

## Reporting Routing slip & Checklist for Clearance (Updated in January 2017)

**This list has to be filled in by the concerned Units/Divisions and must be included as a cover to the folder for circulation**

Project title	Climate Risk finance (00088863)	Atlas AWARD ID	00078764
Start date	11/1/2014	End Date	Jun-20
Project budget	\$2,134,757	Reporting Frequency	Once a Year
Period covered by report	1/1/ 2019 to 31 10/2019	Donors	Global Environment Facility (GEF)

	Unit/Section	Initial / Name / Date	Action	Comments
1	Project Manager	Rashda Hassan <i>[Signature]</i> 12/11/2019	*prepare report including financial implementation report. *prepare routing slip and checklist *prepare transmission letter to the Donor	
2	Programme Officer	<i>[Signature]</i> Intisar Salih 12/11/2019	*Ensure substantive quality, including financial report and financial implementation chapter	
3	Unit Head	<i>[Signature]</i> Hanan (Murwaki)	Clear the report	
4	SPPC & PCR	<i>[Signature]</i> Khalafalla Elshiekh 12/11/2019	*Assure report quality (logical flow, donor requirements, etc.), consistency, and standardization *Verify Financial Report against Atlas and Quality Assure the Report	
5	DRR (P)	<i>[Signature]</i> Jos De La Haye	Validate the report	<i>[Signature]</i>
RR		<i>[Signature]</i> Selva Ramachandran	*Signs transmission letter**	

\* Timeliness of submission of report before deadline is assured by the relevant Programme Unit  
\*\* Only Donor and Terminal Reports

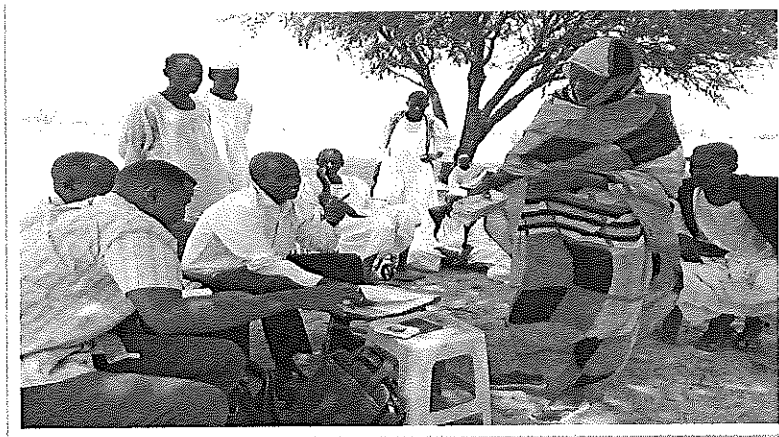


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## Climate Risk Finance for Sustainable and Climate Resilient Rain-fed Farming and Pastoral Systems

(UNDP - Project ID: 00088863)  
< GEF/LDCF /UNDP - Sudan >

Annual Report January 1<sup>st</sup> –October 31<sup>st</sup> 2019



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Implementing Agency:	United Nations Development Programme
Country/Region or Area:	Sudan/Sudan/South Darfur/North Kordofan/Gedarif/River Nile/White Nile/Kassala
Project Title and Output	Climate Risk Finance for Sustainable and Climate Resilient Rain-fed Farming and Pastoral Systems
ID:	00088863
Project Duration:	November 2014 –June 2020
Project Budget for 2019 (AWP):	US\$1,934,916
Reporting Period:	January 1 <sup>st</sup> – October 31 <sup>st</sup> 2019
Overall Project Budget:	Total budget: \$ 24.5M. Detailed as follows: LDCF \$ 5.7 M; Trac \$0.6M; In kind govt. contribution \$18.2M.

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Use font Corbel and font size 10 for all text on narrative sections.*

### Acronyms

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ARC	
ABS	Agricultural Bank of Sudan
AWP	Annual Work Plan
CPAP	Country Program Action Plan
CPD	Country Program Document
CRFP	Climate Risk Finance Project
GoS	Government of Sudan
EWS	Early Warning System
HAC	Humanitarian Aid Commission
HCNER	Higher Council for Environment and Natural Resources
IC	International Consultant
LDCF	Least Developed Countries Fund
MoAg	Ministry of Agriculture
MF	Microfinance
MI	Micro Insurance
MoWRIE	Ministry of Water Resources, Irrigation and Electricity
NAPA	National Adaptation Program of Action
PMU	Project Management Unit
RSA	Remote Sensing Authority
SMA	Sudan Meteorological Authority
SMDC	Sudanese Microfinance Development Corporation
UNDP	United Nations Development Programme
UNDAF	United Nations Development Assistance Framework
WII	Weather Index Insurance

## I. Executive Summary

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### **Context:**

The prevailing situation of the severe impacts of climate change and climate variability on Farmers and Pastoral groups in the semi-arid areas of Sudan necessitated a comprehensive project to deal with the different parts of the problem through designed activities to enhance, the early warning systems, increase the accuracy of the climate forecast, predictions and obligate the application of the adaptation technology. The core of the project is to link the target groups of the farmers and pastoralists with the financial services of the Micro finance and the new product of the Weather index insurance as well as developing the relevant policies and regulatory frameworks that ease the accessibility of the target groups to different services and restrict the eligibility to finance their livelihoods to the use of the approved adaptation technologies for their respective areas and products.

### **Progress against Outputs and Outcomes:**

The annual work plan for 2019 was prepared after technical committee meeting and the project held 10 meeting to arrange for improved collaboration between the committee members. A detailed implementation plan was prepared and shared among the partners. It follows that the project delivery was accelerated since the first installment, which was issued on 23th May 2019, after approval of extension and rescheduling the project activities to depend on the administrative cost from government commitment , which retarded the achievement of the stated targets of 2018 AWP as constructively guided by the Annual report 2018.

The cumulative activities of CRF project were implemented by adopting integrated mechanism between all partners to achieve real project results and overcome such challenges faced project before extension to create better environment .also the project strengthen the capacities of insurance ,reinsurance companies and Micro Finance institutions to learn and apply the weather index insurance product in Sudan.

The all stakeholders of the CRF Project including the donors are appraised the effort and realistic improvement have been done during this year through the Project Board, technical committee meetings.

The piloting of the WII has been applied among small farmers as one of success story of the Project in addition to that the project is implementing this season different technical packages, WII and Micro Finance to both farmers and pastoralists

The procurement process of the soft and hardware equipment is about to be completed according to the plan and the project document. Also, the renewal of licenses for RSA and SMA for high-resolution remote sensing data was completed. Additional rain-gauges (76) and (18) additional automatic stations will be installed soonest to increase monitoring and observation services. As for the iCloud was installed and purchase of equipment. during this period the project has successfully completed the validation trails for farmers

which have been conducted in the six states (Kassala, White Nile, South Darfur, North Kordofan, Gedarif and River Nile) in fields owned by farmers of the targeted community members (men and women 50 - 50% ). the positive implications of this activities increased germination rates recorded based on ARC recommendations packages with cost efficiency and positive results. The project is supporting more than 1500 farmers in target rain-fed areas and another 1000 pastoralist in the pipeline during this season. The EBDAA Bank for microfinance paid the first premium on behalf of the piloted farmers and pastoralist through their associations/ groups for this season.

The RSA update the land cover of the six targeted states in order to get the clearest picture of the land cover of the pilot states, a field work was decided to be carried out. The main goal of this field work is to get the correct coordinates of some gauge stations installed by the project in some of the targeted villages in Gadaref, Kassala and Northern states, as well as the White Nile and North Kordofan states.

The project contained its support on strengthening the EWS institutions and hosted a mission of a UNDP regional adviser on EWS, who provided training to EWS stakeholders on early monitoring of draught & capacity of EWS in some states, The mission also helps in setting good conditions amongst the various institutions dealing with EWS.

CRFP established (8) Early warning units at the targeted states. Each unit is well equipped with relevant tools. Moreover, CRFP established three committees for early warning three levels: national level, state level and at Locality/community level. The main role of the EWC is to provide the project and the community with products that are critical for early decisions to protect peoples and environmental degradation.

The Ministry of Animal Resources dedicated considerable efforts to execute training courses in the six targeted states, (8) workshops directed to the leaders of extensions and pastoralists were completed and (108) farmers and pastoralists associations were formed in the six targeted states. The majority of those associations established their banking account in order to receive financial services. The memorandum with EbdAA Microfinance Bank was activated and the activities agreed upon were in progress, including national revised policies and regulations, awareness raising and commitment to support individuals and associations lending. Remote Sensing Authorities (RSA) delivered GPS, GIS training for 28 participants comprising of extension agents, insurance brokers and SMA agents.

The newly established units and EWCs are expected to support efficient, robust collection and interpretation of weather/climate information for risk mapping, rainfall forecasting and drought early warning which will help reducing or preventing further environmental degradation and CRFP will achieved its objectives to:

- Strengthen institutional and technical capacity for climate observation, forecasting and early warning at national and local levels
- Address residual climate risk to rural livelihoods in the states of greatest rainfall variability through parametric insurance products
- Improve access of vulnerable farmers and pastoralists to financial services for climate change adaptation and disaster risk reduction.

The capacity of Hydrological modeling within the Ministry of Water Resources, Irrigation and electricity was also build through purchasing of sophisticated measuring equipment, participation of hydrological engineers in a number of training sessions at National and state level.

The 120 scientific validation trials achieved during the previous season convinced the farmers practically to use it as a tool to reduce the impact of climate change and adoption the technology, Micro Finance companies are now ready to support the targeted farmers and pastoralist, the MF services will be linked to the use of the technologies released by the Agriculture Research Cooperation (ARC), however, this component need more effort by the project to be implemented this season 2019.

The insurance team of the project facilitate 6 workshops for targeted states on WII to build the capacities of the insurance companies and MF institutions and MOA, moreover they held awareness-raising workshops in the six project targeted states focusing on the process of weather index insurance documentation. The ministry of animal resources was also facilitating considerable efforts to execute training courses in the six targeted states, (8) workshops targeted the communities' leaders, extensions officers and pastoralists were completed.

The memorandum of Understanding has been signed with Microfinance institutions to complete the WII requirements by including national revised policies and regulations, awareness raising and commitment to support individuals and associations lending. Remote Sensing Authorities (RSA) delivered GPS, GIS training for 28 participants comprising extension agents, insurance brokers and SMA agents.

#### **Progress of Outcomes:**

Outcome 1: The progress of the project in 2019. All the Automatic weather stations requested in the project document for the six targeted states were installed and operating, the process of purchase of the recommended additional 18 Automatic stations is in progress, Installation of 2 acoustic Doppler flow meters, and 3 manual hydrological is in progress and purchase of 8 water level meters, 3 manual hydrological stations and 3 current meters provided by the project , Digitalization of hydro metrological data is in progress ,although this activity was hindered by the lack of communication and delay of response between the targeted institutions, namely Sudan Metrological Authority (SMA), Remote Sensing Authority (RSA) and Ministry of Water Resources, Irrigation and Electricity the rating is Satisfactory (S).

Outcome 2: The project provides weather index insurance (WII) services for 1000 farmers in (4) targeted states and 120 Pastoralist in 2 targeted state. The operations successfully are done because all insurance companies agree upon to develop the first documents of WII of pastoralist in Sudan. Other activities relevant to telecommunication, weather insurance and microfinance is in process for this season 2019. Rating is satisfactory (S).

