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# BUILDING RESILIENCE IN THE FACE OF CLIMATE CHANGE WITHIN TRADITIONAL RAIN-FED AGRICULTURAL AND PASTORAL SYSTEMS IN SUDAN

STAKEHOLDER ENGAGEMENT PLAN

GOVERNMENT OF SUDAN  
HIGHER COUNCIL FOR ENVIRONMENT AND NATURAL RESOURCES  
Khartoum, Sudan

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## 1. Introduction

This report describes the consultative process used in the design of the project proposal for building resilience in the face of climate change within traditional rain-fed agricultural and pastoral systems in Sudan.

## 2. Screening activities to establish targeted states

Prior to the launch of stakeholder consultations, desk-based research was conducted to synthesize the range of lessons learned that have emerged on the basis of the nine (9) previous adaptation projects implemented in Sudan (see Table 2-1). On the basis of this review three essential criteria were developed that formed the basis for

**Table 2-1: Completed and on-going research projects in Sudan addressing climate change adaptation**

Project	Overall goal	Funding Agency
Eco-Farm Project (2007-2011)	Introduction of crop and livestock climate-smart technologies	DCG
Climate Change Adaptive Production Technologies for crops and livestock Project	development of climate Smart Crop and livestock Technologies to Enhancing Productivity in Rain-fed Areas.	DCG
Managing Risk, Reducing Vulnerability and Enhancing Productivity under a Changing Climate (2007-2011)	develop innovative strategies for mitigation of, recovery from, and resilience to climate-induced crises affecting smallholder farmers in the Horn of Africa	CCAA- IDRC- DFID
Climafira Project: Climate change predictions in Sub-Saharan Africa: impacts and adaptations (2010-2014):	Assess climate impacts in key sectors of SSA livelihood and economy, especially water resources and agriculture	EC-FP7 - FAO
Enhancing climate change adaptation in agriculture and water resources in the greater horn of Africa (2011-2014).	strengthening (NAPAs) through economic analysis of adaptation investments that is informed by credible and scientific assessment of climate change impacts.	AARC-IDRC
Enhancing the Adaptive Capacity of Smallholders through Response Farming (2013)	Improved response option based on seasonal climate forecasts to cope with impacts of climate variability	ASARECA
Climate Change and Adaptive Production Technology Package for Crop and Livestock Production in Kordofan Region (2012-2014)	Introduction of package of climate change adaptive technologies to overcome the negative impacts of climate change	DCG
Improving the livelihoods of rural communities in the Nile valley and sub-Saharan Africa region: "Sustainable Crop and Livestock Management" (2012-2013)	Enhance food security, livelihoods and adaptive capacity of resource poor farmers to cope with climate variability and change in the dry areas of the world.	IFAD - ICARDA
Sustainable Agricultural Water Productivity Enhancement for Improved food security and Nutrition in ECA	Increase agricultural water productivity to improve food and nutrition security as well as livelihoods in the ECA target countries.	ASRECA& ARC

conducting follow-up field missions and field-level consultations with stakeholders. The first criterion was the degree of uptake of adaptation activities to the wider community beyond direct beneficiaries of project activities. This reflected the potential for replicability, post-project. The second criterion was the level of vulnerability to climatic impacts. This reflected the potential for focusing on those regions that were in need of urgent adaptation responses. The third criterion was ongoing and or planned government programme in rural development activities focused on agricultural, water resources, and pastoralism. This reflected the potential for future adaptation projects to leverage existing national investments and provide incremental benefits focused on building resilience to climate change. As a result of the screening process, a number of regions were identified as potential candidates for project interventions, as described in the section 4.

## 3. Stakeholder Engagement Plan

The proposed GCF project has been developed based on multi-stakeholder discussions and participation of a wide range of stakeholder groups. Under the leadership of the Government of Sudan, climate change related issues and solutions were identified, and they

were presented for stakeholder discussions, inputs and endorsement in West and South Kordofan, Kassala and the Red Sea, Northern, West, Central and East Darfur regions. Relevant stakeholders to be involved in the project implementation, the private sector, civil society organizations and non-governmental organizations were also fully engaged in the process.

Stakeholder engagement in the project implementation begins with the inception workshop which was held at the capital city of Khartoum in February 2018. Parties engaged include the following: Higher Council for Environment and Natural Resources (HCENR), Ministry of Agriculture and Forestry, Ministry of Electricity, Irrigation and Water Resources, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, Central Bureau of Statistics (NBS), Pasture Administration, Producers association, Agricultural Council, Planning Department, NGOs and CSOs, Academia, and the private sector.

Broadly, the three interlinked Outputs of the project have the following key stakeholders:

**Output 1: Resilience of food production systems and food insecure communities improved in the face of climate change in Sudan, benefiting at least 200,000 households and farmer and pastoralist with 35% women.**

This Output will be delivered by the Government of Sudan, in collaboration with national partners and NGOs, and completed by December 2023. The output aims to improve adoption of early maturing seeds and crop varieties, to introduce climate smart practices in water resource management, agricultural production, and rangeland management at the community level, to improve climate adaptive rangeland management at the community level, to establish shelterbelts/agroforestry to improve productivity and reduce land and environmental degradation, and finally, to construct improved Hafirs and to upgrade existing ones, excavating natural pond and cistern to avail drinking water.

