation of priority intervention areas (PIAs) to support economic reforms, build resilience, reduce disaster risks, prevent conflict and enhance knowledge. Eight PIAs are included in the CPP text indicating their objectives and usefulness. These include: PIA1. Natural resources and environment management; PIA2. Market access, trade and financial services; PIA3. Enhanced production and livelihood diversification; PIA4. Disaster risk management; PIA5. Research and knowledge management; PIA6. Peace building, conflict resolution and resolution; PIA7.Coordination, institutional strengthening and partnerships; PIA8. Human Capital, Gender and Social Development.

Investments that are nationally contributed and have regional nature are highlighted upon. That is because Sudan as a member country in the IGAD region is affected by and interacts with the different issues and factors that influence the socio-economic and environmental issues including agricultural sector development and food security situation. Therefore, with the help and participation of the development partners in the region, technical and financial support is provided and harmonized with Sudan technical and financial needs.

That is also reflected in the mechanisms to deal with trans-boundary issues through technical collaboration and regional offices mandated to coordinate handling such issues of regional nature. Sudan is developing cross-border projects with the support of partners to catch with IGAD other clusters. The map indicates the boundaries, states and rivers.



Figure 1: Political map of Sudan

# 1. INTRODUCTION

Sudan is a dry land country that witnessed various incidences of repeated droughts created as a result of changing climate. Sudan is a member of IGAD contained in the Horn of Africa (HoA) and affected similarly by environmental conditions which affect IGAD. The drought of 2010 and 2011 happened to be the most severe that affected all sectors and people and urgently called for a renewed commitment to end drought emergencies and create sustainable food security in the sub-region. Climate change exacerbated the situation of drought impacts causing water scarcity, natural resources degradation and human life loss. It is recognized that Sudan developed a multiplicity of initiatives aimed at confronting the changing environmental conditions and food insecurity situation and proved to be a good background for other countries in the HoA including climate change and droughts initiatives. Sudan worked with other IGAD Member States at the highest level to look into solutions for the drought. Consequently, an analysis was conducted on key priorities covered in major policy documents and initiatives at national and regional levels, including the Comprehensive Africa Agriculture Development Programme (CAADP), Agriculture Strategy, Food Security, Nutrition policy, NAPA. The analysis also includes Sudan past experience on drought confrontation programs during the second half of the 20<sup>th</sup> century.

The analysis of national priorities in the Agriculture Sector as expressed in government documents reveals considerable information on climate change and drought impacts. However, to place country priorities in production and productivity perspective perception, it is important to view the situation within the drought risks perspective. This brings the importance of harmonization of policies at national and sub-regional levels. Improved coordination of development interventions to ensure their effectiveness and to build institutional capacity for efficient service delivery and ensure sustainability also appears as priorities in the government documents. To facilitate the pursuance of the foregoing priorities, national and sub-regional coordination of agricultural sectors development policies are considered critical for implementation and success. The challenge that the renewed commitment of Sudan to the HoA, is how to adjust the many policies, strategies, and programs at the country and sub-regional levels towards effective implementation of the IDDRSI that was produced by the Summit. As a result, Sudan as a member state worked with IGAD to launch the “Drought Disaster Resilience and Sustainability Initiative IDDRSI”, which is aimed at “Ending Drought Emergencies (EDE)” through “improving livelihoods and enhancing resilience of drought-prone communities in the Horn of Africa (HoA)”.

The initiative (The IDDRSI) led to the preparation of a Common Programming Framework at country (CPP) and regional (RPP) levels. Accordingly, IGAD, its Members States, and partners have launched a Regional Platform for Drought Resilience and Sustainability (the “Platform”) in order to build inclusiveness and synergies, and to provide for effective collective action. The platform aims at strengthening institutional arrangement at regional and member state levels in order to ensure coordination and harmonization. All concepts emerged in preparation of a country programme paper to accommodate planning and conduct of programmes at country level (the CPP) and at regional level (the RPP).

The CPP contents, component, objectives and PIAs show the comprehensiveness of the CPP and IDDRSI on which the programme is built. Its comprehensiveness covers almost all conditions and requirements for the development of the dry lands and building resilience in Sudan. With recurrent droughts incidences and severity of some of them, Sudan lost huge amounts of resources including human, livestock and components of valuable ecosystems. Sudanese government, institutions and people became aware of the importance of the IDDRSI and the CPP. That is clear

to thirteen ministries, thirty four institutions, organizations, civil societies and academic ones that constitute the National Platform the major steering force for the IDDRSI and the CPP. Presently, there is appreciable number of projects under processing at national and state levels and will be accommodated within the eight PIAs and all target issues including adaptation, mitigation, Climate risk and drought resilience against sever environmental hazards. Others are covering disaster risk reduction, conflict and recovery approaches within various states. The Sudanese government perceived the unique nature of IDDRSI and the CPP and their capacity for development and contribution to end drought emergencies as long as their programme is funded and managed successfully and sustainably. The Sudan with other member states contributed with IGAD secretariat and partners to articulate and harmonize the CPPs into a regional RPP in order to have strong links in thinking nationally and act regionally to enhance the CPPs towards their regional sense. That is well stated in the importance of coordination.

The increase of productive capacities is one of the means to achieve improved livelihoods and build greater resilience. The improvement of livelihoods and the development of economic sectors in the drought prone areas of the country are directly associated with access to and availability of sufficient, good quality, and sustainable water sources in those areas through soil efficiency improvement. The development of the water sector, associated and supported by clear land tenure and land use plans policies and sustainable natural resources management, will have a positive impact on people's settlement, food security, as well as open more opportunities for the development of value addition processes, income generating activities, and markets. The livestock sector constitutes to the rural livelihood for food production, credit, savings, and nutrition for vulnerable households, and therefore, should receive high priority for water interventions. This should be accompanied by human development interventions, and supplemented by provision and access to grazing areas and palatable feeds, disease control, veterinary services, and a network of rural infrastructures such as feeder roads, communication, and markets.

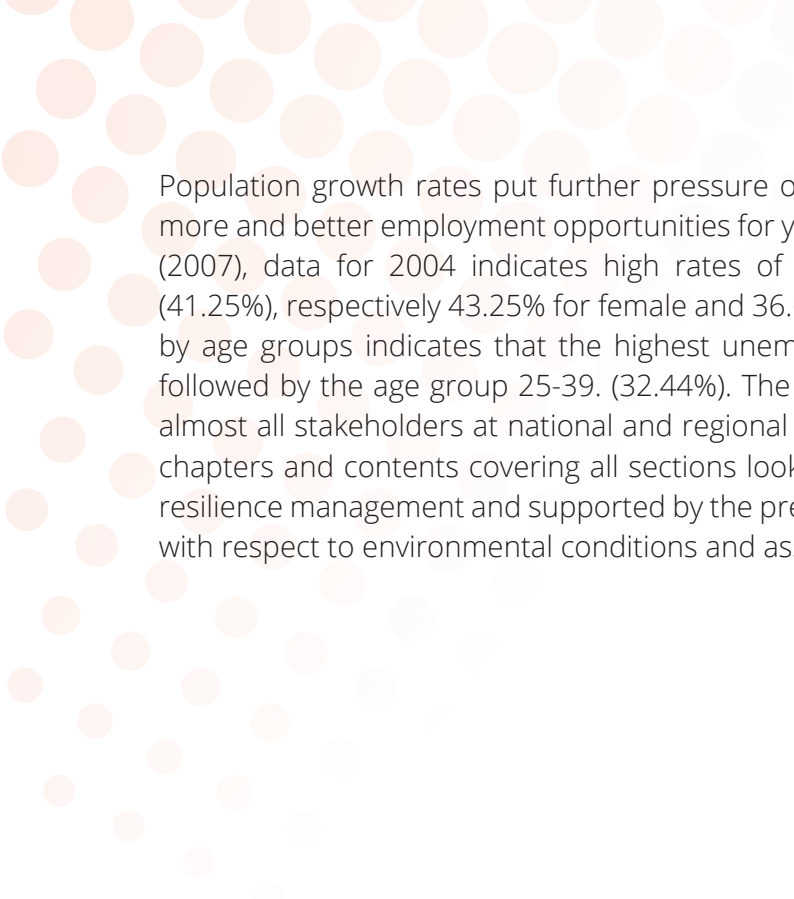
Issues of development and drought resilience building find good support from research institutions and knowledge sharing approaches. Research findings such as drought resilient grains' varieties, high yielding varieties, short ripening varieties are examples of such support and engagement. Transfer of technology such as water harvesting techniques has their importance in food security and livelihoods support. These issues indicate the strong link between the stated priority investment areas in the text.

### **Natural, Human, Social and Economic Features of the ASALs**

The recurrent droughts in rural areas of the country have a direct impact on the productivity and production of rain-fed areas which affects people's livelihood and survival. Drought causes deterioration of livestock productivity as a result of poor pasture and water, leading to movement of herds to longer distances in search of pasture and water. The market supply is also affected. All these factors fed the continuation of the poverty cycle: malnutrition and food insecurity increases, indigenous social safety nets are eroded, while coping strategies, along with the general resilience to shock weakened. On the other hand, urban migrants competing with urban dweller for income opportunities and basic services of health, education and water, which has resulted in more financial resources directed to urban settings. This is reflected in the National Baseline Health Survey (NBHS)<sup>1</sup> of 2010, which shows that about 46.5 percent of the households in Sudan live below the poverty line, which represents approximately 14.4 million people, comprised of 74% of the rural households and 26% of the urban population.

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<sup>1</sup> Sudan Central Bureau of Statistics, 2010.



Population growth rates put further pressure on the demand for jobs and the need to create more and better employment opportunities for youth. According to the Arab Labour Organization (2007), data for 2004 indicates high rates of youth unemployment among Sudanese youth (41.25%), respectively 43.25% for female and 36.64% for male. The distribution of unemployment by age groups indicates that the highest unemployment is for the age group 15-24 (32.80%), followed by the age group 25-39. (32.44%). The mechanism followed to refine the CPP involved almost all stakeholders at national and regional levels. Improvement covered the CPP structure, chapters and contents covering all sections looking back to the previous experience in drought resilience management and supported by the present situation of the Sudan and the future vision with respect to environmental conditions and associated policies and legal framework.



## 2. REGIONAL, NATIONAL AND LOCAL CONTEXTS

### 2.1 Regional Contexts

The most severe drought cycle that hit the Horn of Africa was in the years 2010 – 2012 that initiated the call for effective solution in the region. A Summit meeting concluded to the declaration of the Drought Disaster Resilience and Sustainability Initiative (IDDRSI) put under the management of the IGAD secretariat. A regional Platform became in place with membership including the IGAD Ex Sec, members from IGAD, member states and development partners. A mechanism has been adopted which manage the IDDRSI implementation with regional and national involvement. At the regional level, the IGAD created the PCU to coordinate IDDRSI function and management through the Steering Committee. Sudan is a member.

### 2.2 Country Contexts

Sudan, with an area of 188 million hectares (1.88 million square kilometres), is endowed with 61 million hectares of arable land, 14 million hectares of natural pasture and 21 million hectares of forests.