Outcome 3: Deals with increasing the target group's access to microfinance services. A team for microfinance was developed with the participation of the private sector an intensive

program to execute the activities planned in the project document is in progress. Approved adaptation technologies have been applied in the six targeted states, this has been achieved through MoU and management plans with Agricultural Research Corporation (ARC). The project supports the women groups by linking them with MFIs and insurance companies in livestock and home farming activities, based on successful results achieved the insurance companies are requesting to get a head of the WII products. And have start mobilizing communities to joint WII activities to mitigate climate risk to increase the resilience among the targeted beneficiaries. Also, the companies support the project with relevant documents (Legally and regulatory) for WII.

**Action plan:** The project held a workshop to improve and enhance collaboration between the committee members and they advise to extend the project after Board approval of the 2019 plan. A detailed implementation plan was prepared and shared among the partner's and methods of communications between the beneficiaries have been strengthened. A list of national and international consultants has been requested to facilitate the implementation of the project activities in different fields, strengthen capacities and address gaps thereby supporting the project to achieve its intended objectives

**Expenditures:**

In grand, the total project budget for 2019 (AWP) is USD1,927,656 the total expenditures and commitments up to 31 October 2019 is USD 844528.18 (44%).

**Key challenges:**

**The key challenges are precarious, albeit on the top of the management agenda.**

- a) Shortage of Local component from the government.
- B) Establishment of stable financial and insurance policies especially for pastoral systems and open rangelands;
- C) Government didn't adopt the policies of insurance for rain-fed and irrigated agriculture and the pastoral system;
- D) Weak communication network to link the farmers and pastoralists with the center of information at the project HQ;
- E) Have not yet received approval from the national security to import the Drone aircrafts ;
- F) Sustainability of commitment of insurance companies and financial institutions for the Weather Insurance Index
- G) the quality assurance of documents from the government side is poor,

**The Main Recommendations:**

Specific recommendations for close consideration during 2019 work plan include the following:

- Work closely with all partners to speed up the implementation process as recommended by the Project Technical Committee;
- Wide dissemination of Weather Insurance Index;
- Improvement of chances of small holder farmers and pastoralists to reach the financial institutions for financing to enable them cope with climate change negative impacts;
- Continue capacity building for all the stakeholders at the federal and states level;
- Adoption of Federal Ministry of Agriculture and other relevant stakeholders to the project interventions and replicate in other areas;



- Adoption of Ministry of Finance as a stakeholder to the project ideas and interventions and coordinate with other stakeholders;
- Government of Sudan has to support the sustainability of the Early Warning Systems Units established and link that to the agricultural activities and include that in the state policies, plans and strategies to ensure sustainability;
- Continue to advocate for enhancing the accessibility of the target groups to the financial services and to be included in programming from the very onset of a warning system in order to catalyze sustainable development opportunities through increasing the adaptive capacity of the small producers in the rain fed farming and pastoral production systems;
- Prioritize the postponed activities and removing the institutional barriers with the state authorities with respect to the in-kind contribution by HCENR;
- As recommended by PTC, for the institutions who have signed co-financing agreements with the project; an extensive communication must be established with assistance of HCENR to speed up the process of fulfilling these agreements and related CRFP activities; and.
- Activate sub technical committee working groups in order to maximize benefits from relevant expertise.

## II. Introduction:

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### Project's Background and Rational:

Sudan is one of the most vulnerable countries in the world to climate change, ranking 175th out of 181 countries in Notre Dame Global Adaptation Initiative Index (ND-GAIN)<sup>1</sup>. Increased frequency of droughts and high rainfall variability over the past few decades have already put stress on the region's rainfed agriculture and pastoralist systems, the dominant livelihoods in rural areas.

The impacts of climate change and climate variability on pastoral and nomadic groups in the semi-arid areas of Sudan are worsening and causing clashes between nomads and farmers. Severe drought events in 1983/84 -1987 and 1990/91, 2000 and 2003 resulted in declines in livestock populations by 60 to 70% in some areas of Sudan (in addition to affecting at least 8 million people during each event and causing negative impacts on key socio-economic sectors including the loss of life, damage to infrastructure, up to property as well as limited food, energy (hydroelectric power) and potable water supplies). In addition to this, farmers and pastoralists have had to deal with fluctuating prices within and between seasons, due to adjustments in local or world markets. The agricultural/livestock sector has more recently been negatively impacted by renewed trade sanctions by the United States and the secession of the Republic of South Sudan (in 2011), which result in loss of three-quarters of the Sudan's oil revenues; the latter of which caused inflation to reach over 46%. All such risks are exacerbated by inappropriate agricultural practices, weak support services and an inefficient credit system, lack of reliable rainfall forecasting and early warning in rain-fed areas in addition to the absence of the link between Microfinance/Micro-insurance (MF/MI) and weather/climate/agricultural/livestock information. Also, there is no. Finally, on a national level, there is a lack of appropriate policies, legislation, and support to facilitate the adoption of adaptation technologies with financial services.

The main objectives and expected outcomes of the project, as per the CPAP, is to increase climate resilience of rain-fed farmer and pastoral communities in regions of high rainfall variability through climate risk financing. Along with that the project responds to **UNDAF/CPAP** outcome (a) people in Sudan, with special attention to youth, women and populations in need, have improved opportunities for decent work and sustainable livelihoods and are better protected from external shocks, thereby reducing poverty; **UNDAF/CPAP** Outcome (b) populations vulnerable to environmental risks and climate change become more resilient and relevant institutions are more effective in the management of natural resources. That in addition to UNDP Strategic Plan (2014 – 2017), which stipulates:

Outcome 1: Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.

- Outcome Indicator 1.5. Hectares of land that are managed sustainably under a conservation, sustainable use or access and benefits sharing regime.

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<sup>1</sup><https://gain.nd.edu/our-work/country-index/rankings/>

Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste

- Indicator 1.3.1 Number of new partnership mechanisms with funding for sustainable management solutions of natural resources, ecosystem services, chemicals and waste at national and/or sub-national level

Output 1.4. Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented:

- Indicator 1.4.1 Number of countries with strengthened systems in place to access, deliver, monitor, report on and verify use of climate finance.
- Indicator 1.4.2 Number of countries where implementation of comprehensive measures - plans, strategies, policies, programmes and budgets - to achieve low-emission and climate-resilient development objectives have improved UNDAF/CPAP.

Outcome 5: Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change:

- Outcome Indicator 5.2. Economic loss from natural hazards (e.g. geo-physical and climate-induced hazards) as a proportion of Gross Domestic Product (GDP),
- Outcome Indicator 5.2. Economic loss from natural hazards (e.g. geo-physical and climate-induced hazards) as a proportion of Gross Domestic Product (GDP).

Output 5.2. Effective institutional, legislative and policy frameworks in place to enhance the implementation of disaster and climate risk management measures at national and sub-national levels

- Indicator 5.2.1 Number of countries with disaster reduction and/or integrated disaster reduction and adaptation plans (disaggregated by gender responsiveness) and dedicated institutional frameworks and multi-stakeholder coordination mechanisms.

Output 5.4. Preparedness systems in place to effectively address the consequences of and response to natural hazards (e.g. geo-physical and climate related) and man-made crisis at all levels of government and community

- Indicator 5.4.1 Number of countries with end-to-end early warning systems for man-made crisis and all major natural hazards (e.g. geo-physical and climate-induced hazards)
- Indicator 5.4.2 Number of countries with contingency plans in place at national and sub-national level for disaster and extreme climate events with adequate financial and human resources, capacities and operating procedures.

The Project designed to cover six states representing the dominant agro-ecological zones with rain-fed farming and pastoral systems with visible climate change impacts and the areas the most affected by recurring food insecurity and rainfall variability. The six concerned States are Gedarif, North Kordofan, River Nile, Kassala, White Nile and South Darfur. In particular the project aims to strengthen the institutional capacities of financial services on national and state levels to offer relevant microfinance and Weather Index Insurance products to smallholder rain-fed farmers and pastoralists, strengthen monitoring and forecasting capabilities as well as to build capacity within technical agencies to mainstream weather/climate monitoring into the national, state and sectorial planning in the broader context of supporting financial services and climate change risk reduction.

The Project activities will enable SRFPs to have access to capital to purchase adaptation technologies and will provide them with weather and climate information and warnings

so that they can be empowered to take preventive and adaptive actions. Furthermore, by implicating the private insurance sector who is inherently incentivized to support extensive and reliable climate and weather monitoring to ensure low basis risk, targeted early warnings and seasonal forecasts will be improved in the long-term.

National and decentralized authorities (regional government focal points, communities, women-focused organizations, NGOs/CSOs, media, farmers' associations) and the private sector have been important stakeholders in defining the project outcomes and outputs supporting change during project development. These Stakeholders will continue to be consulted during project implementation and will be provided with the space and opportunity to contribute to the consolidation of the project activities.

**The project's expected outcomes are:**

- Institutional and technical capacity for climate observation, forecasting and early warning strengthened at national and local levels.
- Residual climate risk to rural livelihoods in the states of greatest rainfall variability addressed through parametric insurance products.
- Improved access of vulnerable farmers and pastoralists to financial services for climate change adaptation and disaster risk reduction.

MF/WII products will be offered to approximately 45,000 SRFP. According to the MicroEnsure pre-feasibility study, this number includes 1% of total subsistence farmers, 10% mixed crop (half cash crop / half subsistence farmers) and 2% contract-like farmers (i.e., those that are supported by a delivery agent who provides seed and farming guidance in return for cultivated crops) in the 6 target states.

The project is similarly aligned with Sudan's Country Program Action Plan (CPAP, 2013-2016) by cutting across Focus Area 1 (Poverty Reduction and Inclusive Growth) and Focus Area 2 (Environment, Energy and Natural Resource Management). A key deliverable related to an expected output of the LDCF2 project is capacity building for microfinance providers. Similarly, two Outputs under Focus Area 2, which are aligned with the LDCF2 project outputs include:

- CPAP Focus Area 2, Output 1: Vulnerable communities to climate change and climatic risks adapted comprehensive sets of adaptation measures; and
- CPAP Focus Area 2, Output 3: Environmental governance policies and regulatory frameworks for enabling better natural resources and risk management developed.

The LDCF2 project is most closely linked to country priorities of the UNDAF Outcomes 1 and 2 under Pillar 1, Poverty Reduction, Inclusive Growth and Sustainable Livelihoods, with particular attention given to youth, women, groups in need and communities at risk from the impacts of environmental hazards, climate change and recurrent disasters. UNDAF indicators relevant to LDCF2 outcomes include:

- UNDAF Outcome 1 Indicator 2: Number of private sector companies and microfinance institutions providing microfinance services;
- UNDAF Outcome 2 Indicator 2: Number of vulnerable, especially female headed, households adopting climate change adaptation measures; and

- UNDAF Outcome 2 Indicator 4: Number of states with functioning early warning systems, including flood and drought preparedness systems.

The project is also in-line with UNDP's Country Programme Document (CPD, 2013-2016), which builds on the UNDAF 2013-2016 and supports the implementation of key development priorities in the government's National Strategic Development Plan of 2012-2016. The CPD aligns itself with the Istanbul Plan of Action for Least Developed Countries in three areas: private sector development, climate change and social protection. The CPD focus areas that will be addressed include Poverty Reduction, Inclusive Growth and Sustainable Livelihoods and Environment, Energy, and Natural Resource Management. A significant emphasis of the proposed project is on enhancing the resilience of rural communities to climate change related impacts on food security, particularly women and children in Sudan, in line with the CPD's cross-cutting issues.

This project supports national development goals and plans to achieve Millennium Development Goals (MDGs) 1, 3 and 7.