**Output 2: Improved access of water for human, livestock and irrigation to sustain livelihoods in the face of climatic risks in the nine targeted states benefiting at least 200,000 households.** This Output will be delivered by the Government of Sudan, in collaboration with national partners, and completed by 2023. The output aims to construct and/or rehabilitate water yards and to drill shallow/borehole for drinking water for human and livestock and to build small-scale irrigation systems in targeted locations. Moreover, activity 2.2 will establish sand storage dams in support of small-scale irrigation in targeted localities and villages.

**Output 3: Strengthened capacities and knowledge of institutions and communities on climate change resilience and adaptation.** This output will be delivered by a range of parties, including the Government of Sudan, UNDP, NGOs, CSOs, academia and the private sector. Activity 3.1 aims to Train extension officers and other government stakeholders on climate change resilience and adaptation related issues, and Activity 3.2 aims to Build the capacity of beneficiaries for coping with climate change risks and local operation and maintenance of project interventions.

In the final public consultations during the design of this project (February 2018), expected GCF investments as well as expected community contributions, in terms of their participation in consultations and O&M activities, were fully discussed. Capacity building workshops, public discussion and training activities will serve as key avenues for community engagement as shown in Table below. By no means is the Table intended to be the exhaustive list of opportunities of stakeholder engagement. Informal stakeholder engagement will certainly take place at any time as needed, especially as the project implementation architecture commences.

Activity	Title	Timing	Objective of engagement	Target participants
1.1	Baseline data collection on number of households, farmers and pastoralists	Yr 1,2,3&4	Data collection to inform the baseline of the analysis.	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, NGOs and CSOs, Academia, UNDP
1.1, 1,2	Baseline data collection on cropping systems (field crops)-rain-fed; horticulture (vegetable production (if existing); livestock production system and feed resources; range land (availability and constraints); irrigated agriculture crops farming systems and water resources.	Yr 1,2,3&4	Baseline data collection; stakeholders' inputs for situation analysis	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
1.3	Consulting community members and collecting data on rangeland management	Yr 1,2,3&4	Selection of target beneficiaries, and data collection	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal

				Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
1.4	Data collection on land and environmental degradation in the targeted project areas	Yr 1,2,3&4	Data collection	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
1.5	State of existing Hadirs, natural ponds and cistern	Yr 1,2,3&4	Interviews; focus groups discussions and data collection to inform the situation analysis	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
2.1	Groundwater use, and access to in times of drought	Yr 1, 2 & 3	Interviews; focus groups discussions and data collection to inform the situation analysis	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
2.1	Inputs on issues related to Operation and Maintenance of groundwater wells, including the need for additional trainings.	Yr 1,2,3&4	Interviews; focus groups discussions and data collection to inform the situation analysis	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry,

				Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
2.2	Consult focal ministries for the project intervention i.e. Electricity, Irrigation and Water Resources, Agriculture and Forestry, Animal Wealth, Fisheries and Range land and National Economy, Finance and Planning or others	Yr 1,2,3&4	Interviews; focus groups discussions and data collection to inform the situation analysis	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
2.2	Consult village members in targeted locations on the use and need for sand storage dams	Yr 1,2,3&4	Gender and age-disaggregated data collection; Interviews; focus groups discussions to inform the situation analysis and to revise training materials	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
3.1	Consultations with extension officers on climate change resilience and adaptation related issues	Yr 1,2,3&4	Collection of baseline information	Ministry of Electricity, Irrigation and Water Resources, Ministry of Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
3.2	Community-level consultations on O&M	Yr 1,2,3&4	Community's inputs on best O&M practices and coping capacities	Ministry of Electricity, Irrigation and Water Resources, Ministry of



				Agriculture and Forestry, Ministry of Animal Wealth, Fisheries and Range land and National Economy, Ministry of Finance and Planning, UNDP
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#### 4. Workshops and field missions for field level consultations

Four workshops and field missions for field level consultations with stakeholders and state authorities in the targeted states were organized by UNDP and HCENR during the period 10 July to 20 August, 2016 as follows:

- West and South Kordofan (EL-Fula/West Kordofan)
- Kassala and Red Sea (Port Sudan/Red Sea)
- Northern (Dongola, Northern State)
- West, Central and East Darfur (Khartoum)

The main objectives of the workshops were:

- Complete the consultations with government institutions in the targeted states regarding the project: building resilience in the face of climate change within traditional rain fed agricultural and pastoral systems in Sudan; and
- Agree on the climate change adaptation measures and interventions in sectors of water and agriculture (crops, livestock and forestry)
- Agree with the stakeholders on the localities and villages where the activities of the project will be implemented, based on NAP and vulnerability assessment.

