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ClimBeR: Building Systemic Resilience Against Climate Variability and Extremes



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ClimBeR

ClimBeR seeks to address challenges to adaptation by small-holder farmers through science and innovation aimed at transforming the climate adaptation capacity of food, land, and water systems, working closely with partners at the local, national, regional, and global levels. ClimBeR focuses on generating knowledge to unlock public and private finance, foster climate- and peace-sensitive policies and backstop the Great Green Wall Initiative (GGWI), Africa's flagship programme to address climate change and desertification.



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ClimBeR: Building Systemic Resilience Against Climate Variability and Extremes



Knowledge series























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Abbreviations and acronyms

AAU	Association of African Universities		
ARC	Agricultural Research Corporation		
ARUA	African Research Universities Alliance		
ASARECA	Association for Strengthening Agricultural Research in Eastern, Central Africa		
BD	Board of Directors		
BRIDGES	Boosting Restoration, Income, Development, Generating Ecosystem Services		
BURs	Biannual Update Reports		
CAADP	Comprehensive Africa Agriculture Development Programme		
CBD	Convention of biological Diversity		
CCAFS	Climate Change, Agriculture and Food Security		
CGIAR	Consultative Group on International Agricultural Research		
CIARC	Consortium of International Agricultural Research Centres		
CNS	Comprehensive National Strategies		
CNS CSOs	Comprehensive National Strategies Civil Society Organizations		
CSOs	Civil Society Organizations		
CSOs DG	Civil Society Organizations Director General		
CSOs DG EIA	Civil Society Organizations Director General Environmental Impact Assessment		
CSOs DG EIA EPA	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for		
CSOS DG EIA EPA EPIC-N	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and		
CSOs DG EIA EPA EPIC-N ESG	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance		
CSOS DG EIA EPA EPIC-N ESG FAO	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and		
CSOS DG EIA EPA EPIC-N ESG FAO FCDO	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and Development Office		
CSOS DG EIA EPA EPIC-N ESG FAO FCDO	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and Development Office Forces of Freedom and Change Federal Minister of Agriculture and		
CSOS DG EIA EPA EPIC-N ESG FAO FCDO FFC FMAF	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and Development Office Forces of Freedom and Change Federal Minister of Agriculture and Forestry		
CSOS DG EIA EPA EPIC-N ESG FAO FCDO FFC FMAF FNC	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and Development Office Forces of Freedom and Change Federal Minister of Agriculture and Forestry Forests National Corporation		
CSOS DG EIA EPA EPIC-N ESG FAO FCDO FFC FMAF FNC FREL	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and Development Office Forces of Freedom and Change Federal Minister of Agriculture and Forestry Forests National Corporation Forest Reference Emission Level		
CSOS DG EIA EPA EPIC-N ESG FAO FCDO FFC FMAF FNC FREL GAPAS	Civil Society Organizations Director General Environmental Impact Assessment Environmental Protection Act Educational Partnerships for Innovation in Communities–Network Environmental, Social and Governance Food and Agriculture Organization Foreign, Commonwealth and Development Office Forces of Freedom and Change Federal Minister of Agriculture and Forestry Forests National Corporation Forest Reference Emission Level Gum Arabic producer groups		

GGWI	Great Green Wall Initiative		
GGWSSI	Great Green Wall for the Sahel and Sahara		
GRM	Grievance Redress Mechanism		
HCCDDCP	Higher Council for Coordinating Drought and Desertification Control Programmemes		
HCENR	High Council for Environment and Natural Resources		
ICT	Information Communication Technology		
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative		
IFAD	International Fund for Agricultural Development		
IFMS	International Forum of Meteorological Societies		
IGAD	Intergovernmental Authority on Development		
INC	Interim National Constitution		
INDC	Intended Nationally Determined Contribution		
LDN	Land Degradation Neutrality		
MAF	Ministry of Agriculture and Forestry		
MAR	Ministry of Animal Resources		
MEAs	Multilateral Environmental Agreements		
MECC	Migration, Environment and Climate Change		
MoU	Memoranda of Understanding		
MRVS	Measurements, Reporting and Verification System		
NAIP	National Agricultural Investment Programme		
NAP	National Adaptation Plan		
NAPA	National Adaptation Programme of Action		
NCP	National Congress Party		
NDC	National Determined Contribution		
NDCC	National Desertification Control Council		