- MDG 1: Eradicate extreme poverty and hunger – by providing access to financial services and improved forecasts and early warnings for SRFP currently in poverty in order to build their resilience to climate shocks. Seasonal forecasts and adaptation technologies can enable the rural population to take adaptive farming measures to ensure productivity.
- MDG 3: Promote gender equality and empower women – Women will be empowered by enabling them to have access to financial services and to take decisions based on forecasts and agricultural advisories (NGO/CSOs associated with Ahead University).
- MDG 7: Ensure environmental sustainability – The foundation of this project is to ensure environmental sustainability by integrating EWS/CI into planning and decision-making as well as to build resilience of SRFP to climate change by enabling them to have access to adaptation technologies.
- In relevance to the SDGs, the project work towards achieving the following post 2015 agenda:
  - SDG1: Poverty alleviation: through enhancing the production and productivity of the target groups with the adoption of the relevant adaptation techniques and covering the production process with the insurance services.
  - SDG2: Achieve food security and achieve good nutrition through promoting sustainable agriculture and climate resilient production system.
  - SDG8: Economy - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all through facilitating target community's accessibility to the micro finance institutions and services.
  - SDG13: Climate - Take urgent action to combat climate change and its impacts on the livelihoods of the small producers through financing climate risk combating activities.
- Policy and programme context, including linkage to other ongoing projects/programs;

The Project is implementing in a challenging context and many challenges with the overall countries' political, financial, socioeconomic and security adverse and complex situations in addition to the strained environment and climate change extreme events, and overall weak governance in the agriculture and natural resources management sectors which makes it very challenging to effectively support natural resource management in remote and marginalized areas in Sudan.

- Sudan's Initial National Communication to the UNFCCC (2003) assessed the likely impacts of climate change and concluded that climate change, including decreasing annual rainfall, increasing rainfall variability and increasing average annual temperatures, was causing challenges. These were identified to include a reduction in ecosystem integrity, a decline in crop yields, frequent droughts, and forced changes to sowing dates, disease, insect infestations and a decrease in biodiversity. In turn, these were noted to lead to increased risks of food shortage, famine and poverty.
- Building on those studies, the Government of Sudan, with support from GEF/LDCF and the United Nations Development Programme, prepared its National Adaptation Plan of Action (NAPA, 2007).
- In addition to the LDCF1 project, other regional related projects focusing on early warning, adaptation and/or microfinance include the following:
  - ✓ The FISU project
  - ✓ The Famine Early Warning Systems Network (FEWS NET funded by USAID) The Eastern Nile Technical Regional Office (ENTRO),
  - ✓ The IGAD-HYCOS project The United Nations Office for Outer Space Affairs (UNOOSA)
  - ✓ RSA is currently being supported by the Global Monitoring for Food Security (GMFS) project.
  - ✓ The North Kordofan Services Project, which is focusing on building capacities to perform rainwater harvesting.
  - ✓ The Great Green Wall Initiative-GGW
  - ✓ Peace Consolidation Project (World Bank and SMDC), which is providing Microfinance services to South Darfur.

The project approach, including project set up and management and coordination arrangements, which can further be elaborated as:

- At the states level, six state coordinators will support the project implementation unit (PIU) in Khartoum in implementing facilitating and follow up of the project activities at state and community levels. A detailed management and coordination program have been prepared for the state coordinators as well as the agreed upon reporting to be submitted on monthly basis to the (PIU).
- The PIU also prepared the Annual Work Plan for the year 2019 during December 2018. The PIU prepared a plan to undertake regular monitoring visits to the target states with the implementing partners (HCENR, UNDP and the Directorate of International Cooperation). The monitoring visits are also undertaken whenever a

problem occurs in a given state. The work at the states level is monitored by the Technical Committees that consists of the relevant stakeholders at the states level. At the national level, the Project Board undertakes the role of monitoring and follow up of the project. The national Technical Committees will be reformulated for the inherited TC of the NAPA project by inserting partner institutions relevant to the mandate of the CRFP.

The CRFP, through focusing on reducing the risks associated with climate change, is planning to enhance the effectiveness of on-going development investments, and early warning institutions to provide timely and accurate weather and climate data to the target sectors and groups. Almost 80% of Sudan's population depends on the natural environment for survival, and the scarcity of these natural resources is identified as being a source for conflicts which is widely recognized as an important source of poverty and risk to rural communities depending on the rain fed agricultural system.

The main implementing partners of the project include the Higher Council for Environment and Natural Resources (HCENR); Ministry of Science and Communication (MSC); Ministry of Water Resources and Electricity (MoWRE); Ministry of the Interior (Mol, both State and National levels); Ministry of Agriculture (MoAg, both State and National levels), Central Bank of Sudan; Insurance Advisory Authority.

The primary M&E tools that have been used during 2019 to monitor and evaluate the progress of activities are: (a) field visits with the main purpose to follow up the undergoing studies that covered almost all the target communities in the six states, including meetings with the different project's stakeholders, target communities and states authorities; , (b) monthly reports required to be submitted by the: the six State Coordinators to the PIU updating about their administrative preparations, and (C) Annual reports required to be submitted (PIR and progress reports).

### **III. Progress Review (specifying reporting period)**

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#### **Section 1: Overall progress against outcomes**

The project contributes to the following strategies:

UNDP STRATEGIC PLAN (2014 – 2017):

- Outcome 1 - Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.
- Outcome Indicator 1.5.: Hectares of land that are managed sustainably under a conservation, sustainable use or access and benefits sharing regime.
- Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste
- Indicator 1.3.1 (Global Level Indicator) Number of new partnership mechanisms with funding for sustainable management solutions of natural resources, ecosystem services, chemicals and waste at national and/or sub-national level

- Output 1.4. Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented:
- Indicator 1.4.1 (Global Level Indicator) Number of countries with strengthened systems in place to access, deliver, monitor, report on and verify use of climate finance.
- Indicator 1.4.2 (Global Level Indicator): Number of countries where implementation of comprehensive measures - plans, strategies, policies, programmes and budgets - to achieve low-emission and climate-resilient development objectives have improved UNDAF/CPAP.
- Outcome 5. Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change:
- Outcome Indicator 5.2. Economic loss from natural hazards (e.g. geo-physical and climate-induced hazards) as a proportion of Gross Domestic Product (GDP),
- Outcome Indicator 5.2. Economic loss from natural hazards (e.g. geo-physical and climate-induced hazards) as a proportion of Gross Domestic Product (GDP).
- Output 5.2. Effective institutional, legislative and policy frameworks in place to enhance the implementation of disaster and climate risk management measures at national and sub-national levels.
- Indicator 5.2.1(Global Level Indicator): Number of countries with disaster reduction and/or integrated disaster reduction and adaptation plans (disaggregated by gender responsiveness), and dedicated institutional frameworks and multi-stakeholder coordination mechanisms.

#### **UNDAF/CPAP OUTCOME 1:**

- People in Sudan, with special attention to youth, women and populations in need, have improved opportunities for decent work and sustainable livelihoods and are better protected from external shocks, thereby reducing poverty.
- UNDAF/CPAP Outcome 2: Populations vulnerable to environmental risks and climate change become more resilient and relevant institutions are more effective in the management of natural resources.
- CPAP Focus Area 2, Output 1: Vulnerable communities to climate change and climatic risks adapted comprehensive sets of adaptation measures; and CPAP Focus Area 2, Output 3: Environmental governance policies and regulatory frameworks for enabling better natural resources and risk management developed.

#### **This project contributes to:**

- OUTCOME 1: Institutional and technical capacity for climate observation, forecasting and early warning strengthened at national and local levels.
- OUTCOME 2: Residual climate risk to rural livelihoods in the states of greatest rainfall variability addressed through parametric insurance.
- OUTCOME 3: Improved access of vulnerable farmers and pastoralists to financial services for climate change adaptation and disaster risk reduction products.

*Annual report: Analysis against the outcome. Here more solid analysis is expected using pre-determined indicators.*

On gauging outcomes, the predetermined indicators for 2019:



**OUTCOME 1: Institutional and technical capacity for climate observation, forecasting and early warning strengthened at national and local levels:**

Outcome one deals with the concept of enhancing the early warning system and building the institutional and technical capacity of the National Hydro meteorological services (NHMS) represented by SMA, RSA and MoWIE in order to provide timely and accurate weather and climate information to inform different stakeholders at the national, state and local levels. In addition to enhance the financial institutions, insurance companies and the target groups of the rain fed farmers and pastoralists in the six states.

The planned activities of 2019 have been dedicated for hard and software procurements which include ASD spectroradiometer and further use of such technology for generating data and information that enhanced the early warning institutions as part of the institutional capacity building activities. Capacity in satellite-based crop and drought monitoring for 9 RSA technicians and specialists has been achieved. Digitization of written hydrological/ meteorological/ climate/ agricultural data rescue purposes that facilitate the generation of climate predictions has been completed. Renewal and purchase of hydrological modeling licenses of hydro-met software, including training on software modeling and purchase of high-resolution remote sensing data for risk and renewal of licenses were achieved. These activities were conducted through the RSA, having MoU with EFTAS, through the use of its existing capacity and resources. Foregrounding Technology Transfer GmbH, a German company being part of the European Space Agency (ESA) with expertise in the field of software modeling and training, is collaborating with the RSA since 2009. The presence of this company will resolve the issue of transferring the hard currency required for the software procurement, license renewal and providing training workshops using its international consultants.

SMA has been contracted with Finish for Implementing activity: 1.2.4 & 1.3.1 concerning training for 12 engineers / 8 technicians within SMA on new automatic climate and synoptic stations, capacity reinforcement for SMA to produce forecasts (on hourly, daily, weekly ts and seasonal forecasts. This was done through strengthening the capacity of 8 meteorologists and 12 specialized technicians and the procurement and installation of 7 automatic climate agro met stations..MoWRIE has been under contracting in 2019 with 50,000 USD for implementing activity 1.1.1., procurement of 3 water level meters to be placed, 3 manual hydrological stations, and 2 acoustic Doppler flow meters (ADCP). The progress towards achievement of the results of this activity is as follows; MOWRIE reported that 3 water level meters, 2 ADCP, 2 fiber boats and 2 boats engine have been procured during this reporting period. Contacts have been made with the national telecommunication authorities to establish institutional relationship with the CRFP and to officially link the project with the working telecommunication companies to provide customized agro advisory services with EWS, MF/MI and finally Mobile Application for farmers and pastoralist under process through UNDP. Significant progress towards realization of outcome one has been done, due to the positive response of the project partners were established strong working group to achieve the comprehensive knowledge sharing workshop.

**OUTCOME 2: Residual climate risk to rural livelihoods in the states of greatest rainfall variability addressed through parametric insurance:**

This outcome planned to address the residual climate risk to rural communities through the parametric insurance policy of pastoralist which has been done which has been done by an international consultant. The awareness of developing the Weather Index Insurance product was conducted during 2017 - 2018 and the national workshop to introduce the WIIP to the stakeholders was convened. This allowed Alnilain Insurance Company to be the first insurance company that may be able to pilot the WII products for more than 1000 farmers in four targets states ( Kassal , Algeedarif , White Nile and S. Darfur ) and pay out to 532 farmers in this states In order to realize an optimal application of the MF/MI products and efficient use of the financial services tailored to each target group and state, a set of activities were planned for 2018 ,in addition to purchasing a I CLOUD secure data for climate monitoring and observation. As with regard to the progress of this outcome related activities and I Cloud to secure data service for RSA, SMA, MOWRE, ARC, the Ministry of Agriculture, the Ministry of Livestock, HAC and MFIs/Insurance companies to access flow, meteorological, climate and satellite image data will be hosted and managed by ARC. By hosting the server ARC conduct this activity through its existing contacts with the international service providers. The process started in the first quarter Of 2018 with consultations between the ARC and their specialized contacts to identify the technical specifications of the system required for the ICloud. A meeting with the identified ICT expert, ARC, project team and partners has been held to explain the mechanism of the ICloud as well as exploring the technical capacity and expertise of each partner. It has been agreed that the activity will be followed and organized by the ARC and the ICT expert and is expected to be finalized during early 2019.