The workshops brought together key officials from agriculture, livestock and water sectors, farmers associations, extension agents, forests corporation, range and pasture administration and scientists affiliated to different research institutions, universities, HCENR and various government institutions and individuals dealing with the issues of climate change (attached a list of participants). Participants represented both genders. This workshop, therefore, has provided a good opportunity for participants from different organizations, institutions and agencies to share experiences and knowledge related to climate change adaptations and activities. Facilitators of the workshop were the three national consultants.

During the workshop sessions the following focuses were made.

- Highlights of the proposed projects
- Climate change impact, adaptation options and activities
- Climate change adaptation measures and interventions in sectors of water and agriculture (crops, livestock) and natural resources
- Vulnerable localities and villages where the activities of the project will be implemented

- The role of the line ministries in project implementation

Information prepared by states and discussed for finalization of the GCF project proposal document included a focus on the twelve elements identified in Table 3-1. Pictures of the consultative meetings are provided in Figure 3-1. Summaries of the consultative meetings for each of the states are provided in Annex A. Contact coordinates of meeting participants are provided in Annex B. At the conclusion of each workshop, sufficient information had been obtained for the following:

- Selection of the most vulnerable localities within the state where the project activities;
- Selection of the targeted villages within the state;

**Figure 4-1: Pictures of consultative meetings**



- Climate change adaptation Activities in the agriculture (crop and livestock) and natural resources (water, range and forestry)

**Table 4-1: Information provided by stakeholders and discussed during consultative meetings**

1)	Selected localities, villages, administrative setting and maps if available, to be targeted by the project. Selection criteria is also important.
2)	No. of people and households targeted/village/locality and their socioeconomic profile and indicators including also: main economic activities and other off farm activities, description of farming system (crops and livestock):- <ul style="list-style-type: none"> <li>• Cropping systems (field crops)-rain-fed:</li> <li>• Horticulture (vegetable production (if existing):</li> <li>• Livestock production system and feed resources:</li> <li>• Range land (availability and constraints):</li> <li>• Irrigated agriculture (if existing) crops farming systems and water sources:</li> </ul>
3)	Water resources: surface water sources potential (rivers /seasonal streams, water harvesting, dams – storage, and aquifer recharge); groundwater sources potential (shallow and deep wells), accessibility and description of potential sites for interventions.
4)	Current uses of water resources in agriculture (field and horticultural crops and livestock)
5)	Drought alleviation and climate mitigation technological packages used.
6)	Cultivated areas by crops and livestock numbers by species. These information normally available at the state level.
7)	How has climate change affected the region and people's life? What are the trends in rainfall and drought frequency? What is the level of infrastructure available, including main markets and access to local/regional ones?
8)	Potential climate adaptation options in livestock, agriculture and water sector.
9)	Proposed climate change adaptation measures(activities), best practices and their respective sources (indigenous/introduced) <ul style="list-style-type: none"> <li>• Cropping systems (field crops)- -rain-fed: proposed interventions (activities)</li> <li>• Horticulture (vegetable production: proposed interventions (activities)</li> <li>• Livestock production system and feed sources): proposed interventions (activities)</li> <li>• Range land (availability and constraints): proposed interventions (activities)</li> <li>• Irrigated agriculture: proposed interventions (activities)</li> </ul>
10)	Focal ministries for the project intervention i.e. Electricity, Irrigation and Water Resources, Agriculture and Forestry, Animal Wealth, Fisheries and Range land and National Economy, Finance and Planning or others
11)	State technical committee suggested membership
12)	Related state policies and plans developed/implemented in the last 5 years (supportive or otherwise)

## Annex A: Sites, targeted households, activities and opportunities as stated by stakeholders at the state-level workshops

### West Kordofan State

Locality	Village clusters	Population Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
Al Nohoud	1. Alrawiana 2. Omragaditi 3. Alsibahat 4. Alzilata 5. Abusairor 6. Abushiror 7. Awladgibril 8. Abusabiba 9. Tolob 10. Alshamamia	10x100x6=6000 HH	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Gum Arabic belt restocking and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Non wood forest products</li> </ul>	Construction of water plastic lined water ponds, cisterns, rehabilitation/improvement of haffirs, boreholes, roof water harvesting	<p>Promotion and development of Gum Arabic (ADB)</p> <p>Saving and credit groups, Saving Bank,</p> <p>Animal and agricultural community societies</p>
Wad Banda	15	10x100x6=9000	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements, agroforestry using productive trees (godaim, hashab, cider) and other climate-smart practices</li> <li>Supplementary irrigation), drip irrigation and water saving techniques</li> <li>Gum Arabic belt restocking and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Shelter belts for environmental protection</li> <li>Community forestry</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> </ul>	Construction of boreholes for domestic use and supplementary irrigation	Animal and agricultural community societies
Al Odaya	15	15x100x6=9000 HH	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens ( shallow</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management (reintroduction of high nutritive spp.) and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and</li> </ul>	<ul style="list-style-type: none"> <li>shallow wells, hand dug wells, solar pumps</li> <li>Cisterns, rehabilitation/improvement of haffirs and natural depressions</li> </ul>	<p>Nile Bank,</p> <p>Animal and agricultural community societies</p>