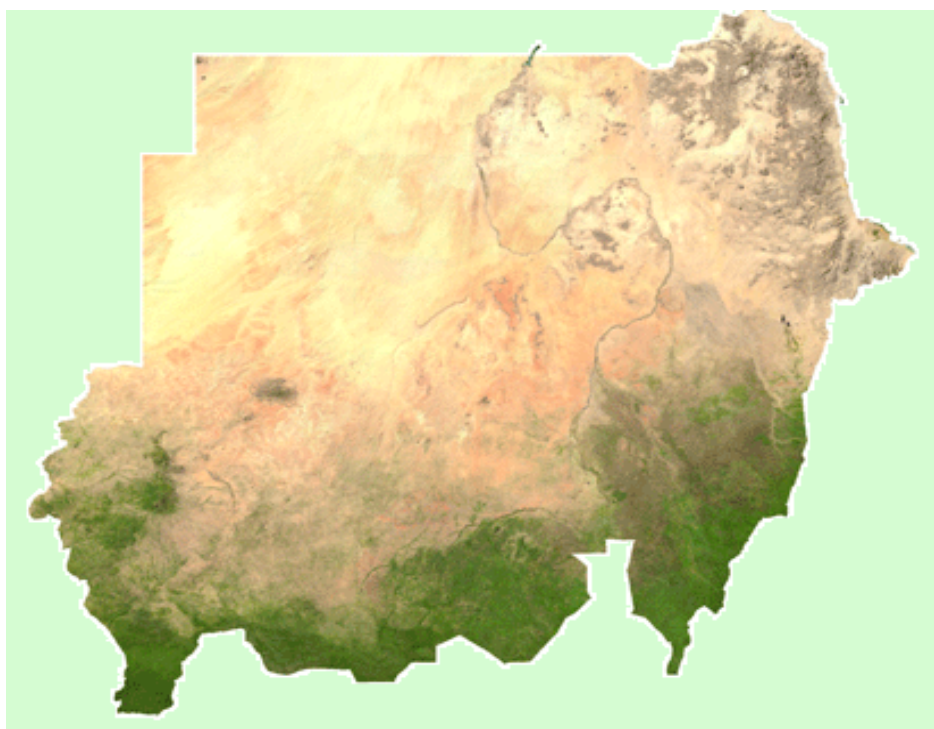


Figure 2: Satellite map of Sudan

The animal resources amount to 101 million heads of cattle, sheep, goats, and camels and a wide range of wildlife species. The abundance of water resources is represented in the country's share of the Nile Water, from seasonal rivers, ground water, and annual recharge from seasonal rainfall. The natural resources of the country are envisaged to meet the domestic needs for sustainable food security, employment opportunities, and foreign exchange earnings in addition to contribution to regional and international trade and food security. However, the government, through the Agricultural Revival Action Plan (2014-2018) continued its commitment to expand the capital base in infrastructure and to open doors for more foreign and domestic investment in the different sectors. The executive programme for Agricultural Revival has defined the macro and sector priorities, in line with the drought resilience concept and practices defined in the CPP, to



create a favourable investment environment for achieving food security, contributing to poverty alleviation, reviving the different production. Sudan as a member state of IGAD, adopted the IDDRSI framework and prepared the CPP for facilitation of its implementation. Sudan suffered from recurrent droughts and the creeping desert and the desertification features from the Sahara which also threatens other IGAD member states. Those features are results of frequent drought waves and may include sand dunes movement, land erosion and degradation of the ecosystems. However, the damage caused by drought and desertification in Sudan has been serious in most of the country but very limited within the Nile Basin. However, the degraded areas vary in their ability to recover and re-support the livelihood of the local communities and may cause displacement through the region. Such people movement has contributed negatively to the development and recovery of the affected areas in the regions, as the youth who move represents the effective labour force for implementation of ground activities for rehabilitation and recovery.

### Local Context, impact and extent of recurrent drought

Sudan experienced recurrent droughts since early 1900s while frequencies and severity is in increasing trend. Sudan is affected by the declining amount of annual rainfall and the fluctuation in magnitude and distribution of the precipitation during the rainy season, with repeated dry spells during the cultivation season that have negative effects on food production and people's livelihoods.

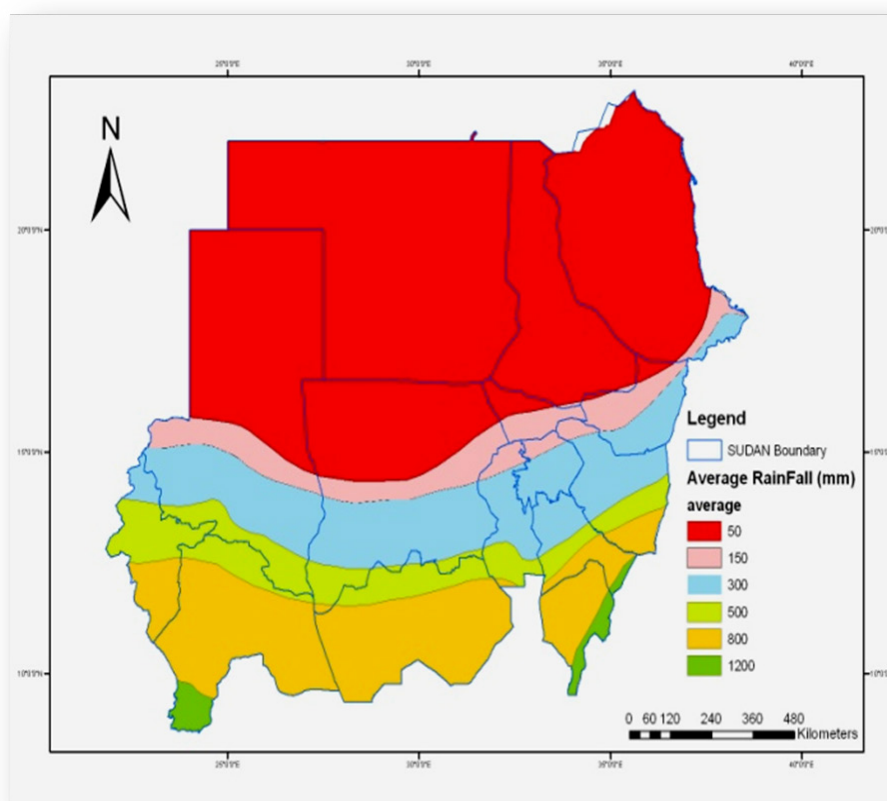


Figure 3: Map of Sudan: annual rainfall zones

The food security situation in Sudan is reported to be deteriorating during late 1900s and extended during the 21<sup>st</sup> century. The prevalence of undernourishment was 31% and 34% for urban and rural populations respectively. This is mainly attributed to the rainfall variability, high food prices, and the long decades of conflict and unrest. Food insecurity is the most common manifestation of such situations. However, recently, a joint mission of MOAF and the FAO during the season of

2018 - 2019 showed positive results in cereals production particularly sorghum, wheat and millet which constitutes 60% of the population main food. Sorghum increased by 36% (1.3 million tons).

In the 2010 - 2012 production seasons, food production shortages were combined with insecurity in South Blue Nile, South Kordofan, some areas in Darfur, and Abyei, resulting in food insecurity<sup>2</sup> and escalating of food prices due to inflation, and local currency devaluation. Insecurities and conflict in productive southern areas have a direct impact on the traditional seasonal north-south migration of nomadic cattle herders. Lack of access to these grazing lands has increased the concentration of animals in important range areas in northern Sudan. As a result, competition over meagre resources for water and grazing pasture has contributed to local disputes over natural resources, some of which have been recorded in local courts. Furthermore, large herds in small areas are likely to lead to overgrazing and increased susceptibility to communicable diseases, and deteriorate the general livestock body condition. Similarly, each crop production zone or system has its own climate endowments and therefore, livelihoods in those areas were affected differently. The eastern (Red Sea and Kassala States) and western regions (Greater Darfur and North Kordofan) of the country continues to record fluctuation of poor to below average grain harvests, which has exacerbated the food insecurity and malnutrition cases among the vulnerable groups of the rural communities, particularly the displaced pastoral groups.

The erratic and low precipitation during the drought years created a situation of decreasing underground water, resulting in deep low water table, which in-turn made access to drinking water for human and livestock in rural areas a problem. This is in addition to the crowdedness around water points, which makes people and livestock vulnerable to diseases and epidemics. This competition over meagre water resources may hatch into poor hygiene and contaminated water, particularly for vulnerable members of households, i.e., children, the elderly, and women. Conflict over resources is becoming common among settled and moving communities and increased incidences of confrontations.

Deteriorating situation in areas of low rains and productivity created incidents of conflict and People displacement to urban centres. The situation leads to emergencies and call for relief. It is in the IDDRSI that the relief emergencies could only be halted through the drought resilience programmes.

## **Review of other trends and impacts in relation to Sudan's drought**

The outmigration of strong members of the rural communities for gold mining contributed further to land degradation and to the low productivity of crops and livestock. The erratic rainy season and recurrent droughts have a push effect on the human resources of the rural rain-fed areas to urban settings. Where the urban population has increased tremendously over the last decade resulting in occupation of arable lands, while urban poverty has become a feature in main towns.

This is further exacerbated by the new emerging income opportunities in the gold mining areas, which are more attractive to young members of the rural communities since it pays better than seasonal rain-fed cultivation. Food production and food security in rural rain-fed areas are associated with repeated risks of long dry spells, localized floods (water erosions), localized pests infestations, etc, that many times, have caused damage, loss and depletion of basic assets of rural households.

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2 Sudan Food Security Outlook, Oct. 2011 – March 2012, [www.fews.net/sudan](http://www.fews.net/sudan)

### 3. RATIONALE AND OBJECTIVE OF THE COUNTRY PROGRAMME

#### **Combined Approach for Humanitarian and Development Interventions**

The Heads of States and governments of the HoA region during the Nairobi Summit in September 2011 endorsed the Nairobi Strategy that calls for enhanced regional partnership to eradicate drought emergencies in the HoA. The Heads of States and governments are committed to: (a) enhance provision of early warning information; (b) support efficient utilization of water resources; (c) promote ecosystem rehabilitation and management; (d) encourage the shift from reliance on rain-fed agriculture to more sustainable programmes in order to manage the impacts of climate change and enhance food security through improved water management; (e) launch and support programmes that address the underlying causes of vulnerability in the drought-prone areas; and (f) support the dry land initiatives jointly launched by the Inter-Governmental Authority on Development (IGAD) and the African Development Bank Group.

The repeated occurrence of droughts, associated with insecurity due to conflicts in some parts of the country, has pushed stakeholders and humanitarian actors to focus more on saving lives and put more effort to rebuild the depleted household assets and basic infrastructures and resources. However, the perception of marginalization persisted among rural communities in the drought prone areas of the country, due to limited interventions of new development projects, whether for food production, health, educational services, or energy programmes. Humanitarian actors in their interventions to provide assistance should always incorporate early recovery aspects in their programmes and strive to build resilience and self-reliance of the affected population. Such programmes can be pivotal in linking emergency and early recovery/development, and consequently implementing the concept of disaster risk reduction as declared in Sendai Framework.

## 4. OPPORTUNITIES AND CHALLENGES FOR THE COUNTRY PROGRAMME

There is a great build-up of experiences in the country for enriching drought resilience, including successful lessons for enhancing the resilience<sup>3</sup> of rural and urban communities to drought events and shocks. This enhancement of resilience is based on past experiences in the country since 1950s and achievements made through support and encouragement of production diversification and use of rotation to improve livelihoods at household level. The lessons learned from pilot development projects revealed the importance of boosting access to production inputs and promoting product outlets, which are part of the marketing process in those remote areas. In this regard, the government of Sudan has formulated the different layers for engaging with the international community's windows of assistance for long term investments to strengthen the resilience capacities and boost the productivity of pastoralists and smallholder food producers in the traditional rain fed sector of the country. Any effort for building productive capacities and livelihood assets that is supported by rehabilitation and development of basic infrastructures will contribute to the reduction of conflicts and disputes attributed to competition over natural resources and access issues. The potential practices that policies and long-term investment should be encouraged including integrated drought cycle management, investment in dry lands and pastoral communities, production diversification, improved access to markets, support to women and youth, and provision of financial services, including savings, credit and insurance. Up-scaling of successful pilot projects and lessons learnt is perceived and constitute encouraging opportunities.

The government has given special focus to disaster risk reduction and establishment of resilience capacities to absorb future drought shocks. In addition, there are needs to build national and regional capacities for effective implementation of drought cycle management approaches that should be associated with the different elements of the drought cycle. The development actors should work to reduce the drought damages to livelihoods through provision of long-term flexible funding that can accommodate climate change and associated natural disasters. This will enable some empowerment of the government institutions and communities to develop mitigation measures and help in building the capacities of vulnerable groups to thrive the climate change events that affects negatively their livelihoods.

The Sudan's early warning and forecasts has contributed to building better information base on changing climate and alerted farmers and pastoralists' communities of the drought and flood events, ahead of the disaster. This has helped the country to implement its National Adaptation Programme of Action (NAPA) in collaboration with the HCENR and address the climate change phenomena and therefore contribute to building resilience of communities in the drought prone areas in the country. The government has invested some of its resources for weather data collection, land-use, crop, and livestock sustainable production systems, to better understand the suitable or appropriate strategies that may be available. Therefore, long-term investment in livelihood protection, safety nets and production insurance packages in support to smallholder food production, would contribute to boost the economy and development of the drought prone areas. There is huge potential for the livestock sector to scale up the current level of export revenue, as a result of getting use of the country location near potential consumption markets in the Gulf, North Africa and South Asia markets. The main importing countries are Saudi Arabia,

<sup>3</sup> A commonly used definition of resilience is "the ability of groups or communities to cope with external stresses and disturbances as a result of social, political, economic, and environmental change" (adopted in Addis Ababa, July 2012 meeting, from Adger 2000).

United Arab Emirates, Jordan, Egypt, and Malaysia. The livestock sector exports of live animals annually average 1.6 million heads; 86% of which are sheep, 8% camels, 5% goats, and 1% cattle. In addition, Sudan exports annually about 4.4 million tons of meat, comprised of cattle (52.2%), sheep (45.3%), and the remaining includes goat and camel meat.