**OUTCOME 3: Improved access of vulnerable farmers and pastoralists to financial services for climate change adaptation and disaster risk reduction products:**

This outcome deals with increasing target groups' access to micro finance services and the approved adaptation technologies. In this regard, a set of approved adaptation technologies have been applied to five out of six states. A contract has been signed with the ARC in target states to conduct and oversee the three main activities of outcome 3, namely; Activity 3.1.1 Organization, centralization and promotion of lessons learned on best agricultural/pastoral practices. An international consultant has been recruited to deal with activity 3.1.2 identification, documentation and promotion of proven adaptation crop and livestock production technology packages through on-farm validation in this regard, five validation trails for adaptation crop and livestock production technology conducted in targeted states. Activity 3.1.3: assessment of previous experiences, design and development of an effective agro-advisory service to assist MF/MI and ensure the added value of adaptation technologies for risk minimization has been implemented and reported on between July and October 2018.

An MoU with the institution of microfinance in target states has been signed and it is expected to facilitate adoption of flexible loan products for the adaptation activities that are being developed by a national expert. In connection to this, a technical and financial proposal was developed by the national consultants and reviewed by CRFP Team. This was followed by a one-day workshop purposely to approve the technical proposal by the different relevant stakeholders and PIU. As a consequent of that

four sub technical committees have been formed in each state, including; technology committee, integrated pest management committee, input delivery committee and MF/MI committee to oversee the formation of CBOs. A study report has been submitted to PIU for technical review and approval.

## Section 2: Progress against each output

### Project Output 1: Institutional and technical capacity for climate observation, forecasting and early warning strengthened at national and local levels

Output indicators	Targets	Progress against targets
<p>1.1.% increase in coverage for climate/weather monitoring in each of the 6 targeted states.</p> <p>(1) AWS, synoptic WS and 75 rain gauges and water levels are placed.</p>	<p><b>Baseline:</b> 1.1 limited cover less than 10% of the target population, increased to 20% from 2015.</p> <p><b>AWP Target:</b> 1.1 (90%) coverage for climate/weather monitoring in each of the 6 target states</p> <p><b>Baseline:</b> 28 manuals, 35 automatics, 58 rain gauges are located in each target state</p>	<p><b>Reporting period:</b></p> <p>More than 100% reported increase in the coverage for climate / weather monitoring in each of the 6 target states achieved during this reporting period.</p> <p>The project had recruited international consultant on Capacity Development on Satellite based Crop and Drought Monitoring and he recommended considerations of National strategy, Facility Focal point, and equipment in future to enhance the project sustainability. This could be achieved through Establishing the National Climate Data Committee, Data sharing protocol and data sharing mechanism. The committee have to define the Data Classification and Sharing protocol and Develop the Met data.</p> <p>202 rain gauges were installed to provide rainfall data in the project target areas. Procurement of 7 additional AWS is currently in process and we have conducted Training of 3 SMA technicians for AWS maintenance and troubleshooting in Finland.</p>



<p>1.2 % increase of rain-fed farmers and pastoralists with access to improved weather/climate information and early warnings (disaggregated by gender and producer type).</p>	<p><b>Baseline:</b>          1.2. This is the first time to apply such activity in Sudan, during year (1) the weather devices were not completed and most of the rain gauges installed after the rainy season.</p> <p><b>AWP Targets:</b>          1.2. Women who received EWS alerts/CI in target states: 8% Male who receive EWS alerts/CI in target states: 15%; disaggregation by producer will be confirmed.</p>	<p>75% of female farmers and 65 % of male farmers in the rain-fed farming and pastoral areas now have access to improved climate information and early warnings to droughts and floods incidents.</p>
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1.3 Frequency of forecast bulletins provided (two bulletins)

- 1.3.1 Localized daily and seasonal bulletins for each state.
- 1.3.2 Development of at least 2 tailored bulletins.
- 1.3.3 Mobile Advisory Messages (SMS)

**Baseline:**  
1.3. Seasonal; daily bulletins were not either published to public or disseminated to the direct beneficiaries.

**AWP Targets:**  
1.3. At least two semi-annual bulletins to be issued and disseminated to the six states.

**Reporting period:**

All partners are linked to a iCloud to enable them to receive weather news and weather prediction bulletins. The service is automatically updated by focal point from project partners. Who in turn disseminate weather information to the community at a wider range using Mobile services (SMS) a phone-based contact list of the beneficiaries in the six targets states?

The project is conducting yearly 7 workshops in target state (Khartoum, Kassala, White Nile, S. Darfur, N. Kordofan, Gedarif and R. Nile) to strength forecast rainy season.

Two tailored weather bulletins developed by SMA and the CRFP, targeting the project beneficiaries in the six states are disseminated on daily basis, using text messages and other media.

The project with the collaborating working telecommunication companies (MTN and Sudan) is providing customized SMS services to the project's target communities in Early warning system, Microfinance /Micro insurance related information



1.4. % of the equipment purchased and installed.

**Baseline:**  
1.5. During year one; only 30% of the procurement has been completed.

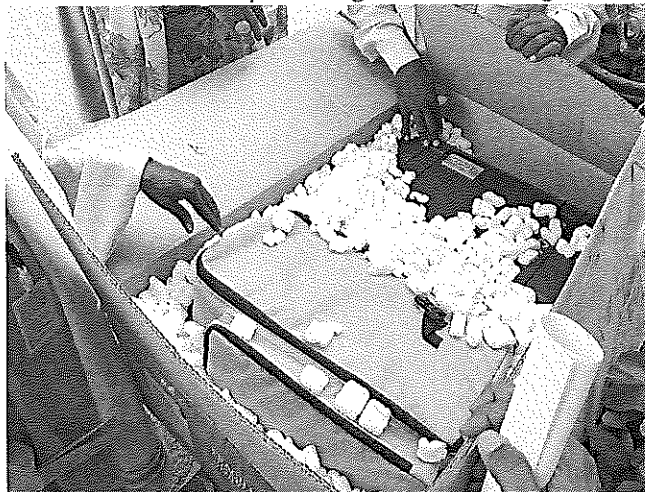
**AWP Targets:**  
1.5. 100% of the targeted procurement achieved during this reporting period.

**Reporting period:**

100% of procurements planned for 2019 had been realized during the second half of the year. During this reporting period, the project Purchased the Spectroradiometer to RSA, and MOWRE to Purchase a 5 water level and for the Renewal and purchase of hydrological modeling licenses of hydro-met software (Activity 1.1.3. USD 10,000). the project has Purchased of 18 additional automatic climate stations (agro met station) with the SMA, and contract has been signed with the RSSA for Procurement and installation of 8 drones , and purchased and

18 AWS,  
Spectroradiometer  
for Remote Sensing,  
8 Early warning  
units, 8 Drones and  
5 water level.

installation of 8 early warning units in six target state.



Spectroradiometer

**Project Output 2: Residual climate risk to rural livelihoods in the states of greatest rainfall variability addressed through parametric insurance products.**

Output indicators	Targets	Progress against targets
<p><b>Indicators:</b> 2.1. Number of WII product designed, validated and approved for rain-fed farmers / pastoralists</p>	<p><b>Baseline:</b> 2.1. WII products have been developed and finalized during 2015,</p> <p><b>AWP Targets:</b> 2.1. At least one of the 6 products piloted in the six targeted states. Pastoralist and microfinance policy.</p>	<p><b>Reporting period:</b> Although (8) WII products were originally planned for the six states; but at the end of the WII study, 20 WII products were developed. With the approval from Supervisory is in place. Insurance companies submitted a full proposal to start piloting WII products for pastoralist in two states (N. Kordofan, White Nile and South Darfur). The target communities identified jointly with CRFP based on communities' willingness, climate/ weather devices, CBOs established and the insurance company access. Finally, Supreme Insurance Authority approved pastoralists policy in September 2019 and was became 22 WII products</p>



2.2. % increase in the number of market outlets and insurance agents in the rural areas to disseminate MF / WII products

**Baseline:**  
22. WII products have never existed in Sudan.

**AWP Targets:**  
2.2 25 % of market outlets and insurance agents in rural areas to disseminate MF/WII products.

At least one designed study to identify the target beneficiaries in the six states.

The Project create insurance portfolio which will help to disseminate MF / WII products in six target state.

**Reporting period:**

The project has restructured of the insurance team to increase market outlets for agents and brokers through companies and workshop in six target states (90 participants).

The project supported 1500 farmers target rain-fed areas and another 1000 pastoralists are in the pipeline to receive the support.

The project had received many proposals from companies and will implementing through insurance portfolio (Alneelain, shikan, Aleslamia and altaawnia) to adapt agro pastoralist policy.



2.3. Average speed of claim resettlement in all 6 States over the past 10 years

**Base line:**  
2.3. Average speed of claim resettlement in all 6 target states over the past 10 years was 35 days

**AWP Targets:**  
2.3. (6) Awareness raising campaigns. Series (TOT) training in each implementation zone for farmer and pastoralist on WII and microfinance.

**Reporting period:**

The average number of days to settle these claims ranges from 20 to 25 days, and the project recruited insurance national consultant to revised Alneeilan piloting and to present recommendation to speed average claim.

The project conducted 7 Awareness raising campaigns in six target states and center states in addition to 3 (TOT) training workshops to 150 participants in three states.

2.4. Claims ratio in all 6 States over the past 10 years

**Baseline:**  
2.4. Average claims ratio over the past 10 years in all 6 States was 0.62

**AWP Targets:**  
2.4. Average claims ratio in all 6 target states by the end of the project is 0.8

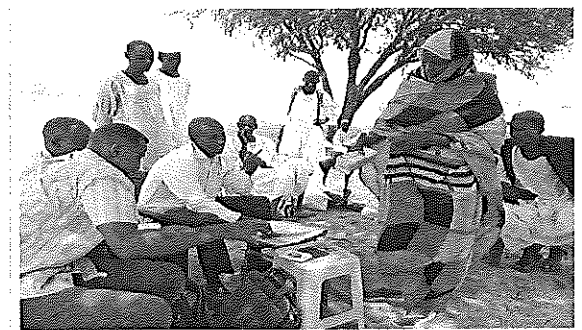
**Reporting period:**

The average claims ratio had been calculated after piloting deployment of Weather Index based Insurance phase in the four targeted states (Kassala, White Nile, S. Darfur, and Algedarif) is 45%. And will be increased after this season to achieve .8.