Locality	Village clusters	Population Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
			wells, hand dug wells, solar pumps, irrigation systems)	vet services) • Non wood forest products		
Babano a	1. Wasata 2. Aldilaima 3. Omosh 4. Algantor 5. Gajalhila 6. Alghiwirat 7. Alkiliabat 8. Aburafai 9. Shagelhaik 10. Giwagita	10x100x6= 6000	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal drawn implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Home nurseries and fruit trees</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management (reintroduction of high nutritive spp.) and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation of boreholes (pastoralists)</li> <li>Construction of improved haffirs and natural depressions</li> </ul>	<p>Alneelain Bank,</p> <p>Animal and agricultural community societies</p> <p>Saving and credit groups</p> <p>Need for micro-finance window</p>
Al Salam	1. Kobara 2. Alnomriki 3. Jagimni 4. Wasata 5. Gobash 6. Aldaba 7. Eltawila 8. Adoma 9. Shag Elgana 10. Targato	10x100x6= 6000 HH	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens ( shallow wells, hand dug wells, solar pumps, irrigation systems)</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management (reintroduction of high nutritive spp.) and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> </ul>	<ul style="list-style-type: none"> <li>Shallow wells, boreholes,</li> <li>Rehabilitation/improvement of haffirs</li> <li>Rehabilitation of Kigaira Dam</li> </ul>	<p>Agric. Bank, Animal Resource Bank, Microfinance West Kordofan Institution</p> <p>Animal and agricultural community societies</p>
Aldibab	15	15x100x6= 9000 HH		<ul style="list-style-type: none"> <li>Grazing management (extension and conflict resolution, fire management file lines, cutting and balling)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Gum production (collection and marketing)</li> </ul>	<ul style="list-style-type: none"> <li>Boreholes construction</li> <li>Rehabilitation and construction of haffirs and natural depressions</li> </ul>	Need for Microfinance window
6	75	45,000				

## South Kordofan state

Locality	Village clusters	Population Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
Al Goz	20	20x100x6= 12,000 HH	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Agroforestry</li> <li>Supplementary irrigation from seasonal streams</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> </ul>	<ul style="list-style-type: none"> <li>Construction of hand pumps with solar energy, submersible pump and water tank.</li> <li>rehabilitation/improvement of haffirs</li> </ul>	<p>Saving and credit groups Swaaid rural finance institutions), ABS</p> <p>Animal and agricultural community societies</p> <p>Development call organization (NGO)</p>
Al Abasia	10	10x100x6= 6000	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements, agroforestry using productive trees (godaim, hashab, cider) and other climate-smart practices</li> <li>Water harvesting techniques, conservation agriculture</li> <li>Supplementary irrigation</li> <li>Terrace cultivation</li> <li>Seed propagation( added value)</li> </ul>	<ul style="list-style-type: none"> <li>Community forestry</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation of haffirs and deepening of natural ponds</li> <li>Hand pumps</li> </ul>	<p>ABS Braa (rural microfinance)</p> <p>Saving and credit groups</p> <p>Animal and agricultural community societies</p>
Al Dalang	15	15x100x6= 9000 HH	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens ( shallow wells, hand dug wells, solar pumps, irrigation systems)</li> <li>Terrace cultivation</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> </ul>	<ul style="list-style-type: none"> <li>shallow wells, hand dug wells, solar pumps</li> <li>rehabilitation/improvement of haffirs and natural depressions</li> </ul>	<p>ABS, Saving Bank , Swaaid, NGOs</p> <p>Animal and agricultural community societies</p> <p>Faculty of Agriculture</p>

Locality	Village clusters	Population	Activities			Opportunities
Al Tadamon	5	5x100x6= 3000	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal drawn implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Home garden with supplementary irrigation and roof</li> <li>Supplementary irrigation with pumps</li> <li>Certified Seed production)</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management (reintroduction of high nutritive spp.) and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>Construction of improved haffirs and natural depressions</li> </ul>	Seed development project  Animal and agricultural community societies  Saving and credit groups  Need for micro-finance window
Al shargy	15	15x100x6= 9000 HH	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Ca</li> <li>Terracing cultivation</li> </ul>	Livestock health and nutrition ( supplementary feeding and vet services) <ul style="list-style-type: none"> <li>Fire line</li> </ul>	Hand pumps <ul style="list-style-type: none"> <li>Rehabilitation/improvement of haffirs</li> </ul>	Microfinance Animal and community societies
Rashad	5	5x100x6= 3000 HH	<ul style="list-style-type: none"> <li>Terrace cultivation</li> <li>Improved seed varieties NPK, Intercropping, IPM, climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Home garden with supplementary irrigation</li> </ul>	<ul style="list-style-type: none"> <li>Grazing management (extension and conflict resolution, fire management file lines, cutting and balling)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Gum production (collection and marketing)</li> </ul>		braa Microfinance ABS
6	70	42,000				