Another challenge for the country programme is the continuous insecurity and conflicts that have led to huge loss of lives and have severely depleted the country's resources and capacities for development. Most of the insecurity and conflict cases are associated with competition over resources, marginalization, and power sharing. These past and ongoing conflicts pose human and governance challenges for poverty reduction in the Sudan (PRSP will be renewed during 2019). The people and the Government of Sudan are working to build institutions for peace and development and shift resources and attention from war to investing in building the country. The contingency plans and preparedness, to absorb future shocks and damages associated with climate change and disasters, are focused on development of sustainable infrastructure and resource base. This provides an important opportunity for peace building and the welfare of the Sudan people.

### **The Country Programming Paper (CPP) Builds on Existing Initiatives**

Opportunities and Challenges for Economic Reform Program in the Field of Internal and External Trade: The long open borders and insufficient trade policies has contributed to increase in smuggling practices into and out of the country, which reduces the amount of currency saved, saving in general, and the economy, which in turn affects the investment opportunities. One of the main challenges is to formulate trade protocols to synchronize the border trade between the Sudan and the neighbouring countries, and they should be amended regularly as needs arise. The government of the Sudan has formulated integrated policies in accordance with the economic reform programs that included internal and external trade policies and could be shared with IGAD member states.

The Interim Poverty Reduction Strategy Paper (IPRSP) and its processes are linked and complementary to the 3-Year Reform Economic Program (2011-2013) and the 5-Year Development Plan (2012-2016). The 3-Year Reform Economic Program (RSEP), is an emergency plan to deal with the adjustment to new political and economic realities following the separation secession of South Sudan and reduction of oil revenues. The new 5-year Plan (2012-2016), a successor to the Five-Year Plan (2007-2011), provides a foundation and road map for implementation of the full Poverty Reduction Strategy Paper (PRSP). Sudan as part of the COMESA is in the final processes for launching has started its CAADP Compact which is currently under preparation. However, with separation of South Sudan as an independent country, the government of Sudan is planning to should continue reviewing all national strategies and policies to accommodate the Sudan with its new borders and climatic zones.

In all development and humanitarian planning and interventions, the development partners from NGOs, CSOs and regional institutions are well acknowledged by the government and their engagement in the implementation arrangements which helped in identifying activities, tasks and areas to focus their involvement. For example, the Sudanese Red Crescent has worked with the ministry of water resources for flood early warning systems together with their active participation in delivery of emergency assistance. Many NGOs participated and engaged in the formulation of development policies such as the IPRSP, UNDAF, and CPF...etc.

The government of Sudan has formulated integrated policies for the revival of the agriculture sector, reflected in the Agricultural Revival Executive Programme (AREP), but its full implementation is constrained by the political and economic context of the country that has been associated with



political tension and insecurities. The Agricultural Revival Program has targeted the following key indicators, in line with the CAADP pillars to achieve its goal in the five years (2007-2011):

- Creating an appropriate environment for a sustainable development of agricultural production;
- Producers and institutions capacity building;
- Development of support services;
- Development and modernization of agricultural systems;
- Protecting and managing natural resources;
- Implementation of quality control and safety measures on agriculture products;
- Establishment of international partnerships

In response to the Comprehensive Peace Agreement signed between the Government of National Unity and Sudan People's Liberation Movement (SPLM), the international community has set a multi-donors trust fund (MDTF), administered by the World Bank, in response to the Joint Assessment Mission (JAM) findings and priorities, to contribute to reconstruction and show peace dividends in the war-affected regions and communities. However, due to the huge needs for recovery and reconstruction, the MDTF used a pilot approach to test and prove sustainable models for livelihood support and rural development. In the agriculture and rural development sector, the MDTF supported pilot interventions in targeted states for the improvement of production and marketing systems for the livestock, and gum Arabic sectors.

The pilot intervention used community driven development approach for prioritizing needs and establishing matching grant systems to ensure communities' ownership and sustainability of the reconstructed services. In both projects (Livestock, and Gum Arabic), the technical assistance component commissioned some technical studies to review and guide the policy reform processes for those two important sectors. As an indirect result, the sheep export jumps from 1.6 million heads in 2009 to 3.2 million heads in 2011, while the exported gums jumps from 26 thousand tons to 57 thousand tons, and the liberalization policy for gums exports resulted in increased share of producers' income of FoB price from 12% to 50%.

## **Linking Humanitarian and Development Interventions**

Development actors seek to restore agricultural production and access to food in disasters' affected areas in the country, or internally displaced communities resulted from insecurity, war, or natural disasters. Development partners are working to improve resilience capacities especially that of the government and civil society partners, to respond to agricultural threats and emergencies. These humanitarian interventions are working with the government to ensure production of foundation seeds to enable domestic multiplication for crop cultivation, and to establish sustainable livestock extension services. This includes training of community animal health workers to deliver essential veterinary extension services to herders; providing sustainable services for timely supplies of drugs and vaccines, and setting up an operational mechanism in which Community Animal Health Workers are being financially rewarded (cost recovery schemes). The franchising model for agro-vet shops in Kenya can be used as a model. The national NGOs and CBOs should be encouraged to incorporate gender and empower women and youth to increase food access and production. Diversification of livelihoods, creation of decent employment opportunities and upgrade of existing ones, as well as intensification of agricultural production are key strategies in moving from emergency humanitarian intervention to sustainable development. The humanitarian approach should focus on livelihood analysis to identify core needs to be addressed at the household while strengthening community resilience and social support systems.



In this regard, the food security and livelihood sector coordination group is supporting the government to use a twin-track approach that combines immediate assistance to improve access to food while addressing the root causes of the problems and building longer-term coping capacity in the face of protracted crises and new shocks. In situations of high unemployment or where access to food is constrained, cash and seed voucher schemes in exchange for labour are being established. In potential drought-prone areas, development partners are working with the government and communities to set up small irrigation schemes to enable communities to have sustainable food production in face of drought shocks. In addition, it is necessary to provision of drought-tolerant seeds for assisting farmers to produce more quality seeds and ensuring that more people can cope with drought in the future. In conclusion, there are many small pilot projects that were tested and proved successful to build resilience capacities of drought-prone communities, such as:

1. Small industries using regional comparative advantages to absorb labour.
2. Market interventions to reduce price escalation in form of co-operatives or units.
3. Improve storage systems/structures.
4. Introduce water-harvesting and management techniques,
5. Soil conservation - zero tillage,
6. Increase provision of drought-resistance plants,
7. Introduce energy-saving tools and technologies,
8. Support plant protection services of low or chemical free methods.

Due to their humanitarian nature, the funding level of individual emergency projects has been low, given their short implementation period (12 months). For greater impact, medium to long term funding for early recovery/development programmes are recommended.

The resumption of agricultural production is a prerequisite of full recovery, yet the lack of complementary non-food items (particularly seeds/tools) may create further food aid dependency. Areas close to poor people's livelihoods – such as agricultural wage rates, access to natural resources and productive assets, and access to non-exploitive credit – may be useful starting points:

- Strengthening and diversifying livelihoods
- Encouraging responsible foreign investment and job creation
- A flexible and participatory approach to urban planning
- Building social security including access to health and education

Humanitarian to recovery situations are often multidimensional, complex, and involve a range of specialized actors. Early recovery provides a unique opportunity to shape the agenda of the subsequent development phase. Effectively addressing cross-cutting issues helps to forge links with other programmes and with the work of other agencies, such as integrating gender equality concerns in all early recovery programmes and activities. Early recovery provides the opportunity to redress inequalities in opportunities and provision of services that may have existed before the crisis. When there are delays in a livelihood response and the situation deteriorates, the humanitarian system tends to fall back on what it knows works to save lives – food aid. However, microfinance is proven anti-poverty solutions that can help poor families improve their socioeconomic condition through entrepreneurship in sound and viable projects.

However, security constraints, limited access (for security or logistical reasons), and the weak presence of state authority in some situations may hinder access and prevent agencies from working alongside stakeholders and programme beneficiaries. Resolving difficult issues and negotiating

with communities and authorities so that programmes may facilitate social development and community empowerment, requires time, effort, and specific skills. In protracted crises of drought and contexts with high levels of chronic poverty, livelihood recovery objectives may need to be more modest and longer-term due to severity of vulnerability. Food aid assistance may need to accept that ongoing reliance on relief is necessary.

The Central Bank of Sudan, Federal Ministry of Agriculture and the UN World Food Programme started a joint project in 2010 called Connecting Farmers to Markets (F2M). The F2M project is considered to be one of multi-sector projects/initiatives designed to alleviate poverty and contribute to the national economy. The concept behind the project is to enable small-scale farmers to get out of the cycle of under-production and poverty, become self-sufficient and produce a surplus. The main objective of the project is to connect small-scale farmers (less than 5 to 10 feddans) to the following four “markets”:

- A micro-credit market, so that they can invest in labour for planting and weeding, better quality seeds, use good fertilizer, etc.;
- A micro-insurance market (so that the farmer will be paid if he loses his crop) and for credit-risk guarantee for the banks (so that they can lend to small scale farmers with no collateral);
- An extension services market - provided by Ministry of Agriculture extension staff - to support the farmer with the best techniques, soil analysis, advice on seeds/fertilizer, marketing of the crop, etc.;
- Sale market;
- Producer's cooperatives to assist them in availing production inputs at suitable prices and products marketing at better prices.

The Ministry of Welfare and Social Security are engaged with WFP in a recovery project called SAFE (Safe Access to Firewood and Alternative Energy) which is being implemented in Darfur. SAFE was being used as platform for not only for SAFE activities (creating and selling fuel efficient stoves and fuel briquettes) but other capacity building components (nutrition, health and hygiene etc.). Through SAFE, WFP aims to boost household income and strengthen community capacity to take care of their own food and nutrition needs by themselves.

WFPs Food for Assets projects is also known as Food for Work. The purpose of Food for Assets/ Food for Work is to provide food insecure households with opportunities for paid work while at the same time produce outputs that are of benefit to both the beneficiaries and their communities. Food for Work activities in Sudan includes construction of haffirs, water harvesting projects, agro forestry and environmental protection, public infrastructure construction, and sanitation projects.

Vouchers: WFP piloted vouchers in North Darfur in January 2011 and has since then been expanded to other states in Sudan. Vouchers have led to the empowerment of WFP's beneficiaries particularly women who make up the majority of voucher recipients. The objectives of this programme are:

- i. To strengthen food markets and promote better functioning food supply chains in food deficit areas (this is a particularly strong focus in Darfur where food markets have been significantly degraded as a result of the crises over the previous decade);
- ii. To empower beneficiaries—particularly women—through i) ownership of their food security needs, and ii) the opportunity to purchase locally preferred food items;
- iii. To open market access in areas prone to drought crises;
- iv. To reduce sales of food aid into local markets

## 5. PRIORITY INTERVENTION AREAS (PIA 1-8)

### Proposed Areas of Intervention at National Level<sup>4</sup>

The proposed programme of Country Programme Paper is compatible with the goals of the Comprehensive Africa Agriculture Development Programme (CAADP) which aims at alleviating hunger, increasing economic development and reducing poverty through agriculture by implementing its four key pillars, namely:

(i) Sustainable Land and Water Management (SLWM); (ii) Infrastructure for Market Access; (iii) Increasing Food Supply and Reducing Food Insecurity; and (iv) Agricultural Research, Technology Development and Dissemination.

Within the framework of Ending Drought Emergencies programme, the priority intervention areas (PIAs) are framed within the following eight components:

1. Natural Resources and Environmental Management
2. Market Access, Trade and Financial Services
3. Enhanced Production and Livelihood Diversification
4. Disaster Risk Management
5. Research, Knowledge Management and Technology Transfer
6. Peace Building, Conflict Prevention and Resolution
7. Coordination, Institutional Strengthening and Partnerships
8. Human Capital, Gender and Social Development

### 5.1 PIA1: NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT

**Strategic Objective:** To enhance drought-prone communities' access to and use of sustainably managed natural resources and environmental services. The natural resources strategic plan in Sudan is intended to guide the country and its partners in responding to natural resource issues and therefore developing natural resources through 2019- 2024. This will lead to sustainable management and use with contribution of stakeholders

#### 5.1.1 Water Resources Development and Management

**Expected Outcome:** Water resources are managed sustainably and equitable access is ensured

The water component will focus on the development and establishment of infrastructure efficient utilization of water resources including water harvesting and supply to ensure sustainable availability of water for human consumption, agriculture, and livestock. Given the trans-boundary nature of the water resources in the region, the component will also support enhanced regional water basin cooperation and coordination.

#### Strategic Interventions:

- i. Improved water Usage and Water Sanitation
- ii. Irrigation requirements
- iii. Water leakage and water recycling
- iv. Employment resulting from water and sanitation construction and maintenance
- v. Pollution of water and soil health

<sup>4</sup> This is the second phase of a 3x5-year phase development programme.

- vi. Equity in allocation of water between sectors
- vii. Cost of water for businesses

The priority is for water resources and irrigation management to make water available for human consumption, agriculture and livestock through (i) investment in water storage and other related infrastructures such as small to medium size dams, water harvesting systems, boreholes, sub-surface and earth dams on water courses; (ii) Rehabilitation and upgrading of existing irrigation schemes, emergency water supply systems; (iii) Protection of water reservoirs and conservation of water catchment areas, and (iv) and meet crop water requirement in ASALs and drought-prone communities.