**Project Output 3: Improved access of vulnerable farmers and pastoralists to financial services for climate change adaptation and disaster risk reduction**

Output indicators	Targets	Progress against targets
<p><b>Indicators:</b></p> <p>a. Number of loan products for adaptation farming and livestock production designed and introduced which provide flexible payment schedules for farmers and pastoralists dependent on rain-fed practices.</p>	<p><b>Baseline:</b></p> <p>3.1. There are currently no MF products geared specifically towards SFFP</p> <p><b>AWP Targets:</b></p> <p>3.1. At least 3 flexible MF products developed which are geared towards the needs of rain-fed farmers and pastoralists in the target production systems.</p> <p>1000 farmers and pastoralist will lend from microfinance institutions (Mishka Microfinance institution and Elebdaa Microfinance bank).</p>	<p><b>Reporting period:</b></p> <p>The project had conducted series of awareness campaign in six target states raising 60 for three 'states Kordofan, Nyala and W. Nile') and Kassala, Gedarif and R. Nile) to promote seven products (5 loans for farms products and 2 loans for agro pastoralist product).</p> <p>Mishka Microfinance institution had lended 29 associations (449 direct and 2245 indirect) Elebdaa Microfinance Bank has signed agreement with the Project to have lender (938 direct and 4695 indirect) farmers and pastoralist and promoting two new products (White Nile, Algdaref, and North Kordofan).</p> <p>Elebdaa Microfinance bank paid the first premium on behalf of the piloted farmers and pastoralists through their associations/groups for this season Sudan microfinance company will lend (3000 direct and in direct) beneficiaries in three target stats (White Nile, Algdaref ,and North.Kourdan ).</p>
<p>3.2. Number of adaption</p>	<p>Base line:</p>	<p><b>Reporting period:</b></p>





technologies documented and promoted to the target groups in the different production systems.

There is no documentation or promotion for the approved adaptation technologies.

The project had developed three finance policies had developed by in collaboration with Ebdaa microfinance bank and Mishka Microfinance institution.

**AWP Targets:**

3.2. One micro-finance policy developed mandating the adoption of adaptation technologies for microfinance products tailored to rain-fed farmers and pastoralists



3.3. % increase in the productivity and income of rain-fed farmers and pastoralists who use adaptation options/packages linked with MF/MI (as compared with non-participating farmers/pastoralists),

**Base line:**

b. There are no rain-fed farmers and pastoralists who use adaptation options/packages linked with MF/MI

**AWP Targets:**

3.3. At least 3 adaptation technologies adopted by rain-fed farmers and pastoralists in the target states with 1 of these technologies targeting women or youth

**Reporting period:**

50 workshops and 30 awareness sessions have been organized in the targeted states. Farmers field schools, pastoralist rang land, veterinary services, rural women activities, home gardening and fruit trees (935 beneficiaries) were supported in four target states (Kassala, Al Gedarif, White Nile and S. Darfur).

A set of smart technologies have been developed for the six states in collaboration and consultation with the Agricultural Research Corporation (ARC). such as water harvesting techniques; early maturing crop species and drought resistant seed varieties.

120 scientific validation trials achieved during the previous season convinced the farmers practically to use it as a tool to reduce the impact of climate change and adoption the technology, Micro Finance companies are now ready to support the targeted farmers and pastoralist, the MF services will be linked to the use of the technologies released by the Agriculture Research Cooperation (ARC), however, this component need more effort by the project to be implemented this season 2019.

The insurance team of the project facilitate 6 workshops for targeted states on WII to build

the capacities of the insurance companies and MF institutions and MOA, moreover they held awareness-raising workshops in the six project targeted states focusing on the process of weather index insurance documentation. The ministry of animal resources was also facilitating considerable efforts to execute training courses in the six targeted states, (8) workshops targeted the communities' leaders, extensions officers and pastoralists were completed.

The memorandum of Understanding has been signed with Microfinance institutions to complete the WII requirements by including national revised policies and regulations, awareness raising and commitment to support individuals and associations lending. Remote Sensing Authorities (RSA) delivered GPS, GIS training for 28 participants comprising extension agents, insurance brokers and SMA



3.4.% of the productivity and income of rain-fed farmers and pastoralists who use adaptation options/packages linked with MF/MI (as compared with non-participating farmers/pastoralists)

**AWP Targets:**

3.4 At least 3 adaptation technologies adopted by SRFPs in the targeted states with one of these technologies targeting women or youth are documented and promoted.

A 45 % (reported) increase in productivity for farmers who used water harvesting , used improved seeds technology crop rotation, weeding control, seed fogger, and spacing in four states (White Nile , Algdaref ,and North Kourdan State, and South Darfur) after rainy season and who used technologies from ARC had been reported.



### **Results of Key Activities:**

Outcome 1: The progress of the project in 2019. All the Automatic weather stations requested in the project document for the six targeted states were installed and operating, the process of purchase of the recommended additional 18 Automatic stations is under insulation, Installation of 2 acoustic Doppler flow meters, and 3 manual hydrological is in progress and purchase of 8 water level meters, 3 manual hydrological stations and 3 current meters provided by the project , Digitalization of hydro metrological data is in progress ,although this activity was hindered by the lack of communication and delay of response between the targeted institutions, namely Sudan Metrological Authority (SMA), Remote Sensing Authority (RSA) and Ministry of Water Resources, Irrigation and Electricity the rating is Satisfactory (S).

Outcome 2: The project provides weather index insurance (WII) services for 1000 farmers in (4) targeted states and 120 Pastoralist in 2 targeted state. The operations successfully are done because all insurance companies agree upon to develop the first documents of WII of pastoralist in Sudan. Other activities relevant to telecommunication, weather insurance and microfinance is in process for this season 2019. Rating is satisfactory (S).

Outcome 3: Deals with increasing the target group's access to microfinance services. A team for microfinance was developed with the participation of the private sector an intensive program to execute the activities planned in the project document is in progress Approved adaptation technologies have been applied in the six targeted states, this has been achieved through MoU and management plans with Agricultural Research Corporation (ARC). The project support the women groups by linking them with MFIs and insurance companies in livestock and home farming activities, based on successful results achieved the insurance companies are requesting to get a head of the WII products. And have start mobilizing communities to joint WII activities to mitigate climate risk to increase the resilience among the targeted beneficiaries. Also, the companies support the project with relevant documents (Legally and regulatory) for WII.

### **M&E and AWP 2019 implementation:**

The annual work plan of 2019 was prepared during December 2018 to January 2019 in close consultations and meeting with all partners, UNDP staff and was finalized and submitted in

January 2019 with a total budget of US \$1,934,916 as guided by the project document. In connection to this, due to the significant delay in the implementation of the planned activities for 2018 due to lack of institutional and partner support and commitment, some of them were moved to 2019 plan in addition to 2019 scheduled activities in order to compensate for the delay. In order to ensure expedited implementation of the activities a crash workplan has been prepared to that effects. Farther more the Workplan with undergo follow up consolidated workplan to ensure completion of activities before project terminate.

#### **Gedairf , North Kordofan ,White Nile, South Darfur and Kassala States:**

During the period may - Nov 2019 the Project team and partners mounted a mission to Gedaref and kassla States with the objective to assess and evaluate the project performance after the extension and the role of technical committees in speed up of project implementation and visited the field to raise awareness on WII and to encourage use of new technologies. Also, in August 2019 the insurance team and Federal Ministry of Livestock team conducted training workshops on insurance. Also, the role of the TC to facilitate the link of Farmers, Pastoralists and Women with financial agencies has been promoted.

#### **River Nile State:**

On Augusts 2019, the PM and M&E Officer held a meeting with the Technical Committee in the River Nile State for the preparation of the winter season and to apply WII for the first time in this Stat. Also, a number of villages were visited to hold awareness campaigns collect data from farmers and to ensure that the weather equipment is ready to collect relevant data. Also, during that visit with the support, the Director of the Ministry of Agriculture the TC members was changed with the objective to enhance its effectiveness to adopt the WII. Training on the use mobile phones commenced during the same period.

#### **State-Level Validation Trials and Training Workshops:**

A total of 120 scientific validation trials were conducted in 5 states by the ARC and agricultural extension agents in farmers' fields. These include improved varieties such as groundnuts, sorghum, sesame, millet and cowpeas. Also 40 field days were done by project stakeholders in 2019 season, 50 workshops and 30 awareness sessions have been organized in the targeted states during 2019.

#### **To sum up, the main achievements include the following:**

- Technical and legal approval of WII products (summer season policy, pastoralist policy and microfinance policy) from Higher SHRIA committee achieved;
- Weather Index Insurance package developed and implemented among more than 1000 farmers in summer season 2017 and more than 1200 in 2019.
- The project has developed three finance policies had developed by in collaboration with microfinance institutions to adopt technologies linked with microfinance and WII services adopted by rain-fed farmers/pastoralists.
- Seven automatic weather stations were installed in all six pilot states and also 18 additional AWS were purchased. Moreover 240 rain gauges in pilot farm areas are also

installed. Farmer were trained to monitor rainfall and report to local meteorology station by phone;

- The project has established of 8 Early warning units in six target state, ministry of agricultural, and range land. in order to enhance an Integrated system for monitoring, data collection, analysis, and communicating to people in order to make early decisions to protect farming pastoralist system and the environment.
- The project has completed the installation of Spectroradiometer for Remote Sensing hyperspectral scene analysis in agriculture, particularly for the detection of pests and diseases before they become visible to the human eye considered as early warning that improve the crops.
- The project has trained more than 3366 participants during project in three component which increasing capacity building
- A set of smart technologies have been developed for the six states in collaboration and consultation with the Agricultural Research Corporation (ARC).such (used water harvesting , used improved seeds technology crop rotation, weeding control, seed fogger, and spacing and adaptive seeds involving farmers) and drought resistant seed varieties.
- The memorandum of Understanding has been signed with 30 partners (23 national partnership and 7 International partnership).
- Farmers groups and cooperatives were formed, and cooperatives were registered in relevant government agency;
- Climate monitoring activities expected to cover 45%men and 50% women of the project sites; and.
- Elebdaa Microfinance Bank and Mishka Microfinance institution had has signed agreement with the Project to lend farmers and pastoralist and promoting two new products, and they lended more than 900 beneficiaries
- Conducted awareness program for farmers on weather index-based insurance and micro-finance.

#### **IV. Monitoring and Evaluation**

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The CRFP incorporates M&E framework as presented in its 2016 Annual Work plan includes outputs, indicators, baseline, targets and activity results that are used to get the required information with regards to the progress of the project. In the first half of 2019, the output-level indicators and targets haven't been clearly addressed due to the delay in implementing the planned activities as a result of the significant delay in transferring the fund allocated for the first quarter (the fund was received on 23/5/2019). Accordingly; a detailed M&E Plan has been prepared to follow up and reporting on each implemented activity, yet this has not been fully reflected due to the delay in implementing the planned activities and achieving the stated delivery level. The M&E activities during this reporting period include:

- Prepare and review the new contracts of the project partners;
- Reschedule the project activities for 2019 Work Plan to address the delay of the previous years; and.
- Prepare the project Implementation progress report.

## V. Key Challenges, Lessons Learned and Recommendations

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### Key Challenges: -

- The government policy towards microfinance and regulatory mechanisms should be reviewed to meet the present outstanding needs by small scale farmers and pastoralists.
- The need to address the issue of the premium, particularly in the livestock sector (the pastoralists) in order to enhance the engagement of the insurance companies.
- Review of the government security policy towards information of the drones.
- The capacity of the government to regularly receive the allotment of the local component.
- The need to resolve the logistical constraint.

### Lessons Learned:

- There is clear understanding and adoption of the weather index technology and products by the concerned companies' financial institutions and the community at large.
- One of the success tractors of the project is the presence of a stronger partnership.
- The accrued benefits have encouraged the government to expand or the project to other states.

### Recommendations: -

- The government to contribute to the payment of the premium in order to initially support the achievement made so far in the weather index insurance.
- The release of the government counterpart contribution is detrimental to the success of the project.
- The presence of a user guide for the management of the reserve grazing resources that would encourage the engagement of the insurance companies.