## Red Sea state

Locality	Village clusters	Population Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
Agig	5 village clusters (Agig, Adobana, Agitar, Aiterba, Garora, Andal)	16,000  Direct: 7,000  Indirect: 9,000	<ul style="list-style-type: none"> <li>• A forestation: Replacement of Meskeet trees by Acacia spp. Sider, Sayal, Adleeb, Soadia</li> <li>• Mangrove forest rehabilitation</li> <li>• Apiculture development (bee hives and accessories) value chain, marketing etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Supplementary feeding, new improved breeds, vet services</li> <li>• Alternative HH energy sources (LPG &amp; solar)</li> </ul>	WH-based improvement of agriculture activities (climate smart practices)  - Assessment of wad diversion infrastructure	Saving and credit groups  Home gardens in Sinkat locality  Microfinance institutions: Red Sea microfinance institution
			<ul style="list-style-type: none"> <li>• Fisheries: capacity building of fishermen (training, equipment, improved nets, fish farms, women small scale products, new fishing technologies), market development and improved storage facilities</li> <li>• Improvement and development of Sea cucumber</li> <li>• Rehabilitation of key habitat ( coral reef, mangrove, sea grass, salt march)</li> <li>• Sea shells development (community off season activities)</li> </ul>	•	-	
			<ul style="list-style-type: none"> <li>• Range land improvement (reseeding, WH, range enclosures)</li> </ul>	•		
Dordaib/ Haya	village clusters: 1-Haya: Gadamaye, Adarhi ShoraAmrab ShoraHawin Hankalawaib Hamisait Amasa Sarobit	30,000 HH Direct  20,000 indirect	<ul style="list-style-type: none"> <li>• Range land improvement (reseeding, WH, range enclosures)</li> <li>• Forestry: plantation of Dom trees value chain, women handcrafts</li> </ul>	<ul style="list-style-type: none"> <li>• Women small scale improvement of dietary products,</li> <li>• Restocking, supplementary, feeding, vet services</li> <li>• Poultry production \</li> <li>• Alternative HH energy sources (LPG &amp; solar)</li> </ul>	WH for agriculture and drinking: Check dams, diversion structures terraces, hafirs, Improvement of shallow wells,  - Cistern	



			Activities			Opportunities
	Asot Halag Sanganai Tolak Derodeb: LashobHadalit Lashob Algarada Absalam Brritak Gadamaye Agotaye Derbab Deodeb					
Guneb Olib	12 village clusters: Rabaeyet+Arbabe yeb Godeedit Balonaye Agwambt-sarar Dadat Amor Sarara Mahale- Meserar Togaylawo Hayet-wassat	15,000 HH Direct 20,000 Indirect	<ul style="list-style-type: none"> <li>• Agriculture practices animal husbandry</li> <li>• horticulture</li> <li>• fisheries</li> </ul>	•	<p>Improvement of spate irrigation in wadis</p> <p>Check dams for recharge of groundwater, shallow wells,</p> <p>- River bank protection (gabion)</p>	
			<ul style="list-style-type: none"> <li>• Improvement of horticultural production</li> <li>• Nurseries for forestry and hotrt. Crops, home gardens</li> <li>• A forestation (Arak tree)</li> <li>• Fisheries: capacity building of fishermen (training, equipment, improved nets, fish farms, women small scale products, new fishing technologies), market development and improved storage facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Green fodder spate irrigated (clitoria, gerawiaetc)</li> <li>• Animal fattening/milk production supplementary feeding, poultry, restocking of resistant goat breeds (darai)</li> <li>• Alternative HH energy sources (LPG &amp; solar)</li> </ul>		<p>Saving and credit groups</p> <p>Home gardens in Sinkat locality</p> <p>Microfinance institutions: Red Sea microfinance institution</p>

			Activities			Opportunities
			<ul style="list-style-type: none"><li>• Rehabilitation of key habitat ( coral reef, mangrove, sea grass, salt march)</li><li>• Sea shells development (community off season activities)</li></ul>			