### 5.1.2 Rangeland Ecology and Pasture Management

**Strategic Objectives:** To enhance drought-prone communities' access to and use of sustainably managed range resources and provision of plans and services to protect and conserve the resources

**Expected Outcomes:**

- i. Rangelands and pastures under sustainable management are increased
- ii. Carrying capacity of rangelands improved

There are different interventions and pilot project aiming to promote tree plantations; rehabilitation and improvement of pastures, rangelands and grazing areas, and demarcation of livestock routes to ensure protection and regeneration of palatable pasture species in an integrated silvo-pastoral management. The priority interventions could be summarized as follows:

- Rehabilitation and maintenance of pasture in the various ecological zones, establishing protected areas and adoption of rational use to ensure sustainability and continuous access to markets;
- Ensure the effective role of traditional institutions and native administration, voluntary and public organization in the pastoral resources management
- Promotion of appropriate sustainable communal rangeland management practices and technologies;
- Land use planning to guide the investment opportunities in this sector and options for strategic partnership, making use of the recent maps (2019) produced by Ministry of Agriculture and Forests in collaboration with ACSAD5 for the three eastern states; in addition to Northern State, River State, Khartoum State and Northern Kordufan State. Another reference for use could be the land cover map of Sudan produced by SIFSIA/ MoA/Remote Sensing Authority in 2012.
- Development of rangeland monitoring structure and support establishment of fire-lines for protection of natural grazing areas

### 5.1.3 Securing Equitable Access to Natural Resources

**Expected Outcomes:** Securing equitable access to key sustainably managed strategic natural resources enhanced.

One of the priority components of the AREP is the protection of natural resources through the development of forests, pastures, range lands, re-establishment of the vegetative cover and the development of the Gum Arabic Belt and improvement of land and water management to combat drought desertification. Community inclusion and participation in planning for the rehabilitation, development and management of rangelands and forests in the drought prone areas will ensure ownership and therefore form the security and sustainability for continuous regeneration of these important resources. Such an approach should be supported by technical assistance and technologies to ensure range re-seeding, bush control and clearing, fire-lines implementation to ensure protection of natural vegetation, development of grazing areas, soil and water harvesting and conservation. Such efforts should be supplemented by activities, for provision of energy saving equipment to enable women participation and empowerment. On the other hand, the re-opening of livestock routes is critical for seasonal movements of livestock to ensure the regeneration of pasture. While recognizing the importance of re-seeding to recover denuded areas, the regeneration of pasture can only be guaranteed if the area is legalized and protected from being accessed by livestock and humans in certain seasons of the year. In this respect, the completion of land use maps will insure proper planning and use of the land for agriculture, pasture and nomadic routes and resolve the conflict between farms and pastoral communities.

#### 5.1.4 Environmental Management (including biodiversity)

##### **Expected Outcomes:**

- i. Conservation and sustainable use of terrestrial and marine ecosystems enhanced
- ii. Biodiversity loss halted
- iii. Pollution control in the Sudan strengthened

Many of the current interventions are seeking to conserve the indigenous genetic resources of main crops and livestock species and ensure their protection through establishment of genetic resources banks for the potential breeds in the country including protected areas. Therefore, the priority intervention focuses on conservation of local species of dry land plant species, livestock breeds, and ecosystem conservation in potential areas. Promotion and support to production of energy saving technologies and policies to reduce trees cutting and promotion of use of alternative sources of energy such as biogas and solar energy.

The priority interventions are as follows:

- Effective control and management of charcoal production and marketing, through organised and planned cutting of firewood from replacement operations of the aged reserved forests and promote use of efficient energy saving stoves;
- Formulate and enforce a very strong legislative framework to guide the charcoal production and marketing;
- Promote investors to invest in energy supply (solar and electricity generation) for rural areas and pastoral communities;
- Support the capacities of civil societies and organisations to enable communities use alternative sources and methods to access safe energy and technologies;
- Improve the local forests and introducing new valuable varieties of trees species.

### 5.1.5. Development of Renewable Energy

**Specific Objective:** Access to affordable, reliable, sustainable and renewable energy ensured

**Expected outcomes:**

- i. Renewable resources use increased;
- ii. Environmental Protection enhanced.
- iii. Soil efficiency management

**Specific Objectives:** To enhance drought-prone communities' sustainable access to and efficient use of land resources

**Expected outcome:**

- i. Soil fertility enhanced
- ii. Land misuse controlled
- iii. Land degradation in vulnerable and marginal areas of the ASALs halted;
- iv. Degraded areas recovered.

### 5.1.6 Forestry Development and Management

**Specific Objectives:** To ensure community participation for sustainable forestry development and management.

**Expected outcome:**

- i. Enhanced community engagement and inclusion in Forest development.
- ii. Community participation in forest management increased;
- iii. Community access to forests' recommended species expanded
- iv. Increased community production of seedlings and seeds collection activities in ASALs and drought-prone areas.

### 5.1.7 Resource Mapping

**Specific Objective:** To ensure mapping of natural resources in the different ecosystems in the ASALs and Drought-Prone Areas.

**Expected outcome:**

- i. Production of updated natural resources maps for ASALs and DPAs
- ii. Use of spatial technologies and techniques to ensure reliable data collected for natural resources in the ASALs and DPAs.
- iii. Increased access to information on resources' maps and quality control standards formulated.

### 5.1.8 Petroleum, Mining and Industry

**Specific Objective:** To ensure sustainable protection and regeneration of natural resources in the different ecosystems in the areas affected by petroleum, mining and industrial activities in the ASALs and Drought-Prone Areas.

**Expected outcome:**

- i. Contaminated waste water from petroleum activities used for re-plantation of trees on the affected sites;



- ii. Increased areas planted and top soils affected by mining and industrial activities;
- iii. Production of environment protection protocols for petroleum, mining and industrial activities in the ASALs and DPAs.
- iv. Environmental safeguards are enhanced in all ASALs and DPAs activities.

## 5.2 PIA 2: MARKET ACCESS, TRADE AND FINANCIAL SERVICES

**Strategic Objective:** is to improve transport, market infrastructure and financial services in ASALs

This component addresses issues related to trade, processing and marketing of products, including policy aspects, livestock mobility for trade, roads and transport, trade/marketing infrastructure, trade finance, trans-boundary disease control, and sanitary and Phyto-sanitary measures and standards. Activities under this section would be a shared responsibility through PPP partnership between private sector and investors with the Ministry of Trade, Industry, Cooperatives, and Ministry of Agriculture and Forestry and Ministry of Animal Resources. The activities will be geared towards the improvement of infrastructure for livestock marketing and value addition along the value chain.

### Expected Outcomes

- i. Improving the level of business, companies and individuals
- ii. Diversifying and expanding the base of exports
- iii. Improving the standard and quality of exported goods to achieve competitiveness of exports
- iv. Reducing the cost of export
- v. Reducing trade and economic losses
- vi. Import substitution.
- vii. Developing trade services.

### 5.2.1 Transport, Market, and Infrastructure Development

**Expected Outcome:** Equitable access to markets, trade and basic services improved

The AREP calls and supports states for the development, rehabilitation and sustainable management of rural infrastructures, such as feeder roads, livestock markets, value added facilities and storage capacities. In this regard, the government encourages the formation of market association and empowers communities and private sector to participate in the operation and maintenance of those structures, to ensure sustainability through a cost recovery mechanism. The Central Bank of Sudan, Federal Ministry of Agriculture and the UN World Food Programme started a joint project in 2010 called Connecting Farmers to Markets (F2M). The F2M project is considered to be one of multi-sector projects/initiatives designed to alleviate poverty and contribute to the national economy (see 5.4). The experience of WFP “piloted vouchers project” in North Darfur in January 2011 (has since then been expanded to other states in Sudan) needs to be seen. The objectives of this programme are to strengthen food markets and promote better functioning food supply chains in food deficit areas (sec. 57.) and to empower beneficiaries to have the opportunity to purchase locally preferred food items; to reduce sales of food into local markets (see sec. 5.7).

Vouchers have led to the empowerment of WFP’s beneficiaries (particularly women who make up the majority of voucher recipients), instilling them with direct ownership of their food security needs. In discussions with beneficiaries, vouchers are appreciated to have an explicit cash value,

and are seen to have allowed women to negotiate their entitlement with traders, providing them with both choice and dignity.

The set-up of public employment programmes could contribute to build and maintain critical infrastructure, while providing employment opportunities, also to women and youth. Therefore, priority intervention includes, institution strengthening and capacity building of cooperatives for trade, local livestock marketing outlets to enhance more off take and value chain development.

- i. Strategic Interventions
- ii. Improved Transportation
- iii. Improved Market Service
- iv. Market Infrastructure Development
- v. Equity in access to market for all users

The concern should be for market development and provision of equitable services in order to encourage market users to enrich the market with their goods. This can be achieved through: (i) investment in road construction and other related infrastructure such as boreholes and artificial water pool and animal rest places to enhance animal mobility towards markets (ii) Investment in market infrastructures for provision of services during market function.

### 5.2.2 Securing Livestock Mobility

**Expected Outcome:** Mobility of marketable livestock in IGAD Member States secured

The activities envisaged include: (i) construction of standard livestock markets and market information system (ii) Market interventions to reduce price escalation in form of co-operatives or units. (iii) developing feeder roads to improve access to livestock and other goods markets; (iv) construction of quarantine stations, establishment of check points/ improvement of stock routes, provision of livestock feed, supported by integrated services centres/outposts; (v) construction of slaughterhouses/abattoirs/cold chain systems, livestock based product processing units and markets; (vi) development and implementation of a branding programme for identification and traceability of livestock in the country; (vii) access to mobile phones by producers and traders and (viii) formulation of appropriate policies and legislations that will enhance community participation in marketing and export.

### 5.2.3 Access to Secure and Affordable Financial Services

**Expected Outcome:** Access to secure and affordable financial services enhanced

The current policies of the AREP are calling for promotion of rural finance and savings services/ schemes to support rural and pastoral communities and establish micro-finance institutions in rural areas. The IGAD's EDE ARP can learn from the lessons and experiences gained in Sudan for provision of microfinance facilities in rural areas, such as the MDTF projects that tested new modalities for provision of rural finance to producers groups and communities.<sup>6</sup> This can also build upon the Central Bank of Sudan/Ministry of Agriculture/WFP F2M activity which provides loans to small holder farmers through farmers' associations.

### 5.2.4 Strengthening Regional and Cross-Border Trade

**Expected Outcome:** Regional and cross-border trade increased

<sup>6</sup> The financial model of the village development committees, supported by the MDTF Project titled "Improving livestock production and marketing – A Pilot". The second model is the seed fund for the gum arabic producers' association supported by the MDTF Project for Revitalizing the Sudan gum arabic production and marketing.

Support animal vaccinations against epidemic diseases and provision of essential drugs, in addition to support of regular inspections by Veterinary staff. Capacity building of veterinary staff to integrate animal health services, marketing and certification systems/services, SPS Standards and other regional and trans-boundary requirements.

### 5.2.5 Development and Harmonization of Financial Services for Streamlining CPP at National Budget

**Expected Outcome:** Financial services policies harmonized at national and states level to improve market access.

Directors to include the competent institutions and to update the prices of the focus and support the procurement time before the rainy and harvest season are essential in order to clarify the roadmap for producers. Opening and organizing the import to cover the food gaps, increasing and developing the food analysis centres and packing factories.

## 5.3 PIA 3: ENHANCED PRODUCTION AND LIVELIHOOD DIVERSIFICATION

**Strategic Objective:** To increase adaptive capacities of households and institutions in drought-prone communities.

Sudan economy depends on agriculture which is considered as a source of livelihoods for approximately 80% of the total population. This component includes interventions aimed at support to livelihoods in drought-prone regions and states for sustainable food production and nutrition at the household level, including increase incomes and decent employment opportunities, with particular attention to youth, women and vulnerable groups, and provision of productive services, social safety nets, education, health care, drinking water and sanitation facilities. Activities under this section would be coordinated between ministries of agriculture, animal resources, social welfare, trade, finance, education, health, industry, youth and federal affairs. Priority interventions identified includes:

### Expected Outcome:

- Adaptive Capacity of households increased;
- Production and productivity enhanced
- Institutional capacity improved

### 5.3.1 Production and Livelihoods Diversification

The majority of farmers and pastoral groups invest in farming and livestock as means of livelihood support and under risk because of erratic low rains. Diversification in crops and in animal increases protection against drought impacts and at the same time improves their livelihoods support. Diversified cropping means failure in crop production for some types of crops will be compensated for by resilience of others.