## VI. Update on risks and mitigation measures

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The late start of the project posed some serious risks that have to be addressed immediately and incorporated in the project and partners plans.

- Despite limited resources usually allocated by the Government Sudan for research activities, however Agricultural Research Corporation (ARC) mainstreamed the work on CRF validation trails in the regular programmes of the six targeted states, henceforth availing in-kind contribution to the project. This in addition, to an amount of SDG 2,050,000 (equivalent USD 45,555) donated by the Ministry of Finance to the project.;
- Low level of awareness on accurate and credibly useful weather information has always been a challenge for insurance companies. To address this challenge, the project conducted awareness campaigns and training courses in (TOT) to insurance brokers, stakeholders and beneficiaries in six states (150 participant) and later connected with international agencies to provide high resolution image and accurate data.

- Data sharing is enhanced by active coordination between concerned agencies through purchasing of mobiles and iCloud;
- To overcome missing trained and qualified engineers/technicians' salaries had been increased and more training opportunities were provided;
- To solve the problem of remotely sensed data-based indices, which had been a challenge for insurance companies, awareness companies and training course were directed to insurance brokers, stakeholders and beneficiaries;
- Purchase of equipment and establishment of iCloud will provide data and information for the insurance companies and this will lower the upfront cost; and
- Participation of private sector will ensure future sustainability of project

## **VII. Partnerships and Sustainability**

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### **Civil Society Organizations/NGOs: -**

The Project is also working closely with many stakeholders including counterparts representing the insurance sector, microfinance sector and early warning systems institutions.

As the project targets farmers and pastoralists, it is building strong partnership with the Farmer's and Pastoralist's Associations to ensure that key project messages are communicated through these institutions. Relevant NGOs such as Practical Action, Youth and Female Society Organizations and the Sudanese Climate Change Network as well as SOS Sahil (a Pastoralist NGO), are being contracted by the project to ensure that awareness campaigns about weather index insurance are communicated to the targeted communities across the villages and localities of the six targeted states.

The project is building strong partnership with the Farmer's and Pastoralist's Associations to ensure that key project messages are communicated through these institutions and to facilitate linking between financial institutions.

### **Indigenous Peoples**

The project targets farmers and pastoralists in selected villages in the six targeted states. The project is conducting extension campaigns and training awareness at the grass root level to ensure that the project concept of weather index insurance is well understood and facilitate to access to financial services. Chairs of Pastoralists and Farmers Associations are already part of the technical committee and have always been involved in the project plan formulation to implementation. Unions for farmers and pastoralists in the six targeted states are now partners for the project.

### **Private Sector**

Insurance and some microfinance institutions in Sudan is a private sector. The project is well engaging with (Elnilain, Altaawnia and Aleslamia ) insurance companies that is involved in the implementation of the project. Some insurance companies, financial institutions and micro-finance agencies are partners of the project. The microfinance institutions specially the (Microfinance Unit of the Bank of Sudan, Alfal microfinance company and Ebdaa

microfinance bank) are having an extended partnership with the project from the design phase through to the implementation phase. Both insurance and microfinance sectors are represented in the Project Board and to provide the adequate guidance in both fields

## VII. Financial Summary

**Table 1: Overview of available resources for the reporting period**

(Total funds received from different donors)

Donor	Allocations/ funds received in 2019	Total (US\$)
GEF	1,927,656	1,927,656
<b>Total</b>	<b>1,927,656</b>	<b>1,927,656</b>

**Table 2: Overview of budget and expenditure per output**

(for multi-donor projects, show the cumulative total)

Output	Budget	Expenditures
Output Improve access to microfinance	765,700	134,467.02
Output 2 Strengthen Early warning sys	1,055,555	476,531.56
Output 3 Weather Index Insurance (WII)	313,502	185,845.55
Output 4 Project Management	0	- 13,820.16
<b>Total</b>	<b>2,134,757</b>	<b>783,023.97</b>

**Notes:**

1. The project commitments and un-depreciated assets is US\$ 61,504.21.
2. The financial information contained in this report is an extract from UNDP financial records. All financial information provided above is provisional. Certified financial statements will be provided after the closure of 2019 accounting period.



are to be included below the financial tables:

### Annex I: Progress Review: detailed matrix of activities and results

Outcome 1	Indicators	Baseline	Annual target	Progress / target
<p>OUTCOME 1: Institutional and technical capacity for climate observation, forecasting and early warning strengthened at national and local levels:</p> <p>Budget: Expenditure to date</p>	<ul style="list-style-type: none"> <li>1.1. % increase in coverage for climate/weather monitoring in each of the 6 targeted states</li> </ul>	20%	30%	90%
	<ul style="list-style-type: none"> <li>1.1. % increase in coverage for climate/weather monitoring in each of the 6 targeted states</li> </ul>	20%	30%	70%
	<ul style="list-style-type: none"> <li>1.2. % of rain-fed farmers and pastoralists with access to improved weather/climate information and early warnings (disaggregated by gender and producer type).</li> </ul>	1.2. Women who receive EWS alerts/CI in target states: 5%; % Men who receive EWS alerts/CI in target states: 10%	8%, % Men who receive EWS alerts/CI in target states: 15%;	60% of female farmers and 55% of male farmers in the rain-fed farming and pastoral areas
	<ul style="list-style-type: none"> <li>1.4. Frequency of forecast bulletins provided (two bulletins)</li> </ul>	1.4. Seasonal; daily bulletins were not either published to public or disseminated to the direct beneficiaries.	1.4. At least two semiannual bulletins to be issued and disseminated to the six states.	Two of the localized and tailored bulletins have been issued this reporting period (Jan – Dec 2018).
	<ul style="list-style-type: none"> <li>1.5. % of the equipment purchased and installed.</li> </ul>	1.5. During year one; only 30% of the procurement has been completed.	30%	90%
Planned activities		Results		
Action 1.1.1 Procurement of 5 water level meters to be placed, (3 manual, hydrological stations and 2 acoustic Doppler flow meters (ADCP) for (MOWRE)		Business plans prepared and scheduled, contract, received bills and the payments have been made through UNDP for MOWRIE.		
Action 1.1.3: Renewal and purchase of hydrological modelling licenses of HydroMet software including training for nine (9) engineers with modelling software (RSA, SMA, MOWRE)		About eighteen had trained, mostly from the project staff at the six target states, in addition to one participant from the staff of the Ministry of Water Resources and Irrigation, Remote Sensing Authority, and Ministry of Agriculture, will be anticipated that, the trained staff will use their acquired knowledge, to generate the necessary		

	information and disseminate it to the farmers and pastoralist in their area of responsibility.
Action 1.1.3: Renewal and purchase of hydrological modelling licenses of HydroMet software including training for nine (9) engineers with modelling software (RSA, SMA, MOWRE)	To conduct this modelling, we have agreed with focal point of (MOWRIE).to prepare this modelling equipment with RSSA & SMA and will start in mid-November 2019.
Action 1.2.1 Installation of additional 18 AWS in six target states	It has already purchased 18 AWSs in September from (VAISALA Oyj Finland), It will extend capitalism of assets, so that to support institutions working in early warning system.
Action 1.2.1 Installation of additional 18 AWS in six target states	The project will start of installation of 18 AWS in mid of November, after making tracking system.
Action 1.1.7: Training for of at least 10 MOWRI engineers, 4 SMA engineers and 3 RSA engineers on flow meter calibration in wadis and soil infiltration rate measurements.	We prepared (TOR) for International consultant to provide training for of at least 12 engineers from MOWR, SMA and 3 RSA on flow meter calibration in wadis
Action 1.1.7: Training for of at least 10 MOWRI engineers, 4 SMA engineers and 3 RSA engineers on flow meter calibration in wadis and soil infiltration rate measurements.	On track, and it will conduct in first of December after sign with international consultant.
Action 1.2.2: Purchase of 7 drones to Strength states farms monitoring and train remote sensing cadres on crop assessment	The training hosted by Asian institute of technology for 14 participants, the programme objective of the training is to practice on drone operation and image analysis for crops.
Action 1.2.2: Purchase of 7 drones to Strength states farms monitoring and train remote sensing cadres on crop assessment	A set of smart specification have been developed by consultation with UNDP and project unit, and we prepared MoU which help to purchasing from international agencies
Action 1.2.6 Knowledge transfer between Sudan NHMS (RSA, SMA, MOWRE and the Ministry of Agriculture) and regional and international agencies on vegetation and drought monitoring	Business plans was prepared, contract and the organizing by UNDP.
Action 1.2.6 Knowledge transfer between Sudan NHMS (RSA, SMA, MOWRE and the Ministry of Agriculture) and regional and international agencies on vegetation and drought monitoring	It has already done by partners for two days, and all of them have presented their products which to provide and develop the bulletin.
Action 1.2.7 License renewal for the TAMSAT product including training by an expert on Cold Cloud Duration to effectively use satellite images to determine rainfall estimates	The project was held Meeting with (SMA) focal point to set MoU and Contract, and it will License renewal in December.
Action 1.3.4 Capacity reinforcement by a National financial expert on long-term sustainable budgeting and establishing sustainable cost-recovery mechanisms with revenues generated from selling tailored weather	TOR prepared and scheduled, contract and the payments have been made with the early warning committee, this activity is planned to be finalized in early December 2019.
Action 1.3.5 Establishment of a farm information management system	A contract has been signed with national expert to National strategy, Facility Focal point, and Capacity development, and establishment of early warning units for 40 days.
Action 1.3.5 Establishment of a farm information management system	The target was achieved by purchase and installation of 8 Early warning units in six targets states, Ministry of agriculture, and range land.

Action 1.3.5 Establishment of a farm information management system	It set specification and MoU with consultations with UNDP and company which setting and installation the APP, and it will start in December
Action 1.4.3 Implementation of a formalized feedback mechanism from beneficiaries to NHMS/ARC on the utility of alerts, weather/climate info/forecasts/predictions and agricultural advisories	To prepare formalized feedback mechanism from beneficiaries to NHMS/ARC on the utility of alerts, to help pastoralists and farmers to better manage covariate risk in rain-fed agriculture in six target states.
Action 1.4.4: Weather Index Insurance Awareness through national and local media (TV and radio channel) and different channels	To disseminate the concept of WII the project agreed with many national media (Alshrooq Channel, daily newspaper and radio channel), and the project have public account in Facebook

Output 2	Indicators	Baseline	Annual target	Progress / target
<p>OUTPUT 2: Residual climate risk to rural livelihoods in the states of greatest rainfall variability addressed through parametric insurance products:</p> <p>Budget: Expenditure to date:</p>	2.1. Number of WII product designed, validated and approved for rain-fed farmers / pastoralists	2.1. WII products have been developed and finalized during 2015,	2.1. At least one of the 6 products piloted in the six targeted states.	
	2.2. % increase in the number of market outlets and insurance agents in the rural areas to disseminate MF / WII products	2.2. WII products have never existed in Sudan.	2.2 At least one designed study to identify the target beneficiaries in the six states.	
	2.3. Average speed of claim resettlement in all 6 States over the past 10 years	2.3. Average speed of claim resettlement in all 6 target states over the past 10 years was 35 days	2.3. (6) Awareness raising campaigns.	
	2.4. Claims ratio in all 6 States over the past 10 years	2.4. Average claims ratio over the past 10 years in all 6 States was 0.62	2.4. (6) training sessions.	
Planned activities		Results		
Action 2.2.3 Development of a nationally based WII marketing and development team associated with the WII international specialist organization		The project has restructured of the insurance team to increase market outlets for agents and brokers through companies) On track		
Action 2.2.4.: Identification of farmers and pastoralists willing to participate in WII schemes and to accept the conditions of the loans		It have already done by national consultant (45 participant) 15 in Khartoum, 25 N. kourdufna and White Nile , 5 Kassala , 5 Algdareef and 18 R. Nile.		
Action 2.2.5 Training for local insurers and local brokers to enable them to adapt and underwrite weather index insurance contracts		The project conducted a series of technical and training sessions in six target states for (120) participant and will conduct comprehensive workshop in end of November in Khartoum.		
Action 2.2.11.: Activity: Development of a toll-free number of complaints service to assist SRFPs in the event of dispute		The project was developed of a toll-free number (6171) complaints service and will establishment of call center to solve a complaint and send Message, which are hosting in		

	Ministry of agricultural.
Action 2.2.12 South – South cooperative Countries Kenya, Ethiopia	The study tour was held in Kenya from 29 September to 6 October for 10 person and the Objective to Learn from the Kenyan experience in terms Index Based Livestock Insurance (IBLI) and Pastoral activities management.
Action 2.3.5: Series of training courses led by the TOTs in each implementation zone for farmer cooperatives, extension officers and lead farmers	Series of training courses led by the TOTs in each implementation zone for farmer cooperatives, extension officers and lead farmers including presentations, product brochures, leaflets and comics run. 60 participant for three ‘states Kordofan, Nyala and W. Nile”) and Kassala, Gedarif and R. Nile).