## Kassala state

Locality	Village clusters	Population Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
Nahr Atbara (West bank of Atbara River)	5 Reraha Dimiat Simidaha Ejuneed Sidera	17,818	<ul style="list-style-type: none"> <li>• Terrace cultivation</li> <li>• Crop and varieties diversification (sorghum, early maturing spp such cow beans and CC smart packages)</li> <li>• Improved seeds bank(s)</li> </ul>	<ul style="list-style-type: none"> <li>• Fodder production in crop rotation (clitoria)</li> <li>• Range land improvement (reseeding and seeds collection)</li> <li>• Supplementary feeding(rumianants)</li> <li>• Shelterbelts (small scale farm, villages)</li> <li>• Tree nurseries (central and community)</li> <li>• Alternative HH energy sources (LPG &amp; solar)</li> </ul>	<ul style="list-style-type: none"> <li>• Supplementary irrigation ( farm ponds), WH</li> <li>• Small scale irrigation schemes (pumps)</li> </ul>	Women Saving and credit groups, revolving funds Microfinance institutions
Rural Aroma (outside Gash Delta)	Garateet Tugrar Togoub Am Raho East Adergawi	30,120	<ul style="list-style-type: none"> <li>• Irrigated vegetables and fruits gardens</li> <li>• Integrated farm for women</li> <li>• Improve marketing capacities</li> </ul>	<ul style="list-style-type: none"> <li>• Range improvement</li> <li>• Fodder production in river bank (clitoria, Abu sabeen, Gerawia, Barseem, etc)</li> <li>• Supplementary feeding(rumianants)</li> <li>• Shelterbelts (small scale farm, villages)</li> <li>• Community nurseries</li> <li>• Alternative HH energy sources (LPG &amp; solar)</li> </ul>	<ul style="list-style-type: none"> <li>• Hafir rehabilitation</li> <li>• Small scale irrigation schemes on river banks</li> <li>• Shallow wells installation and rehabilitation (solar system package)</li> </ul>	
Kassala	6 Kassala Sabeel Alshokria Aljamam Wad sharefaie Tajouj	30,000	<ul style="list-style-type: none"> <li>• Horticulture</li> <li>• Integrated farm for women groups</li> <li>• Marketing</li> <li>• Value chain (dehydration and processing of vegetables and fruits)</li> <li>• Apiculture</li> </ul>	<ul style="list-style-type: none"> <li>• Afforestation (shelterbelts, agroforestry and tunjia)</li> <li>• Supplementary feeding</li> <li>• Fodder production (clitoria, Abu sabeen, Gerawia, Barseem, etc)</li> <li>• Alternative HH energy sources (LPG &amp; solar)</li> </ul>	<ul style="list-style-type: none"> <li>• Modern irrigation systems(water saving)</li> <li>• Drilling and installation of shallow wells (women groups)</li> <li>• River bank erosion training in horticulture areas (Gabion, shelterbelts)</li> </ul>	
Talkouk	5 Talkouk Tawiat	17708	<ul style="list-style-type: none"> <li>• Crop varieties diversification (sorghum, early maturing spp such cow beans and CC smart</li> </ul>	<ul style="list-style-type: none"> <li>• Improve water shed management (forestry and range)</li> </ul>	<ul style="list-style-type: none"> <li>• Sand storage dams</li> <li>• Check dams</li> <li>• Spate and flood irrigation</li> </ul>	

Locality	Village clusters	Population	Activities			Opportunities
	Tahjar Temikeet Tahadi		packages) • Apiculture • Vegetables	• Animal restocking(ruminants and poultry for women) • Meskeet management in collaboration with partners, possibly WFP) • Supplementary feeding • Community tree nurseries • Alternative HH energy sources (LPG & solar)	• Shallow wells • Water yards	
		95,646				

## Northern State

Locality	Village clusters	Population/ Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
Dongola	6 AlKhwai Labab Shaeg Jertoad Aloagal Gaabellagia Algouba	1729	<ul style="list-style-type: none"> <li>Land development and rehabilitation:</li> <li>(Land leveling,</li> <li>Shelterbelts,</li> <li>Salt leaching., soil amendments)</li> <li>Modern irrigation systems</li> <li>Climate smart practices</li> <li>Heat resistant crop varieties</li> <li>Community organization to access and manage microfinance</li> <li>Research component focused on new technologies</li> </ul>	<ul style="list-style-type: none"> <li>Sub-surface water utilization for range land development (Algouba)</li> <li>Vet services, including mobile vet services</li> <li>Improved animal breeds</li> <li>Supplementary feeding</li> <li>Shelterbelts</li> </ul>	<ul style="list-style-type: none"> <li>Drilling of wells, accessories and solar pumps</li> <li>Modern irrigation systems</li> </ul>	<p>Northern Company for Microfinance Farmers and pastoralists committees Agricultural Development Fund Farmer window schools (saving and lending groups)</p>
AlGaold	5 Molwad Om Krabeej Howd Lati Alzaraib Nawa	1140  (This locality provides support to nomads and it has high potential for large scale production)	<ul style="list-style-type: none"> <li>Land development and rehabilitation:</li> <li>(Land leveling,</li> <li>Shelterbelts,</li> <li>Salt leaching., soil amendments)</li> <li>Modern irrigation systems</li> <li>Climate smart practices</li> <li>Heat resistant crop varieties</li> <li>Community organization to access and manage microfinance</li> <li>Research component focused on new technologies</li> </ul>	<ul style="list-style-type: none"> <li>Sub-surface water utilization for range land development (Algouba)</li> <li>Vet services, including mobile vet services</li> <li>Improved animal breeds</li> <li>Supplementary feeding</li> <li>Solid Shelterbelts (8 Km Molwad, om karabeej, Elzaraib, Nawa)</li> <li>Tree nursery</li> </ul>	<ul style="list-style-type: none"> <li>Drilling of wells, accessories and solar pumps</li> <li>Modern irrigation systems</li> </ul>	
Al Daba	3 Argi Alafad Selib Tanganrati	2600	<ul style="list-style-type: none"> <li>Land development and rehabilitation:</li> <li>(Land leveling,</li> <li>Shelterbelts,</li> <li>Salt leaching., soil amendments)</li> <li>Modern irrigation systems</li> <li>Climate smart practices</li> <li>Heat resistant crop varieties</li> <li>Community organization to access and manage microfinance</li> </ul>	<ul style="list-style-type: none"> <li>Vet services</li> <li>Supplementary feeding</li> <li>Rangeland improvement in Wadi Elmalik (WH, seed broadcasting)</li> <li>Rehabilitation of tree nurseries</li> </ul>	<ul style="list-style-type: none"> <li>Drilling of wells for nomads (Wadi Elmalik)</li> </ul>	