### Expected Outcomes:

- i. Production and productivity enhanced
- ii. Livelihoods diversified

Investment in agriculture, livestock, forest products and fisheries increase the possibilities and opportunities for livelihoods support under dry land conditions where dependence on single source creates risk of failure and confrontation of food insecurity. In addition, diversification of crops and animal creates confidence in developing resilience because failure of some can be

compensated for by others. Support to production of drought resistance seeds and short maturing varieties of main food staple crops as research and knowledge results will be of importance in production and productivity enhancement.

### **Strategic Interventions**

- i. Development of adaptive capacity of households and communities for drought resilience
- ii. Investment of income generation sources to improve livelihoods

### **5.3.2 Livestock Production, Health and Nutrition**

**Expected Outcome:** Livestock Production and Productivity in ASAL Increased

Planned interventions focused on establishment and maintenance of livestock watering points, vaccination services, promotion of pastoralist mobile and boarding schools, strengthening CAHWs networks for knowledge sharing, mapping disease control zones and developing disease surveillance structures.

### **5.3.3 Crops Production and Productivity**

**Expected Outcome:** Crop Production and Productivity in ASALs Increased

The planned strategy for the agricultural production in drought-prone areas is targeting the sustainable soil and water management, and support to agriculture technology transfer and extension services. The priority interventions include support to production of drought resistance seeds and short maturing varieties of main food staple crops.

### **5.3.4 Fisheries Development**

**Expected Outcome:** Fishery Production in ASALs Increased

The main aim of the AREP is to set standards to ensure quality for in-land and marine fish catch and marketing.

### **5.3.5 Income Diversification**

**Expected Outcome:** Household Income Sources Diversified

The development and expansion of value addition to main products from rural and pastoral areas in the drought-prone areas in the country, such as those products from acacias and natural forests, including gums and resins, honey, dairy and milk by-products. This intervention focus on training and capacity building of rural women and youth on simple technology development, business management and development, book-keeping, to empower pastoral and agro-pastoral women and young people and support income diversification. Restocking and fattening activities for small ruminants by women groups proved to contribute to income diversification in rural development projects.

### **5.3.6 Productive Safety Nets**

**Expected Outcomes:**

- i. Access to food for chronically food insecure households improved
- ii. Graduation from the safety net programme enhanced

Priority interventions in support to strengthen the productive and social safety nets should be encouraged in drought-prone areas in the country, in line with minimum national social protection

floors. This includes the support for the establishment of social development funds through cost sharing and promotion for the establishment of cooperative societies and producers' associations among rural communities, including the pastoral and agro-pastoral groups. Public employment programmes demonstrated to be effective in maintaining critical infrastructure, while providing employment opportunities to targeted groups. In order to be successful it is crucial that those programmes are embedded in the principles of decent work and include from the beginning some elements of guarantee, paying careful attention to wage setting. Public works should do not have a negative impact on children's schooling or increase their involvement in work that would be hazardous to their health or development (either directly employed by the work programme or substituting their parents' usual activities while parents participate in the programme).

### 5.3.7 Trans boundary Disease Control & SPS Measures and Standards

**Expected Outcome:** Demand for livestock products from the IGAD region increased

The on-going programmes and projects focus on increasing awareness on nutrition and hygiene, rehabilitation of drinking water resources, establishment of sanitation facilities, development of transport infrastructure, expansion of governance systems, improvement and rehabilitation of health and education facilities.

## 5.4 PIA 4: DISASTER RISK MANAGEMENT

**Strategic Objectives:** To enhance drought disaster management in the Sudan.

This component addresses all issues related to disaster risk reduction (DRR) to enhance capacities and capabilities and achieve resilience to ensure that when people are affected by disasters they can continue to meet their minimum needs in terms of type, timing, location, method of provision and duration.

### 5.4.1 Drought Disaster Risk Management

Recurrent drought and floods threaten the life of the communities in drought prone areas and results in risk resulting from caused by failure of food production and by floods under high rains incidences. It is necessary to have good and clear disaster risk management strategies and plans at state level to facilitate risk reduction and prevent conflicts arising from crop failure.

#### **Strategic Intervention**

- i. Development of a strategy and plans for disaster risk reduction
- ii. Strengthening EWS capabilities of the meteorology authority

Sudan Meteorology Authorities need to be strengthened through technical and financial resources from both the government and donors'. The strengthening of the cooperation and coordination with ICPAC as specialized IGAD centre improves and enhances EW and increase the provision of climate information. Strengthening of the state institutional capacity to keep records for informing future decision making for the better management of disasters is also a priority.

### 5.4.2 Early Warning System and Response

**Expected Outcome:** Early response to Early Warning information improved

The early warning and emergency response mechanisms can improve the strategies that the communities have developed within a social, economic and environmental context in permanent change and therefore contribute to strengthening resilience of communities in the affected

regions and areas. It also addresses interventions related to climate monitoring and weather forecasts. Activities under this section would be spearheaded by MARFR with support from FVP; some ongoing and planned interventions are identified also.

This could be achieved by strengthening the community based early warning systems, State Disaster Risk Management Committees, support to the Meteorology Authority and partners (hydrology, HAC, HCENR and civil defence) to develop drought and flood early warning system. Strengthening policies, legislation and regulations in order to harmonize responsibility and better coordination between different partners and actors at the national level, (DRM Strategies) are necessary.

### 5.4.3 Contingency Planning

In stress situations of limited income generating activities and opportunities that resulted in high unemployment or where access to food is constrained, cash and seed voucher schemes in exchange for labour are proposed to reduce loss of productive assets and contribute to boost recovery and rehabilitation of households' livelihood.

**Expected Outcome:** Vulnerability to disaster risk in drought-prone communities reduced

### 5.4.4 Disaster Risk Reduction and Climate Change Adaptation (includes Risk Transfer Mechanisms)

**Expected Outcomes:**

- i. Adaptive capacity to climate-related hazards and natural disasters strengthened
- ii. Vulnerability to climate-related hazards and natural disasters reduced

### 5.4.5 Hazard, Risk and Vulnerability Mapping

**Expected outcome**

- i. Mapping of climate-related hazards and natural disasters strengthened
- ii. Vulnerability mapping of climate-related hazards and natural disasters enhanced

### 5.4.6 Mapping of Pastoral Movements and Drought Events

**Expected outcome:** System for climate monitoring to serve pastoral groups promoted

The current climate risk management (programmes) and interventions focuses on weather/climate monitoring, installation of weather stations networks in drought prone areas in the country. Promotion of climate smart technologies to farmers, adoption of climate smart agriculture (CSA) to prevent rural poverty and building agriculture adaptation to climate change is important.

The main strategic and policy platforms of reference for the above activities include the National Policy for Disaster Preparedness and Management and the National Adaptation Programme of Action on Climate Change (NAPA). National Adaptation Plan (NAP) the NAP serve as a long term plan for adaptation in Sudan. It include the high priorities interventions which reflect the needs of country at state level, a participatory approach was adopted during the consultation stage to prepare this policy document. Chapter two with this document shows different projections for the temperature and rainfall up to 2060 which help decision making to build drought resilience.



## 5.5 PIA 5: RESEARCH KNOWLEDGE MANAGEMENT AND TECHNOLOGY TRANSFER

**Strategic Objective:** To improve production and utilization of knowledge for drought resilience in the Sudan

The idea is to build knowledge on the interface between agriculture systems. This component addresses interventions aimed at improving agriculture research and technology dissemination and adoption. It includes a sub-component aimed at improving information and knowledge sharing and diffusion. Key activities include the support to adaptive research; research on rangeland and pasture improvement, drought resistant crops, and value driven production systems; and support to ATTES (Agricultural technology transfer and extension services).

### 5.5.1 Research and Knowledge Management

**Expected Outcome:** Improved technologies are generated, promoted and successfully adapted for pastoral resilience and agricultural Productivity.

**Expected Outcome:**

- i. Agriculture Productivity increased
- ii. Drought resistant crops produced
- iii. Range increased and pasture improved,
- iv. Level and extent of adaptive research increased

Agriculture research in Sudan supports drought resilience through generation and production of crops varieties that are drought resilient, short ripening and high yielding to increase productivity and production of agricultural crops. On the other side of livestock, research works on rangeland and pasture improvement.

**Strategic Interventions:**

- i. Development of research to enhance increased yield and production
- ii. Increasing level of investment in adaptive research
- iii. Improving range resources and carrying capacity

The research and knowledge management in the Sudan as a dry country is very essential to have capacity to intervene in situation when the drought and lower rain affect the production of food. The role of research is to develop a system of knowledge and research results that help farmers to cultivate crop variety adaptive the the condition and withstand drought incidences.

### 5.5.2 Support Applied/Adaptive Research

**Expected Outcome:** Access to adaptive technologies and innovations in drought-prone communities improved

Support to adaptive research should focus on those technical areas that are able to make the most significant impact on enhancing community's and household resilience. This would include research on: water resources, pasture, and land development and environment management (including renewable energy and biodiversity); food security, market development and trade issues; livelihoods and basic services; disaster risk management and climate change adaptation; as well as conflict resolution and peace building. Particular support should be provided to the Agricultural Research Corporation for joint programmes with Agricultural sector institutions for Agricultural Technology Transfer and Extension Service (ATTES) network in the drought prone areas of the country, to ensure research relevance and application of findings and results.

### 5.5.3 Advisory and Extension System

**Expected Outcome:** Adoption and scaling up of resilience-enhancing technologies and innovations enhanced

Support for the establishment of Innovation Platforms, Farmers' Field Schools and Junior Farmer Field and Life Schools (JFFLS), Youth Agri-entrepreneurs Innovation Centers (YAPICs), and information exchange platforms; training small scale farmers, including women and youth, in adoption of pilot technologies that boost production and enhancing resilience capacities of small scale farmers to mitigate climate change end up with ecosystem restoration.

### 5.5.4 Knowledge Management and Communication

**Expected Outcome:** Access to information to enhance resilience improved

### 5.5.5 Promote the Network of National and Regional Dryland, Collaborative Adaptive and Applied Research Centres

**Expected Outcome:**

- i. Robust learning in drought-prone communities promoted
- ii. Applied and adaptive research compatible with priorities of the resilience agenda

## 5.6 PIA 6: PEACE BUILDING, CONFLICT PREVENTION AND RESOLUTION

**Strategic Objective:** to guarantee peace and stability in the Sudan and the IGAD region

The focus of this component is on individual, communities, and institutional capacity building to strengthen the operational capacities in the country. Approaches or recovery and adoption of sustainable use enhance conflict resolution and its persistence with time in compatibility of resources development and rational use.

### 5.6.1 Peace and Conflict

**Expected Outcome:** peaceful environment improved

The drought incidences deteriorated the land and resources quantities and quality to the extent that the resources are not supporting the human and animals to satisfaction particularly in areas where rainfall is decreasing, range land degraded and agriculture productivity declined. Conflict incidents are escalating resulting in human and animal losses. It is becoming necessary to plan for peace building, conflict resolution and prevention.

### 5.6.2 Peace Building and Mediation Mechanisms

**Expected Outcome:** Incidences of violent conflict in drought-prone communities reduced

Poorest regions in the country, are characterized by decades of conflict, underdevelopment and social and economic isolation. These factors fuel insecurity caused by a nexus of conflict drivers, including cycles of cattle raiding, contested access to natural resources under ecological stress, small arms proliferation, and weak state institutions unable to secure law and order. Facilitating peace building and conflict management will be undertaken by using appropriate civil societies organizations, non-governmental organizations (NGOs), national and regional institutions. Traditional and government peace building structures will be strengthening.

### 5.6.3 Conflict Resolution

#### Expected Outcome:

- (i) Response capabilities to resolve resource-based conflicts, and insecurity in ASALs increased
- (ii) Peaceful settlement of conflicts in ASALs increased

## 5.7 PIA 7: COORDINATION INSTITUTIONAL STRENGTHENING AND PARTNERSHIPS

**Specific Objective:** to strengthen the institutional capacity, coordination structures and partnerships for effective implementation of IDDRSI

The objective of the IDDTSI and the CPP programme linked to it is to increase drought resilience and to end emergencies in drought-prone areas. The implementation is based on spectrum of stakeholders relevant to drought. Coordination is well perceived as an effective mean to fulfilment of the objectives. To succeed in this function it is necessary to strengthen the stakeholders and the institution capacity as well as the coordination structure in order to bring the implementation to satisfactory levels.

### 5.7.1 Institutions, Partnership and Coordination

#### Expected Outcome:

- i. Institutions strengthened and Capacity built
- ii. Institution work in close coordination with partners

Sudan as a dry land country is facing various problems resulting from drought incidents and declining rainfall amount associated with bad distribution. To overcome the consequences and work towards improvement of drought management, institutions need capacity building and staff strengthening which require technology and funds. However, development of coordination mechanisms and enhancing coordination with partners will help institutions to fulfil development objectives towards drought resilience

#### Strategic Interventions

- i. Development of coordination mechanism between institutions and partners;
- ii. Planning for institutional strengthening and capacity building;
- iii. Development of a system of resource mobilization.