Output 3	Indicators	Baseline	Annual target	Progress / target
<p>OUTPUT 3: Improved access of vulnerable farmers and pastoralists to financial services for climate change adaptation and disaster risk reduction:</p> <p>Budget: Expenditure to date</p>	3.1 Number of loan products for adaptation farming and livestock production designed and introduced which provide flexible payment schedules for farmers and pastoralists dependent on rain-fed practices.	3.1. There are currently no MF products geared specifically towards SFFP	3.1. At least 3 flexible MF products developed which are geared towards the needs of rain-fed farmers and pastoralists in the target production systems.	
	3.2. Number of adaption technologies documented and promoted to the target groups in the different production systems.	There is no documentation or promotion for the approved adaptation technologies.	3.2. At least 3 adaptation technologies adopted by rain-fed farmers and pastoralists in the target states with 1 of these technologies targeting women or youth are documented and promoted.	
	3.3. % increase in the productivity and income of rain-fed farmers and pastoralists who use adaptation options/packages linked with MF/MI (as compared with non-participating farmers/pastoralists),	There are no rain-fed farmers and pastoralists who use adaptation options/packages linked with MF/MI	3.X. 10% increase in yield and/or income for rain-fed farmers and pastoralists who have access to improved financial	

			services linked with adaptation technologies	
	3.4.% of the productivity and income of rain-fed farmers and pastoralists who use adaptation options/packages linked with MF/MI (as compared with non-participating farmers/pastoralists)			
Planned activities		Results		
Action 3.1.3 Assessment of previous experiences, design and development of an effective agro-advisory service to assist MF/MI and ensure the added value of adaptation technologies for risk minimization		Its prepared Business plans, recruited of consultant, contract and the process to payments and will achieve during September to December		
Action 3.1.4 Rectify and improve the existing technology transfer programs to disseminate proven technology packages to agro-pastoralists through their groups/associations/organizations and inform them how micro-finance can be used to support the acquisition of adaptation technologies		Its prepared Business plans with focal point of Ministry of animal resources to produce piloting products.		
Action 3.1.5 Capacity building and institutional support targeting adaptation technology development and transfer		120 scientific validation trials achieved during the previous season convinced the farmers practically to use it as a tool to reduce the impact of climate change and adoption the technology, Micro Finance companies are now ready to support the targeted farmers and pastoralist, the MF services will be linked to the use of the technologies released by the Agriculture Research Cooperation (ARC), however, this component need more effort by the project to be implemented this season 2019		
Action 3.1.7: Review the Agricultural finance of Sudan's previous experience with mobile banking and develop an improved mobile banking service to provide microfinance services to rain-fed pastoralists and farmers in the target states		Its prepared Business plans, recruited of consultant, contract and the process to payments and will achieve during December		
Action 3.1.10 Formalization of community-driven adaptation plans into Sudan's Five-Year Plan (2017-2021)		Workshops will start in mid of November 2019 at state level		
Action 3.2.3 Awareness raising of agro-pastoralists in the targeted areas on the new regulatory framework		During May and June, conducted 6 training workshops in target state for community on the new regulatory framework.		
Action 3.2.5 Development of rules and regulations to bundle microfinance and WII		It prepared (TOR), recruited of consultant, contract and the process to payments through UNDP and will achieve during September to December		
Gender (e.g., youth, women) focused training to inform rain-fed farmers and pastoralists on (contractual service 1individual) MF/WII and climate change adaptation technologies		Business plans, Contract and recruited of consultant will start in December.		
Action 3.4.1 Capacity development for the Agricultural Extension and Technology Transfer Administrations (AETTA) in the targeted localities		Farmers field schools, pastoralist rang land, veterinary services, rural women activities, home gardening and fruit trees (935 beneficiaries) were supported in four target		

to organize farmers in groups and associations	states (Kassala, Al Gedarif, White Nile and S. Darfur).
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## Annex II: Updated Risk Log

#	Description	Status	Type	Impact & Probability	Countermeasures / Mngt response	Owner
	High upfront costs in developing WII may not be cost-effective and can lead others towards traditional forms of micro-insurance	Technical difficulty and ease of scaling-up	In the long-run, index insurance is less expensive to the administrator because there are no on-site inspections or individual loss assessments to perform. (Payout is based on an independent and exogenous weather parameter.) Scaling-up in terms of policyholders will be supported by first pilot testing the WII product. Insurance costs become minimized over time through planning of optimal (adaptation oriented) inputs and as yields rise.	Operational, Strategic, Financial	P = 3 I = 2	Project and partners
	Targeted farmers and pastoralists are sceptical and unwilling to engage into the index-insurance scheme	There is limited uptake of WII products and a potential waste of financial resources	The project will invest resources in familiarizing the target community with index-insurance that will be designed in a way that is affordable to the target community. The beneficiaries will be more willing to accept the insurance products because the regulatory framework for compensation criteria will be updated so that compensation can become clear and streamlined. and project had paid of insurance premium to more than 1000 farmers and had pay out of compensation to farmers in 2017	Operational	P = 3 I = 3	Project and partners
	Limited reinsurance companies willing to back high-risk holder farmers and pastoralists	WII products cannot be successfully implemented without the support of international markets to and offload risks	Connecting Farmers to Market (CFM) project has shown that small holder rain-fed farmers can be effectively provided insurance and backed by reinsurance providers. The LDCF project will be building a formalized partnership with the CFM project, incorporating their lessons learned, and designing MF-MI products (e.g., WII) which will reduce the risks for insurers due to the mandated adoption of CC adaptation technologies by beneficiaries. and now we have more than three companies may want to apply WII in all the Sudan.	Operational, Financial	P = 2 I = 4	Project, government, and partners
	Delay for insurance compensation which could hinder next year's harvests	Farmers will be unable to subsist in a changing climate without sufficient capital thereby making them more affected by climate change	The WII regulations and legal frameworks geared towards farmers and pastoralists will be reviewed and revised so that compensation criteria are clear and compensation is streamlined. and impact of that experiment will end into decreased compensation period and which will continue to remain so with time.	Operational, Strategic	P = 3 I = 3	Project and partners

### Annex III: Annual Work Plan (2019)

EXPECTED OUTCOME	PLANNED ACTIVITIES	QUANTITY				RESPONSIBLE PARTY	PLANNED BUDGET					
		Cost per Unit					Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender
		1	2	3	4							
<p><b>Outcome 1:</b> Institutional and technical capacity for climate observation, forecasting and early warning strengthened at national and local levels</p> <p>Indicators</p> <p>1.1. %90 increase in coverage for climate/weather monitoring in each of the 6 targeted states</p> <p>1.2. %80 of rain-fed farmers and pastoralists with access to improved weather/climate information and early warnings (disaggregated by gender and producer type).</p> <p>1.3. Frequency of forecast bulletins provided (two bulletins)</p> <p>1.4. % of the equipment purchased and installed.</p> <p>Baseline:</p> <p>1.1 During 2018 70 % coverage achieved.</p> <p>1.2. 41% Women who receive EWS alerts/CI in target states: 38%; % Men who receive EWS alerts/CI in target states: 10%</p> <p>1.3. Seasonal; daily bulletins were published and not disseminated to public or direct beneficiaries</p> <p>1.4 80% of equipment purchased and installed in 2018.</p> <p>Target:</p> <p>1.1 60 % increase in coverage for climate/weather monitoring in each of the 6 target states</p>	<p>Activity Result 1.1: Rainfall modelling and simulations for six target states (River Nile, Gedarf, North Kordofan, and South Darfur, Kassala and White Nile States) to enable local flood forecasts and climate projections</p> <p>Action 1.1.1 Procurement of 5 water level meters to be placed, 3 manual, hydrological stations and 2 acoustic Doppler flow meters (ADCP) for (MOWRE)</p> <p>Action 1.1.3: Renewal and purchase of hydrological modelling licenses of hydro met software (RSA, SMA, MOWRE)</p> <p>Action 1.1.3: Renewal and purchase of hydrological modelling licenses of hydro met software (RSA, SMA, MOWRE) (training)</p> <p>Action 1.1.5: Knowledge sharing between RSA, SMA and MOWRE on hydrological modeling. LoA between RSA, SMA, MOWRE and PMU</p> <p>Action 1.1.7: Training for of at least 10 MOWRE engineers, 4 SMA engineers and 3 RSA engineers on flow meter calibration in wadis and soil infiltration rate measurements.</p>					UNDP HCENR MOU bet MOWRE & internal company - UNDP Direct payment	GEF/ LDCF	72300		Materials and Good	50,000	
						HCENR	GEF/ LDCF	72800		Information technology equipment's	24,000	
						HCENR	GEF/ LDCF	75700		Training workshops	5,400	
						HCENR Early warning team	GEF/ LDCF	75700		Training workshops	15,000	
						HCENR	GEF/ LDCF	71200		International Consultants	17,000	



EXPECTED OUTCOME	PLANNED ACTIVITIES	Quarters				Quantity	Cost per Unit	RESPONSIBLE PARTY	PLANNED BUDGET						
		1	2	3	4				Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender	
1.2. 90 % increase in population who have access to improved EWS/CI  1.3. At least two semiannual bulletins to be issued and disseminated to direct beneficiaries in six states.  1.4. 90% of equipment to be purchased and installed	Action 1.1.7: Training for of at least 10 MOWRI engineers, 4 SMA engineers and 3 RSA engineers on flow meter calibration in wadis and soil infiltration rate measurements.						HCENR /MOWRE	GEF/ LDCF	75700			Training workshops	3,000		
	Activity Result 1.2: Procurement of 7 automatic climate stations, 6 automatic synoptic stations with telemetry and 162 rain gauges; purchase of high resolution remote sensing data; and capacity reinforcement related to new products/equipment to enhance the availability, quality and transfer of real-time weather/climate data on 130,000 ha of drought-prone land for purposes of drought forecasting and early warning.														
	Action 1.2.1 Installation of additional 11 AWS in six target states						HCENR/SMA	GEF/ LDCF	74100			Professional Services - Nat	10,017		
	Action 1.2.1 Installation of additional 11 AWS in six target states						HCENR/SMA	GEF/ LDCF	72300			Materials & Goods	365,739		
	Action 1.2.2 Purchase of 7 drones to Strength states farms monitoring and train remote sensing cadres on crop assessment						HCENR/ UNDP direct payment	GEF/ LDCF	72300			Materials & Goods	21,000		
	Action 1.2.2 Purchase of 7 drones to Strength states farms monitoring and train remote sensing cadres on crop assessment						HCNER	GEF/ LDCF	75700			Training workshop	39,228		
	Action 1.2.6 Knowledge transfer between Sudan NHMS (RSA, SMA, MOWRE and the Ministry of Agriculture) and regional and international agencies on vegetation and drought monitoring						HCNER	GEF/ LDCF	75700			Training workshop	6,480		