Locality	Village clusters	Population/	Activities			Opportunities
			<ul style="list-style-type: none"> <li>Vegetable and fodder production in wadi Elmalik</li> </ul>			
Marawi	6 Mora Kori Kannar Algorair Osli Om Jawaseer	4600	<ul style="list-style-type: none"> <li>Ground water-based small irrigation schemes (solar pumps, irrigation wells, modern systems, shelterbelts and crop diversification and intensification)</li> <li>Training for fishermen</li> </ul>	<ul style="list-style-type: none"> <li>Shelterbelts and tree nurseries (sayal, salam, arak sarih and tomam)</li> <li>Wadi reseeding for range improvement</li> <li>Vet services</li> <li>Supplementary feeding</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation of irrigation wells, solar systems</li> <li>Modern irrigation system</li> <li>Check dams along the Wadi for recharging ground water and flood irrigation(Om Jawaseer)</li> </ul>	
		10,069				

## Khartoum State

Locality	Village clusters	Population Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water	
Rural Umdor man	Abuhleaf,Mondra,F atasha Elgadima, Fatasha Elzaoia, Fatasha A.	1,115	<ul style="list-style-type: none"> <li>Improved sorghum crop varieties (early maturing CC smart packages)</li> <li>Home garden with supplementary irrigation</li> <li>Fodder production</li> </ul>	<ul style="list-style-type: none"> <li>Supplementary feeding(small ruminants)</li> <li>Range improvement</li> <li>Community nurseries</li> <li>Poultry , fish farms and Apiculture, green belt protection</li> </ul>	<ul style="list-style-type: none"> <li>Access to belt boreholes</li> </ul>	Microfinance institutions Khartoum Green Belt Project Close to various services and markers
Rural Sharg Elnil	Algaba abuzaid,Elhour,Elhola,ELakoda	1,232	<ul style="list-style-type: none"> <li>Home garden with supplementary irrigation</li> </ul>	<ul style="list-style-type: none"> <li>Supplementary feeding(small ruminants)</li> <li>Range improvement</li> <li>Community nurseries</li> <li>Poultry , fish farms and Apiculture, green belt protection</li> </ul>	<ul style="list-style-type: none"> <li>Access to belt boreholes</li> <li>Rehabilitation of borehole(Abuzaid)</li> </ul>	Access to belt boreholes
Total		2,347				

## Central Darfur State

Locality	Village clusters	Population/ Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water Safe drinking water, Irrigation)	
Zalingi	Abtta,Andrew,Calgo, Fasi, Dankouj, Shawa Tamar Bolgameel	400,123 (Locality Total)	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens ( shallow wells, hand dug wells, solar pumps, irrigation systems)</li> <li>Supplementary irrigation), drip irrigation and water saving techniques</li> </ul>	<ul style="list-style-type: none"> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Range rehabilitation and management</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>rehabilitation/improvement of haffirs, boreholes, for drinking water supply, Water ponds</li> <li>Cisterns (Hodhs):</li> <li>Water yards:</li> <li>Shallow hand dug wells and boreholes:</li> <li>Sand Storage Dams</li> </ul>	<ul style="list-style-type: none"> <li>Central Darfur Microfinance Institution,</li> <li>Professional Producer Associations.</li> <li>WFP (FFA, FF Education, Early recovery, Environment rehabilitation, Firewood)</li> <li>Research stations</li> <li>Integrated solution for Agric. Sector Programme</li> </ul>
Azoom	Rongatas,Momo, Omshalaya, Mara Finfiny	321,240	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens ( shallow wells, hand dug wells, solar pumps, irrigation systems)</li> <li>Supplementary irrigation), drip irrigation and water saving techniques</li> </ul>	<ul style="list-style-type: none"> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Range rehabilitation and management</li> <li>Non wood forest products</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>rehabilitation/improvement of haffirs, boreholes, for drinking water supply, Water ponds</li> <li>Cisterns (Hodhs):</li> <li>Water yards:</li> <li>Shallow hand dug wells and boreholes:</li> <li>Sand Storage Dams</li> </ul>	<ul style="list-style-type: none"> <li>NGOs (local National, International) CRS, Norwegian Church Aid, Danish Refugees Council , RC and local CBOs and N. NGOs)</li> <li>Professional groups (Livelihood and food security, Environment, Livestock)</li> <li>Gebal Mara Rural Development project</li> <li>University of Zalengi,SPDP,SECS</li> </ul>