### 5.7.2 Coordination and Platform Management (note national and sub-national)

**Expected Outcome:** Harmonized, synergized and well-coordinated Drought Resilience Initiative

To reach successful and efficient coordination a national platform in Sudan has been established and strongly supported by the government reflected in establishment of two high levels of committees (a ministerial and a technical) in order to give the coordination mechanism strength confidence at national, regional and at public levels. That is strengthened through regular follow up and advice. The procedure is followed at national and state levels. Workshops enhanced the procedure. The national platform is linked with the regional platform and coordination mechanism.

### 5.7.3 Institutional Strengthening and Capacity Building (note Institutional and Human)

The ministerial and technical committees of the national platform represent ministries, institutions and organizations that are expected to implement the IDDRSI through activities practices and projects. It is required that the institutions and the human resources have the capacity to perform

activities to enhance resilience building through various activities. Project design, implementation and monitoring are part of the functions.

**Expected Outcome:** Effectively functioning institutional arrangement to implement IDDRSI at regional and national level

#### 5.7.4 Enhancing Partnership

At national level and IGAD, stakeholders and institutions require technical and financial support to facilitate capacity building and efficient implementation of the IDDRSI and CPP. National, regional and international partners provide technical and financial support to enhance implementation.

**Expected Outcome:** Purposeful and sustained partnerships for Drought Resilience Initiative built

#### 5.7.5 Resource Mobilization

The Sudan has a good potential of human and financial resources at state and rural areas. Proper mobilization assists in IDDRSI implementation. Mobilization of the local resources in coordination with external funds increases the support and assists implementation.

**Expected Outcome:** Funding of IDDRSI by stakeholders increased

### 5.8 PIA 8: HUMAN CAPITAL, GENDER AND SOCIAL DEVELOPMENT

**Specific Objective:** To increase equitable access to basic social services in drought-prone areas

Dry land areas of Sudan are faced with poor economic development and escalating poverty level resulting in malnutrition and vulnerability to disease outbreaks associated with poor health services. It is necessary to create conditions to enhance equity in social service.

#### 5.8.1 Development of Social, Gender and Human Capital

**Expected Outcomes:**

- i. Human capital and Social Affairs developed
- ii. Women Empowered

Provision of health and education and social services in the rural areas are defined as poor and low standard might be because of poverty and low investment in these areas. The situation is resulting in limited access to health and nutritional values which leads to losses of rights and lowering of standards.

**Strategic Interventions:**

- i. Development in education needs in infrastructure and quality
- ii. Development of health sector with regards to infrastructure and accessibility
- iii. Women empowerment

Health and education service, in rural areas and some urban communities, suffer from availability of adequate support for infrastructure and health needs of hospitals and physicians. In addition, there is limited culture concerning health and nutrition. Intervention to improve these conditions is vital for community development towards resilience against drought.

### 5.8.2 Access to Health and Nutrition (Note: Includes Control and Management of Zoonotic Diseases)

**Expected Outcome:** Healthy and well-nourished communities in drought-prone areas of the IGAD region

### 5.8.3 Access to Education and Training

Education services suffer from infrastructure and qualified human resources at almost all levels as a result of displacement and migration resulting from conflicts and poor economic conditions.

**Expected Outcome:**

- i. Inclusive and equitable quality education and training
- ii. Employability in formal and informal sectors improved
- iii. Income generation improved
- iv. Conflict on land and water resolved

### 5.8.4 Promote Gender Equality and Women's Empowerment

Women in rural areas are not given power equitable to men due to traditions and gender segregation and accordingly their contribution in decision making and responsibilities in second to men. So promotion of equality is essential.

**Expected Outcome:**

- i. Gender inequality in political and socio-economic development in drought-prone areas increased
- ii. Persons with disabilities effectively participate in, and benefit from political and socio-economic development opportunities in drought-prone areas.

### 5.8.5 Social Safety Nets

It is common that people who suffer from defects and weakness have limited power to protect themselves against harmful results caused by powerful groups and are losing some of their rights in the society. Solutions need to be put in place to help weak persons. The role of institutions and CBOs is essential.

**Expected Outcome:** Extremely vulnerable populations able to meet basic human needs through social protection

### 5.8.6 Migration and Displacement (Note: Operationalization of the transhumance)

Political conflict cause migration and resource-based ones result in local people displacement and create social problems. Migrations of nomads are traditional coping system against drought effects and constitute drought resilience practice during time when pasture is not satisfactory.

**Expected Outcome:**

- i. Durable solutions to displacement reached
- ii. Orderly, safe, regular and responsible migration and mobility of people facilitated
- iii. Climate information provided

## 6. REGIONAL PRIORITIES

### Regional Priorities in the National Investment Plan

Sudan as a member country in the IGAD region is affected by and interacts with the different issues and factors that influence the socio-economic and environmental issues including agricultural sector development, food security situation climate change and resulting drought. Therefore, with the help and participation of specialized centres (ICPALD, ICPAC) and development partners in the region, Sudan contributed to setting the regional priorities compatible with the CAADP and IGAD strategies including the RPP. However, the national investment programme is set to address the challenges for the sector in order to contribute effectively and efficiently to the development of Sudanese economy and therefore the ARAP is advocating for strategic partnerships to transform agricultural production from subsistence level to market and commercial production (Wheat Production strategy and Rain-fed sorghum production commenced 2016 and resulted in surplus, and the PPP strategy). Such transformation would ensure and open good opportunities for revenue generation and sustainable agricultural development in the country. As a result, Sudan contributed to food aid to Southern Sudan in 2016.

Sudan is becoming part of the activities of ICPAC within Climate information and co-production system. There is strong coordination and collaboration between Sudan Metrological Authority and ICPAC with regards to climate information and support of pastoral groups and small farmers with climate information needs. The approach will help pastoralists and farmers needs and helps other relevant stakeholders as important users. Projects development is linking these two institutions in regional perspectives that include training and capacity building.

ICPALD has strong relation with development and research institutions in Sudan that are engaged in dry land activities. A dry land research institute is attached to the agricultural research corporation with which ICPALD is developing communication for cooperation with regards to dry land agricultural development The information and knowledge on research results include good quality crops and drought resilient varieties.

### Priorities that are in National Agricultural Investment Plan that are of a Regional Nature

The ARAP (new one) is comprehensive, dealing with all aspects of agriculture including finance, marketing, generation and transfer of technology, capacity building, institutional reform, value-addition through processing, establishment of agricultural information systems and sustainable management of natural resources. Due to resource constraints and the limited implementation capacity, especially at the state and locality levels, it is important that components of the ARAP be rearranged according to priorities. The following criteria are used to determine priorities:

- Support poverty reduction and food security;
- Support export promotion and participation in regional or global free trade;
- Enhance production and productivity;
- Ensuring a balanced development and wide spread effects on population;
- Support the sustainability of the utilization and maintenance of natural resources;
- Enhancing national institutional and technical capacities, productivity, increase food security and poverty reduction and capacity building emerge as possible priority areas;

The lessons learned from previous experiences in handling rural and agricultural development in rain fed zones of the IGAD region can be summarized as follows:



- Food security and risk management;
- Commercial agriculture, agro-processing and market access and development including Improving access to markets and value addition;
- Sustainable agricultural land and water resources development and management;
- Technology generation and dissemination;
- Institutional and human capacity strengthening and creating an enabling environment;
- Support stakeholder-led and broad-based agriculture (crops and livestock) development
- Promote domestic, regional and international trade in agriculture (crops and livestock)

## **Policy and Trade Issues that Need Regional Collaboration**

The policies and trade issues that require close collaboration between IGAD member countries and should receive due attention, remain around the regional agreements cooperation and understanding of regional agreements like the Nile Basin Initiative, cross-border livestock movement between countries, trans-boundary diseases and pests control, economic integration, energy, capacity building and infrastructure development.

## **Existing Mechanisms to Deal with Trans-boundary Border Issues**

The existing mechanisms to deal with trans-boundary issues are through technical collaboration and regional offices mandated to coordinate handling such issues of regional nature, such as crops and livestock pests and diseases, borders movement of livestock and border informal trades. Sudan is counterpart of the mentioned regional entities, and has a role to play in these issues to enhance drought resilience in order to play and also develop mechanism (e.g. joint agreements with countries). For example, Sudan is a member in the regional forum for IBAR, early warning and climate forecasts, regional disaster risk management, and desert locust control. Each of these offices formulates annual plans and reporting mechanisms to alert other members in the region of the new development their specific areas of specialization (as well as enhancing coordination between member countries). The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is a non-political organization of the National Agricultural Research Institutes (NARIs) of ten countries (Burundi, DRC (Congo), Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania and Uganda (Sudan is the president). It aims at increasing the efficiency of agricultural research and knowledge management in the region so as to facilitate contribution to economic growth, and enhance productivity of crops and livestock in the region.

The cross-border cooperation between IGAD member states developed cross-border clusters to enhance cooperation between cross-border communities. Sudan is developing good progress in this area with the support of IGAD partners. GIZ, EU and LPI have made good progress in cross-border projects to enhance drought resilience and disaster management. Project processing is going on. The Sudan national coordinator is a member of the IGAD CBWG.

The increase in migration is a regional problem that created various impacts. Sudan has a role to play and is accommodating projects that have the objectives to contribute in refugees' settlement in East Sudan.

The increase in the smuggling activity of exported goods especially the gum Arabic across Sudan's wide borders has made some non-producing countries to be classified as major exporters. The long open borders help smuggling into and out of the country, bringing in unimportant goods in the economic envelope, which (makes market distortions) reduces the amount of money saved

and saving in general, and in turn affects the investment opportunities. It is challenging that there are no protocols regulating the border trade between the Sudan and the neighbouring countries, (Ethubia) which needs renewal and modernization. The protocol will assist in regional trade movements. The Border trade regional committees have to be encouraged and provided incentives to increase their efficiency.

Areas and represents an important mean of stability and development. Fifteen states of Sudan are border lined, and neighbouring seven Arab and African countries. There is only one protocol regulates the border trade with Ethiopia. It has not been renewed since 2002 when it was signed. The meeting of the Joint Ministerial Committee (Sudanese-Ethiopian) held in Khartoum in March 2019, in accordance with its outputs, that the border trade committee of the two countries meet for the purpose of amendment of the protocol.

An order was issued to open border crossings and facilitate the flow of trade between Sudan and southern Sudan. The decision on 30 March 2019 affects the provision of goods to six million people who represent the border strip between the two countries. The value of goods that pass to southern Sudan before the separation was estimated at about seven thousand tons of different commodities which supported livelihood and resilience. However, this decision requires support not only from the two countries but also from regional efforts and donors in terms of rehabilitating the infrastructure and praising the institutional decisions of the state and supporting and rehabilitating the private sector to practice border trade in accordance with the formal framework organized by the authorities to change the pattern of the border population from agricultural type only to agricultural and commercial type. As an example of the active role, the Ministerial Meeting of IGAD Trade Ministers in Nairobi in May 2018, where a framework discussion was held on informal trade, which was prepared by experts representing all IGAD countries.

A huge challenge to the border trade in the country needs the efforts and supports research, academic, donors and organizations on the compatibility of neighboring countries on the development of protocols and agreements governing the trade in a manner that is matching stated specifications and that lead to the continuation and flow of trade encouraging the residents of the border areas to stability and good neighborliness and achieve human, economic and political security on the border strip. One of the economic challenges is the deterioration in the exchange rate of the Sudanese pound, where the Government of the Sudan is seeking a specific program to control it. These efforts are met by international challenges represented by putting Sudan as a target and the prohibition of international financial institutions and banks from dealing with it (negative impact of economic sanctions).

The regional centres established to address drought and livestock diseases issues reflected the potentials available within the member states for regional collaboration and effectiveness, but should be supported by providing favourable environment for growth, such as creating a joint procurement system to contribute better deals in the markets. Therefore, there are good opportunities to formulate regional plans to address research, technology development and transfer, with some incentives to the private sector to engage and participate in research and marketing of agricultural inputs and outputs. Similarly, there is potential for development of the agricultural support industries (such as fertilizers, seed agro-chemicals ...etc.), establishment of reference laboratories, roads infrastructures, support to capacity building of farmers' unions and associations through exchange visits and study tours.

## 7. IMPLEMENTATION AND INSTITUTIONAL ARRANGEMENTS AT THE NATIONAL AND REGIONAL LEVEL

The implementation and institutional arrangements at the national level for the proposed actions will be categorized according to the specific technical nature of the action. Each of the technical line ministries has an established structure and mechanism to respond to shocks and disasters related to drought events and to coordinate in implementation.