EMERGED OUTCOME	PLANNED ACTIVITIES	QUARTER				Quantity	Cost per Unit	RESPONSIBLE PARTY	PLANNED BUDGET					
		1	2	3	4				Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender
	Action 1.2.6 Knowledge transfer between Sudan NHMS (RSA, SMA, MOWRE and the Ministry of Agriculture) and regional and international agencies on vegetation and drought monitoring.						HCNER	GEF/LDCF	72,100			Contractual Services - Companies / Int-Serv	75,000	
	Action 1.2.7 License renewal for the TAMSAT product including training by an expert on Cloud Duration to effectively use satellite images to determine rainfall estimates						HCNER	GEF/LDCF	72100			contractual services co.	25,000	
	Action Result 1.3: SMA, RSA and MOWRE are trained to provide sustainable services on weather/climate observation, risk analysis, forecasting and early warning including the establishment of a farm information management system and the revitalization of targeted seasonal forecast delivery for rain-fed farmers and													
	Action 1.3.4 Capacity reinforcement by a National financial expert on long-term sustainable budgeting and establishing sustainable cost-recovery mechanisms with revenues generated from selling tailored weather products & risk map.						HCNER	GEF/LDCF	71300			National consultants	7,500	
	Action 1.3.5 Establishment of farm information management system						HCNER	GEF/LDCF	74100			Professional Services - Nat	60,000	
	Action 1.3.5 Establishment of farm information management system						HCNER	GEF/LDCF	72100			Contractual Services - Companies / Nat-Serv	150,000	

EXPECTED OUTCOME	PLANNED ACTIVITIES	Quarters				Quantity	Cost per Unit	RESPONSIBLE PARTY	PLANNED BUDGET					
		1.	2	3	4				Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender
	Action 1.3.5 Establishment of farm information management system						HCENR	GEF/LDCF	71300			National consultants	12,000	
	<b>Activity result 1.4: Improved communication protocols and mechanisms (i.e. partnership with mobile phone operators) to provide timely and accurate weather and climate risk forecasts to rain-fed farmers and pastoralists in 6 target states.</b>													
	Action 1.4.3 Implementation of a formalized feedback mechanism from beneficiaries to NHMS/ARC on the utility of alerts, weather/climate info/forecasts/predictions and agricultural advisories						HCENR	GEF/LDCF	71400			Contractual services Individual	24,000	
	Action 1.4.4 A public awareness campaign in 6 agro-ecological states of the project sites.				0		HCENR	GEF/LDCF	71400a			Professional Services - Nat	35,000	
													<u>945,364</u>	
	<b>Total Outcome one</b>													
	<b>Outcome 2: Residual climate risk to rural livelihoods in the states of greatest rainfall variability addressed through parametric insurance products</b>													
	<b>Indicators:</b>													
	2.2. % increase in the number of market outlets and insurance agents in the rural areas to disseminate MF / WII products													
	2.3. Average speed of claim resettlement in all 6 States over the past 10 years													
	2.4. Claims ratio in all 6 States over the past 10 years													
							TEAM insurance Committee	GEF/LDCF	72100a			Contractual Services - Companies / Nat-Serv	75,000	
							HCENR	GEF/LDCF	71400			Contractual Services - Individual	20,000	

EXPECTED OUTCOME	PLANNED ACTIVITIES	Quantity				RESPONSIBLE PARTY	PLANNED BUDGET					
		Cost per Unit					Fund code	Donor code	Account code	Budget Description	Amount (US\$)	% of budget allocated to Gender
		1	2	3	4							
2.5. One targeted beneficiary has been identified, enrolled and beneficiaries' data has been created.	Action 2.2.5 Training for local insurers and local brokers to enable them to adapt and underwrite weather index insurance contracts					HCENR+ Insurance Team	GEF/LDCF	75700		Training Workshops & conferences	50,000	
2.6. Increase in number of knowledges between the insurance companies and brokers through awareness campaigns on WII.	Action 2.2.11.: Development of a toll-free number of complaints service to assist SRFPs in the event of dispute					HCNER / Communication companies	GEF/LDCF	72100a		Contractual Services - Companies / Nat-Serv	14,000	
2.7. Number of technical training sessions and ToT training, at least 5 training workshops and knowledge sharing.	Action 2.2.12 South - South cooperative Countries Kenya, Ethiopia					HCENR & UNDP	GEF/LDCF	75700		Training, workshop & conference terminal reviewed	19,252	
<b>Baseline:</b> 2.1. WII products have been developed and finalized during 2015 but not approved. 2.2. This is first kind of service for the target groups. 2.3. Average speed of claim resettlement in all 6 target states over the past 10 years was 35 days 2.4. Average claims ratio over the past 10 years in all 6 States was 0.62 2.5. Study to identify target beneficiaries as WII products have never existed in Sudan. 2.6. This is first kind of coordination and awareness raising campaigns in WII for targeted groups 2.7. This is the first kind coordination and capacity building in WII/CI for targeted groups. <b>Target:</b> 2.3. 25 % of market outlets and insurance agents in rural areas to disseminate MF/WII products 2.4. Average claims ratio in all 6 target states by the end of the project is 0.8 2.5. At least one designed study to identify the target beneficiaries in the six states. 2.6. 6 Awareness campaigns & training sessions	<b>2.3 Activity Result Insurance literacy programme / awareness campaign designed and delivered to small farmers and delivered to small businesses, community-based organisations, local farmers and pastoral communities</b> Action 2.3.5: Series of training courses led by the TOTs in each implementation zone for farmer cooperatives, extension officers and lead farmers <b>Activity result 2.4 Legal and regulatory framework for risk transfer in 6 target states assessed, policy recommendations developed and reinsurance secured</b>					HCENR	GEF/LDCF	75700	Training workshop	24,000		
	Action 2.4.8: Development of clear criteria for compensation regarding risks including rainfall thresholds per state					HCENR	GEF/LDCF	71300		National consultant	11,250	



EXPECTED OUTCOME	PLANNED ACTIVITIES	Quarter				Quantity	Cost per Unit	RESPONSIBLE PARTY	PLANNED BUDGET					
		1	2	3	4				Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender
<p>can be more productive and capable of paying back loans.</p> <p>3.3. Other than in regions covered by the LDCF1 (first NAPA project), SRFPs do not have access to any adaptation technologies or packages.</p> <p>3.4 There is no documentation or promotion for approved adaptation technologies.</p> <p><b>Target:</b></p> <p>3.1. At least 3 flexible MF products developed which are geared towards the needs of rain-fed farmers and pastoralists</p> <p>3.2. One micro-finance policy developed mandating the adoption of adaptation technologies for microfinance products tailored to rain-fed farmers and pastoralists</p> <p>3.3. At least 3 adaptation technologies adopted by rain-fed farmers and pastoralists in the target states with 1 of these technologies targeting women or youth</p> <p>3.4. At least 3 adaptation technologies adopted by SRFPs in the targeted states with one of these technologies targeting women or youth are documented and promoted.</p>	<p>Action 3.1.7: Review the Agricultural finance of Sudan's previous experience with mobile banking and develop an improved mobile banking service to provide microfinance services to rain-fed pastoralists and farmers in the target states</p> <p>Action 3.1.10 Formalization of community-driven adaptation plans into Sudan's Five-Year Plan (2017-2021)</p>						HCENR	GEF/LDCF	71300			National consultants	22,500	
	<p><b>3.2 Activity result : Legal and regulatory frameworks reviewed, analysed and improved to increase the co-provision of microcredit and micro-insurance services</b></p> <p>Action 3.2.3 Awareness raising of agro-pastoralists in the targeted areas on the new regulatory framework in 6 target states</p> <p>Action 3.2.5 Development of rules and regulations to bundle microfinance and WII</p> <p>Action 3.2.6: National level Coordination, M&amp;E and Finance Support</p> <p>Action 3.2.6: National level Coordination, M&amp;E and Finance Support</p>							HCENR	GEF/LDCF	75700			Training workshops & conferences	20,000
<p><b>3.3 Activity Result: At least three micro-credit, flexible loan products designed and tested to account for pastoral mobility and income cycles of smallholder rain-fed farmers and pastoralists (SRFP).</b> [Each product will specify appropriate loan size, prices, repayment schedules, and eligibility criteria geared toward rain-fed farmers and pastoralists and offered through financial service providers to increase resilience of farming and pastoral practices as prioritised in local adaptation plans]</p>							HCENR	GEF/LDCF	71200			Training workshops & conferences	36,000	
							HCENR	GEF/LDCF	71200			International Consultants	35,000	
							HCENR	GEF/LDCF	71400			Contractual services individual	72000	
							HCENR	GEF/LDCF	71200			International Consultants	16,500	

EXPECTED OUTCOME	PLANNED ACTIVITIES	QUANTITY				RESPONSIBLE PARTY	PLANNED BUDGET					
		Cost per Unit					Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender
		1	2	3	4							
	Action 3.3.5 Gender (Youth & Women) focused training to inform rain fed SFP on MF/MI and climate change adaptation technologies					HCNER	GEF/LDCF	75700		Training Workshops & Conferences		
	<b>3.4 Activity Result: Organization and capacity development for small holder rain-fed farmers and pastoralists(SRFP) on newly developed and targeted financial services including training on a financial services management manual</b>											
	Action 3.4.1 Capacity development for the Agricultural Extension and Technology Transfer Administrations (AETTA) in the targeted localities to organize farmers in groups and associations					HCNER	GEF/LDCF	75700		Training Workshops & Conferences	100,000	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71200		international Consultants	182,500	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71600		Travel	5,000	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71300		National consultants	72,000	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71200		International Consultants	22,500	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71600		Travel	5,000	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71200		international Consultants	22,500	
	Action 3.4.6 State level Coordination and M&E					HCNER	GEF/LDCF	71600		Travel	5,000	



EXECUTED OUTCOME	PLANNED ACTIVITIES	Quantity				Cost per Unit	RESPONSIBLE PARTY	PLANNED BUDGET						
		1	2	3	4			Fund code	Donor code	Acco unit code	Budget Description	Amount (US\$)	% of budget allocated to Gender	
	Action 3.4.6 State level Coordination and M&E						HCNER	GEF/ DCF	71300			National consultants	9,000	
<b>Total OUTCOME three</b>													<b>765,700</b>	
<b>OUTCOME 4 : Project Management</b>														
<b>Main outputs/products:</b>														
• National Consultant hired	Travel and follow up								71600				300	
• Committee and working groups held their meetings	Maint& other Equip								72500				700	
• Board meeting conducted	Office Fuel								75000				1,250	
• Risks & issues updated	Car Maint. Office Expenses								74500				1250	
	Bank charges								74510				850	
	T. Committee								74525				2,000	
	Project Team Meeting								74500				2,000	
	Board Meeting								75000				2,000	
<b>Total OUTCOME four</b>													<b>10350</b>	
<b>TOTAL</b>													<b>US\$ 1,934,916</b>	