## East Darfur State

Locality	Village clusters	Population/ Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water Safe drinking water, Irrigation)	
ELdain	Glabi (cluster) 1 Higliga Om labania	22,100/110,500 27,429 HH per locality 137,144	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Gum Arabic belt restocking and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>Construction of water plastic lined water ponds, cisterns, rehabilitation/improve ment of haffirs, boreholes, roof water harvesting</li> </ul>	<ul style="list-style-type: none"> <li>East Darfur Microfinance Institution,</li> <li>Professional Producer Associations.</li> <li>WFP (FFA, FF Education, Early recovery, Environment rehabilitation, Firewood)</li> <li>Care Switzerland, Research stations</li> <li>Integrated solution for Agric. Sector Programme</li> <li>NGOs (local National, International) UMCOR, ZIOA</li> <li>RC and CORE (Commission for refugees)</li> <li>UNHCR</li> <li>Professional groups on Livelihood and food security</li> <li>SPDP, SECS , Integrated management of natural resource for livelihood support (EC)</li> <li>Basic Needs for sedentary and pastoral communities, UNAMID</li> <li>Youth Initiatives</li> </ul>
Firdous	Abo sinadirra Hibaeil	16,400/ 82,000 282,247	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Gum Arabic belt restocking and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>Construction of water plastic lined water ponds, cisterns, Rehabilitation of haffirs and deepening of natural ponds</li> <li>boreholes, roof water harvesting</li> </ul>	
Asalia	Abusaida Om Elgoura Gazala Jawazat Kilaikil	9,200/ 46,000 241,452	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, animal draw implements and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Gum Arabic belt restocking and rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Range rehabilitation and management and construction range enclosures (WH)</li> <li>Livestock health and nutrition ( supplementary feeding and vet services)</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>Construction of water plastic lined water ponds, cisterns, rehabilitation/improve ment of haffirs, boreholes, roof water harvesting</li> </ul>	
		47,700/238,500 560,843 (total pop direct and indirect)				

## West Darfur State

Locality	Village clusters	Population/ Number of HH	Activities			Opportunities Other Projects, financial and microfinance institutions.
			Agriculture	Livestock and natural resource management	Water Safe drinking water, Irrigation)	
Genana	Aishbara Korti Gargar Atia	1629/ 10934	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens ( shallow wells, hand dug wells, solar pumps, irrigation systems)</li> <li>Supplementary irrigation), drip irrigation and water saving techniques</li> </ul>	<ul style="list-style-type: none"> <li>Livestock health and nutrition (supplementary feeding and vet services)</li> <li>Range rehabilitation and management</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>rehabilitation/improve ment of haffirs, boreholes, for drinking water supply, Water ponds</li> <li>Cisterns (Hodhs):</li> <li>Water yards:</li> <li>Shallow hand dug wells and boreholes:</li> <li>Sand Storage Dams</li> </ul>	<ul style="list-style-type: none"> <li>West Darfur Microfinance Institution,</li> <li>Professional Producer Associations.</li> <li>WFP (FFA, FF Education, Early recovery, Environment rehabilitation, Firewood)</li> <li>Research stations</li> <li>Integrated solution for Agric. Sector Programme</li> </ul>
Krenik	Habila kanari (Zawia, Dewait, Azerni)	1200/ 8400	<ul style="list-style-type: none"> <li>Improved seed varieties NPK, Intercropping, IPM, and other climate-smart practices</li> <li>Water harvesting (chiseling, contour bunds)</li> <li>Horticulture gardens (shallow wells, hand dug wells, solar pumps, irrigation systems)</li> <li>Supplementary irrigation), drip irrigation and water saving techniques</li> </ul>	<ul style="list-style-type: none"> <li>Livestock health and nutrition (supplementary feeding and vet services)</li> <li>Range rehabilitation and management</li> <li>Non wood forest products</li> </ul>	<ul style="list-style-type: none"> <li>rehabilitation/improve ment of haffirs, boreholes, for drinking water supply, Water ponds</li> <li>Cisterns (Hodhs):</li> <li>Water yards:</li> <li>Shallow hand dug wells and boreholes:</li> <li>Sand Storage Dams</li> </ul>	<ul style="list-style-type: none"> <li>NGOs (local National, International) CRS, Concern, World Relief, RC</li> <li>Professional groups (Livelihood and food security, Environment, Livestock)</li> </ul>
		2,829/ 19,334				

## Annex B: Workshop attendant contact coordinates

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