The IDDRSI structure in Sudan starts with a politically supporting level at the council of Ministers in Sudan that issued the form of the structure of the IDDRSI platform signed by the president. The platform is composed of two committees: the ministerial of thirteen ministers and the technical of thirty-four officials including under-secretaries of the ministries both relevant to dry land issues. The PCU including the IDDRSI national coordinator and the focal point with a secretariat constitute the secretariat office. During the last two years the national platform developed good level of perception to their role in IDDRSI implementation including contribution to CPP review, revision and follow up. Since the revision of CPP started (January 2019) the technical committee is organized into seven sub-committees' compatible with their roles in relation to the PIAs. That makes help in many issues related to the IDDRSI and the CPP. As example some contributed in the report of April – May 2019 by provision of result-based knowledge. The Agricultural Research Corporation is acting as a knowledge source.

The MoFAs plays the role of the political focal ministry that links IGAD with other ministries and institutions with respect to their regional contribution within IDDRSI framework and other links. The MoFAs prepare the country agreement with IGAD and links this with partners planning to function in Sudan within IGAD agreement. Example is the GIZ that is implementing three projects including the refugees and migration projects. As well the links include Note Verbal from IGAD through MoFAs to member state institutions concerning project development, meetings, nominees for workshops.

However, within the regional nature of the programming framework to end drought emergencies in the region, the CAADP National Team, chaired by the National Coordinator, should be strengthened, and supported by a coordination unit indicated on drought agenda to play the coordination role and follow up implementation of the required actions and activities as outlined in this draft paper. To fully achieve and deliver this important coordination role, the national team should formulate results-focused action plans with milestones and develop the monitoring tools and indicators to report on progress.

The role of member states in issues of ending drought emergencies, Sudan played a role in provision of food to Southern Sudan as a regional role of a member state that was in 2016.

### **Proposed Implementation Arrangements at the Regional Level**

For the IGAD Secretariat to implement the regional activities under the Ending Drought Emergencies initiatives the Food Security Section should work in close collaboration with other Sections of the IGAD Secretariat, as well as coordinate activities with national structures (for example the CAADP national teams). IGAD should liaise with other potential regional organizations involved in food security in the Horn of Africa (including AfDB, USAID, COMESA,

EAC, AU, ASARECA, ILRI, etc.) through the IGAD regional Platform for Disaster Resilience and Sustainability to ensure that the IGAD Regional Strategy<sup>7</sup> is harmonized with the strategies of the other regional bodies and that there is no duplication of efforts or competition. There is a need to re-visit the bilateral border trade arrangements and provide technical assistance for more capacity building of institutions and staff working in this field.

The implementation arrangements for the proposed interventions will vary according to the sector and nature of intervention. To ensure the ownership and sustainability of the interventions proposed in this strategy, the proposed programs should be implemented by the technical government institutional with technical supervision from specialized agency or institution assigned by the IGAD. Such agencies include technical and UN agencies, specialized institutions in the IGAD member states, the private sector and NGOs. The IGAD's role in project implementation would be to ensure that the technical supervision and support is provided in a timely manner, in addition to continuous monitoring and evaluation for achieving the intended outcomes and impact. IGAD will mobilize the necessary resources for implementing the priority regional projects. It would take charge of project formulation studies as well as all other studies and networking activities.

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7 The IGAD Strategy on Drought Disaster and Resilience Initiative (ISDDRI)

## 8. MONITORING, EVALUATION AND LEARNING (MEL)

The government in collaboration with UNDP launched on 31<sup>st</sup> October 2011 an event setting the stage for the preparation of a National Strategy for the Development of Statistics (NSDS) for the Republic of Sudan (2012-2016). The preparation of this strategy is expected to bring on board all stakeholders in statistical development and address the data gaps for the design, management, monitoring and evaluation of national development, policy frameworks, Poverty Reduction Strategies (PRSs) and the Sustainable Development Goals (SDGs). The Central Bureau of Statistics (CBS) believes that this intervention is pivotal for the successful accomplishment of the formulation of the national strategy (NSDS).

Emphasizing the need for a national ownership of the strategy during the formulation and subsequent implementation phase, the government believes that the process of designing of the NSDS should be inclusive, consultative and participatory reflecting the data requirements of national, state and local level governments, non-state actors (private sector, NGOs/CSOs...etc.) at all levels as well as international development partners. Through the NSDS formulation exercise the advocacy, sensitization and dialogue with politicians, policy-makers, decisions-makers, and planners are believed to be very essential for the preparation of the Strategy. Having the strategy is one thing; equally important is its subsequent implementation. Thus, getting on board all stakeholders from the outset is crucial for the successful implementation of the strategy. The Strategy to be developed is the first one of its kind for the Republic of Sudan. It is, therefore, a welcome development that Sudan has embarked on this initiative and draw lessons from the experiences of countries that have already developed their NSDS.

In reviewing the current M&E system in the country to check the availability of the indicators proposed in the results framework, the sources of data on indicators varies from the CBS to development partners' initiatives and sometimes mandates. Those indicators included in the current system are, percentage of urban/rural population, unemployment rate for different age groups, population with access to improved water source, incidence of poverty, ownership of cattle, use of improved sanitary, and percentage of food insecure population. It is important to ensure accurate data collection and disaggregation by age and gender.

### Proposed MEL System for EDE

The mandate of monitoring and evaluation and learning (MEE) should cut across all thematic areas reflected in the six main components of the EDE and should:

1. Provides strategic information for decision makers and leadership by implementing international MEL standards and supporting normative guidelines to the countries in the region;
2. Establishes and maintains a regional monitoring system that supports the tracking of indicators measuring progress on the outcomes planned and results forecasted. This includes the set targets/goals of the Sustainable Development Goals (SDGs), which should be supplemented with special evaluation studies of regional significance as needed;
3. Produces regional reports and synthesis for regional dissemination;
4. Provides technical support to country-level EDE partners in their efforts to support the national M&E system; and

5. Coordinates and strengthens the regional and country communications and collaboration network in support of a harmonised and aligned approach to indicator monitoring, evaluation approaches, and capacity building to attain the agreed upon M&E system.

The proposed MEL system should aim to contribute to effective national leadership and strategic management of EDE regional and country programmes, including overseeing the utilisation of data and information, as appropriate. This is to ensure that evidence-informed programme planning and implementation through direct technical assistance to countries, and regional activities. Therefore, the successful institutionalization of M&E involves the creation of a sustainable, well-functioning MEL system within a government, where good quality information is used intensively. Three dimensions of success are stressed here:

### Utilization of MEL Information

The information is used to support government policy making, including performance budgeting or national planning; for policy development, analysis and program development; and for accountability purposes. Intensive **and comprehensive** utilization can be viewed as reflecting the mainstreaming of the M&E function in the government with serious commitment.

### Good Quality MEL Information

Governments may stress a system of performance indicators focusing on national development goals; sectoral goals; and lower levels of ministry outputs, service delivery, and processes. However, more focus on carrying out rapid reviews, rigorous impact evaluations, or other types and methods of evaluation, but it should be compared with technical standards to determine if it represents good quality or not.

### Sustainability

This relates to the fact that the M&E system is firmly embedded in the government structure and mainstreamed in core government processes such as the budget cycle, institutionalized and thus is likely to be sustained over time. Conversely, if the system is largely funded by donors rather than by the government itself, then sustainability would be seen as less likely. However, the experience of African countries reflects M&E system focused on incremental changes, if there is the potential to demonstrate that M&E is a cost-effective government activity.

It is widely accepted that the extreme poverty situation facing most African countries provides a clear priority for intensive development support. Since the country has prepared an Interim Poverty Reduction Strategy Paper (IPRSP), a document required for access to debt relief under the Heavily Indebted Poor Countries Initiative, and set development targets, it should establish a good monitoring system to report on results achieved. This puts a premium on having adequate national **reliable** statistics, which in turn is leading to intensive donor support for statistical capacity building, such as assistance provided for the population censuses and household surveys. Particularly with their national statistical bureau, Sudan appears keen to accept this support. Usually IPRSP should present their national monitoring systems designed to meet requirements for the amount of budget and other resources spent on national priorities and national progress against the **SDGs**.

Statistics on amounts spent and on poverty levels are both very important, but unfortunately neither is able to measure the government's performance in terms of the *results* of its spending



the outputs, outcomes, and impacts of the government itself. **SDGs** and other measures of poverty provide a bottom-line measure of *country* performance but fail to reveal the contributions of the government compared with donors, the private sector, and civil society groups such as NGOs. Similar to other countries in Africa, Sudan simply lacks the needed resources to be able to conduct evaluations and reviews, but rely on donors for such work. Lack of donor harmonization has imposed a heavy burden of information supply on foreign aid and assistance, however, donor cooperation and harmonization can be facilitated through sector-wide approaches. Application of MEL in Sudan requires some preliminary arrangements that starts with identification of the capacity that Sudan possess in the form of qualified staff and material. There are limited experience at the Mo PF and MoAF, division of planning using the SDGs and AU. A plan for training is also needed. Limited training was provided by IGAD to the staff of the DRSLPL and the staff can be used as start for further development on training and capacity building. Recently AU provided training for trainers within the framework of the CAADAP but because of fund constraint no use has been made> Much work is needed in the field of MEL to be planned for enhancing the MEL.

IDDRSI submitted a structure of the PCU we a need for one officer to be trained in the field of MEL and develop a strategy for development in the area to assist in the MEL in connection with IDDRSI and CPP implementation and constitute a resource for training the institutions related to IDDRSI. The framework was submitted the minister of Agriculture who transferred the framework to the undersecretary for implementation. The proposed framework represents the starting point and provides the answer for "how, when and who on monitoring, evaluation and reporting will be tied to MEL framework at the IDDRSI level, ministry of agriculture institution and IGAD support. That would be the approach for solving this problem. The proposed development into MEL framework could be supported at the national level by the government of Sudan through the National Strategy for the Development of Statistics (NSDS) proposed by INDP.

Having got this framework in place then it is possible to achieve the MEL objectives as a process that helps improve performance and achieve results by improving current and future management of the CPP outputs, outcomes and impacts and that applies to projects, institutions and programmes. The experience in Sudan is that MEL is project linked and training of project personnel is to provide service in for the project.

# Annex 1: Results Framework for the CPP

Component 1: Natural Resource Management						
EXPECTED OUTCOME 1 Access to natural resources secured and sustainably managed for drought-prone/ communities						
Sub Component 1.1. Soil Efficiency Management						
Intermediate Outcome 1.1 To renew and increased soil efficiency in the rain-fed and irrigated sector to increase productivity and per capita income through food supply chain						
Priority interventions	Expected Outputs	Indicators	Target	Baseline	Source of Verification	Assumptions
1.1.1. Soil analysis	Determined and increasing soil efficiency	-land added to productive area -increasing production	4 national agricultural schemes and part of rain-fed area2020	100% of national agricultural schemes	IGAD & NAIP	1. Soil analyzing soil properties
Sub Components 1.2. Water resources development						
Intermediate Outcome 1.2 Increased availability and equitable access to safe water from sustainably managed resources for livestock and crop production.						
Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
1.1.1. Investment in small scale water storage and other related infrastructures such as small to medium size dams, water harvesting systems, boreholes, sub-surface and sand dams;	Increased sustainable water sources coverage and capacities by 50%	1. Acreage under irrigation. 2. Distance to functional water sources 3. Volume of water available from sustainably managed sources. 4. Proportion of population using a safe and improved drinking water source	Halve by 2015 the proportion of people without sustainable access to safe drinking water	35% of the population without access to safe drinking water (in 2009)	MDG progress reports, Public Water reports, WASH Reports	Increased investments on water control structures, rehabilitation and development of irrigated areas in drought prone areas
1.1.2. Establishment of water monitoring systems in catchment areas to monitor ground and surface water potential for better water harvesting planning.		5.				

1.1.3.	Increase investment in development of sanitation and hygiene infrastructures in drought prone areas and states.	Increased sanitation and hygiene structural capacities by 20%	Proportion of population using a sanitation facilities and improved hygiene structures.	Halve by 2015 the proportion of people without sustainable access to sanitation and hygiene facilities	35% of the population without access to sanitation and hygiene facilities (in 2009)	MDG progress reports and Public Water reports	Increased investments, rehabilitation and development on sanitation structures in drought prone areas
1.1.4.	Rehabilitation and upgrading of existing sanitation and hygiene infrastructures and emergency sanitation systems						
<b>Sub Components 1.3. Pasture and land development</b>							
<b>Intermediate Outcome 1.3</b>							
<b>Pastures/rangelands under sustainable management are increased</b>							
<b>Priority interventions</b>	<b>Expected Outputs</b>	<b>Indicator</b>	<b>Target</b>	<b>Baseline</b>	<b>Source of Verification</b>	<b>Assumptions</b>	
1.2.1. Rehabilitation and maintenance of pasture in the various ecological zones and adoption of rational use to ensure sustainability;	Increased pastoral areas by 20%	Percentage change in pastoral areas in the drought prone states	Increase pastoral areas by 25%				
1.2.2. Ensure the effective role of voluntary and public organization in the pastoral resources management	Increased awareness on importance of pastoral areas	Percentage change in the number of interventions in DPAs					
1.2.3. Promotion of appropriate sustainable communal rangeland management practices and technologies		Percentage of households who are members of community organizations in pastoral areas					
1.2.4. Land use planning to guide the investment opportunities in the pastoral sector <sup>1</sup> .	Land use maps available and accessible for use by states	Number of land use maps disclosed and published	All states have developed and used land use maps	3 states (2012)	MoAI Records		

1.2.5.	Development of rangeland monitoring and evaluation system and network in DPAs.	M&E system operational and accessible	Effective M&E system and structure operational in the DPAs				
1.2.6.	Establishment of fire-lines for protection of natural grazing areas	Eliminate fire damage/loss of natural grazing areas	Number of fire-lines opened annually.	Annual increase of natural grazing areas			
<b>Sub Components 1.4. Securing Access to Natural Resources</b>							
Access to sustainably managed natural resources is enhanced							
<b>Intermediate Outcome 1.4</b>							
<b>Priority interventions</b>							
1.3.1.	Establishment of community forests	Increased forests' areas	Indicator	Target	Baseline	Source of Verification	Assumptions
1.3.2.	Establishment of soil and water conservation structures	Increased soil reclamation areas	Percentage increase in community forests	All population centres surrounded with trees	NA	FNC	
1.3.3.	Strengthen local Government capacity for legislation of livestock routes	Disclosed laws and acts on livestock routes	Percentage increase in soil and water conserved areas	Annual reduction of soil degradation by 25%	NA	DCLUU	
1.3.4.	Provision of integrated services along the routes	Improved access to basic services along the routes	Number of legislations endorsed by state assemblies	Reduced incidence of dispute over natural resources	NA	Local court cases recorded	
			Number of integrated services centres established	Reduced diseases recorded on moving pastoral communities and herds	NA	MARFR	

### Sub Components 1.5. Environmental management (including Renewable Energy & Biodiversity)

Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
1.4.1. Conservation of local species of dry land plant species, and ecosystem conservation in potential areas.	Significant reduction in the rate of biodiversity loss is achieved.	Biodiversity loss. No. of approved policies and programmes on the adoption of renewable energy	The adoption of renewable energy technologies is prioritized	NA	HCENR	
1.4.2. Effective control and management of charcoal production and marketing				NA	HCENR	
1.4.3. Promote investors to invest in energy supply for rural areas and pastoral communities;	Coverage of electricity generation and butane gas services to rural areas	No. of service unit established	Reduce trees cutting in rural areas	NA	HCENR	
1.4.4. Support the capacities of civil societies and organisations to enable communities use alternative sources and methods to access safe energy and technologies	Community managed cost recovery system for accessing energy sources	No. of communities with operation services		NA	HCENR	
1.4.5. Promotion and bulking of drought-resistant grasses, trees, shrubs and breeds/species.	Genetic resource banks established in DPAs.	No. of centres established		NA	HCENR	

Component 2: Market access and trade						
EXPECTED OUTCOME 2			Access to markets and trade improved			
Sub Components 2.1. Transport and market development						
Intermediate Outcome 2.1						
Priority interventions						
Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions	
Increased access of drought-prone communities to markets and trade	Variation in the value of trade transactions in the drought-prone areas	Drought-prone communities household incomes are increased by 50%	NA	CBS & states		
2.1.1. Developing feeder roads to improve access to livestock and other goods markets;						
2.1.2. Construction of quarantine stations.				MARFR		
2.1.3. Establishment and improvement of stock routes, supported by integrated services centres/outposts			NA	MARFR		
2.1.4. Construction of slaughterhouses, abattoirs, livestock based product processing units and markets			NA	MARFR		
2.1.5. Development and implementation of a branding programme for identification and traceability of livestock in the country			NA	SSMO/MARFR		
2.1.6. Formulation of appropriate policies and legislations that will enhance community participation in marketing and export	Variation of household incomes in drought-prone communities					
Sub Components 2.2. Securing livestock mobility						
Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions	
Effective and well served livestock routes operational in DPAs	No. of CAHWs and CLDWs active in DPAs	Full coverage for livestock routes	NA	MARFR		
2.2.1. Secure availability of integrated services of water, fodder and pasture along stock routes to markets, including cross-border routes;						
2.2.2. Encouragement of CAHWs and PPP for provision of veterinary services and essential livestock drugs	No. of CAHWs and CLDWs active in DPAs		NA	MARFR		
Sub Components 2.4. Transboundary disease & SPS measures and standards						



Priority interventions						
	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
2.4.1. Development, rehabilitation and sustainable management of export quarantine centres	All borders points have quarantine centres	No. of centres established	100 percent coverage	NA	MARFR	
2.4.2. Establish and maintain quarantine infrastructure throughout the commercial livestock routes with facilities for pasture, water, treatment crash, tick control, a laboratory for disease diagnosis and office.	All commercial livestock routes have quarantine centres	No. of centres established	100 percent coverage	NA	MARFR	
2.4.3. Improve food safety (sanitary and Phyto-sanitary standards);	Disclosed safety standards in place	Standards announced	Access to safe food	NA	SSMO	
2.4.4.						

### Sub Components 3.2. Agriculture production and productivity

Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
3.2.1. Support to production of drought resistance seeds and short maturing varieties of main food staple crops.	Crop production and productivity are increased	% increase in production (MT) and productivity	Small Farms	Annual survey	Agriculture Research	

### Sub Components 3.3. Fisheries development

Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
3.3.1. Provision of fishing equipment to local communities;	Increased fish production	% increase in fish catch (MT)	Increased access to fishing equipment	NA	MARFR/states	
3.3.2. Promotion of fish farming and fish pond technology;	Development of new sources for fish production	No. of fish farms established	Increase fish production	NA	MARFR/CSOs	
3.3.3. Review and update the current legislation to set standards and quality control;	Value added products	Disclosed legislations established	Preservation of fish resources	NA	MARFR/SSMO	
3.3.4. Upgrade and organize the marketing system along the value chain		No. of fish markets	Increase income sources	NA	MARFR/states	

Sub Components 3.4. Income diversification										
Intermediate Outcome 3.4										
Priority interventions										
3.4.1. Scaling up of successful farm/small-scale technologies, such as processing, storage facilities and post-harvest conservation to reduce losses and ensure good quality of products;										
3.4.2. Identify and establish rural infrastructure needed for the development of the animal and plant products of economic value										
3.4.3. Establish processing, value addition and marketing systems for some of the drylands products of economic value;	Diversification of Household Income sources is promoted for enhancing resilience									
3.4.4. Develop best practices for the production, post-harvest handling, processing and marketing of drylands products to improve quality and regular supplies.	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions				
3.4.5.	Increase numbers of products	Diversity of income sources for targeted communities (average number of income sources by household and contribution to total income as a percentage)	Increase HH income sources	CBS	CBS/PRSP					
3.4.6.	Increase number of market outlets	Average number of income sources by household and	Increase HH income sources	CBS	CBS/PRSP					
3.4.7.			Increase HH income sources	CBS	CBS/PRSP					

3.4.8.		contribution to total income as a percentage	Increase HH income sources	CBS	CBS/PRSP	
<b>Sub Components 3.5. Productive and social safety nets</b>						
Intermediate Outcome 3.5						
Dependency on safety net programmes is reduced						
Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
3.5.1. Support for the establishment of social development funds through cost sharing basis	Assurance of communities' ownership of social development funds	Number of HHs graduated from safety net programmes	Increased coverage of social development fund	CBS	CBS/PRSP	
3.5.2. Promotion and establishment of cooperative societies and producers' associations among rural communities, including the pastoral and agro-pastoral groups.	Increased coverage of cooperatives and associations in DPAs	No. of cooperative societies and associations formed	Increased access to basic services	CBS	CBS/PRSP	
<b>Sub Components 3.6. Access to basic social services</b>						
Intermediate Outcome 3.6						
Access to basic social services increased						
Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
3.6.1. Develop and scale-up the mobile health care and education facilities	Mobile health coverage to DPAs	Number of households accessing basic social services	Full coverage of DPAs	NA	Economic survey reports, Human development reports	
3.6.2. Support the development of basic roads network and other social services in the drought prone areas	Increased road networks		Full access	NA		

3.6.3. Expand social and people participation for provision of health, education and drinking water services and support and governance systems;	Increased coverage in DPAs	Full access	NA	
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**Components 4: Pastoral Disaster Risk Management**

**EXPECTED OUTCOME 4** Enhanced drought Preparedness, Prevention and Management.

**Sub Components 4.1. Early Warning / Response System**

**Intermediate Outcome 4.1** Timely response to early warning information is operated

Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions
4.1.1. Strengthen EWS capabilities of the meteorology authority through technical and financial support from both the government and donors' community to	Well-equipped met stations network	Response time between Early Warning and Humanitarian response plans & reports)	Operational decentralised disaster management system	NA	SMA/EWU	
4.1.2. Strengthen the state institutional capacity to keep records for informing future decision making for the better management of disasters.	Equipped States' met stations with recording system			NA	SMA/EWU	
4.1.3. Strengthen the capacity of farmers to benefit from early warning information.	Effective HH preparedness system in place	Time lapse between EW information and response	Effective response mechanism established	NA	SMA/EWU/States	
4.1.4. Sourcing for Disaster Risk Reduction/mitigation	Investment in DRR	No. of investments	PPP in EWS and response	NA	SMA/EWU/States	

investments.								
4.1.5. Enhancement of traditional coping systems.	Researched and analysis of traditional coping systems	No. of researches conducted	NA	CBS/PRSP				

### Sub Components 4.2. Climate Monitoring and Climate Change Adaptation

Intermediate Outcome 4.2	Reliable climate outlook reports available and shared. CC adaptation policies and interventions are incorporated into the national development strategic plan and budget							
Priority interventions	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions		
4.2.1. Strengthening weather monitoring systems at locality, states, national and regional levels.	Reliable climate outlook directs planning	No. of climate outlook reports used at different levels	Reliable system in place	NA	SMA			
4.2.2. Promote local knowledge and skills on climate change and adaptation mechanisms	Integrated local and formal knowledge			NA	SMA			

### Components 5: Research and Knowledge Management

EXPECTED OUTCOME 5	Improved technologies are generated, promoted and successfully adapted for pastoral resilience							
Sub Components 5.1. Support to adaptive research	An enabling environment for adaptive research is in place in the country							
Intermediate Outcome 5.1	Expected Outputs	Indicator	Target	Baseline	Source of Verification	Assumptions		
5.1.1. Support to adaptive research on rangeland and pasture improvement, on drought resistant crops, and production systems	Increased drought adaptive species recorded	Level of investment for adaptive research	No. of drought resistant species released	NA	MoAI/States			

5.1.2.	Support to ATTES (Agricultural technology transfer and extension services) Network;	Increased network coverage of agricultural technology and extension services in DPAs	No. of operational ATTES units	Full coverage of the DPAs	NA	MoA/States	
<b>Sub Components 5.2. Advisory and extension system</b>							
<b>Intermediate Outcome 5.2</b>							
Appropriate advisory and extension services are available and accessible by drought-prone communities							
<b>Priority interventions</b>		<b>Expected Outputs</b>	<b>Indicator</b>	<b>Target</b>	<b>Baseline</b>	<b>Source of Verification</b>	<b>Assumptions</b>
5.2.1. Building the capacity of community based organisations (CBOs) and local NGOs to improve their capability to implement rural development programmes in the drought-prone areas in the country;		Empowered CBOs and NGOS in DPAs	No. of training and capacity building sessions	Effective CBOs and NGOs in DPAs	NA	Social Welfare/CBS	
<b>Sub Components 5.3. Knowledge management and communication</b>							
<b>Intermediate Outcome 5.3</b>							
Increased access to information and dissemination of knowledge contributes to enhanced community resilience							
<b>Priority interventions</b>		<b>Expected Outputs</b>	<b>Indicator</b>	<b>Target</b>	<b>Baseline</b>	<b>Source of Verification</b>	<b>Assumptions</b>



<p>5.3.1.1. Strengthen capacity of rural extension staff and other staff working with communities, particularly on planning, soil and water conservation, land utilization and management, natural resources management, moisture conservation and agro-forestry, range management, animal husbandry and improved farming methods adaptable to semi-arid areas</p>	<p>Increased coverage of staff training and institutional capacity building</p>	<p>Outreach of knowledge dissemination activities and satisfaction of beneficiaries</p>	<p>Accessible and effective extension and advisory structures available in DPAs</p>	<p>NA</p>	<p>Social Welfare/CBS</p>	
<p>5.3.2.</p>						



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