NDDCU National Drought and Desertificat Control, Coordination and Monitoring Unit	
NFI	
NGOs	Non-governmental organizations
NLC	
NOGGW	National Office of the Great Green Wall
NRM	natural resources management
PAGGWI	Pan-African Great Green Wall Initiative
PAO	Practical Action Organization
РоА	
RB- COSOP	Results-Based Country Strategic Opportunities Programmeme
RC	Resistance Committees
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RPGD	Range and Pasture General Directorate
SDG	Sustainable Development Goal
SECS	Sudanese Environment Conservation Society
SMA	Sudan Meteorological Authority
SSNRMP	Sudan Sustainable Natural Resource Management Project
SUDNAIP	Sudan National Agricultural Investment Plan
SYOCC	Youth Organization for Climate Change
тмс	Transitional Military Council
TT	
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VDC	Village Development Committees



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Overview of the Great Green Wall Agency in Sudan

The National Office of the Great Green Wall (NOGGW) was created in 2016 by Council of Ministers Decree No 36 and was activated in July 2021 in accordance with Ministerial Decree No 6, declared by the Minister of Agriculture and Forests. These actions were line with the recommendations of multiple evaluations that were carried out in which it was deemed necessary to strengthen the capacities of the institutional and organizational structures of the Great Green Wall (GGW) initiative and GGW national structures of the participating countries. The GGW intervention zones in Sudan are located in six states that are highly affected by drought and desertification and where the livelihoods of local communities need to be improved. The states are North Darfur, North Kordofan, Kassala, River Nile, Northern State and Khartoum State.



Figure 1: The organisational structure comprises of six offices, supported by the National Supervisory Committee at national level and Rural Development Committees at local level

The GGW coalition in Sudan comprises many agencies and stakeholder groups, these include:

- The Higher Council for the Environment and Natural Resources (www.hcenr.gov.org)
- The Ministry of Agriculture and Forestry (www.fnc. gov.org)
- The Ministry of Animal Resources, Fisheries and Rangelands
- The Ministry of Finance
- The Ministry of High Education & Science Research
- Academia
- National and international NGOs
- Development partners

NATIONAL TECHNICAL ASSISTANCE NEEDS

Implementation of the GGW faces numerous challenges at national, state and local levels. There is a need to improve coordination between government, civil society and private sector actors to improve the effectiveness and scale the impact of interventions within the GGW zones. Key challenges include:

- i. Unclear and overlapping government mandates: Rangeland management is the responsibility of the Ministry of Animal resources, while forest management is the responsibility of the Forests National Corporation under the Ministry of Agriculture and Forests. Soil conservation and land use also falls under the Ministry of Agriculture and Forests, while wildlife and protected areas management are the responsibility of the Ministry of the Interior. State-level ministries also have mandates related to land management, forestry and agriculture. A Higher Council of Environment and Natural Resources serves as a coordinating body under the Council of Ministers, yet despite this structure there remains a lack of clarity around mandates that has led to confusion and conflict, undermining action on GGW objectives.
- ii. There is a need for greater coherence between legislation governing forests and rangelands, specifically the Rangelands and Fodders Resources Development (Rationalization) Act (2015) and the Forest and Renewable Natural Resources Act (2002).
- iii. There has been insufficient coordination and engagement between government and other relevant actors (civil society and the private sector).
- iv. Natural resource-based conflicts and tensions emerging from communal use of rangelands has impacted GGW implementation.
- v. Lack of clarity around land tenure and property rights has resulted in tensions and undermined investments in agricultural development and land restoration.

ADDRESSING THESE GAPS WILL REQUIRE:

- Adapting project interventions to the evolving needs of the affected populations.
- Ensuring coordination between all implementers, particularly government and community authority structures.
- Ensuring that project information and risks is properly communicated and disclosed to stakeholders and putting in place mechanisms to receive feedback, comments, and grievances from all stakeholders on project design and implementation, with appropriate adjustments made in response to these inputs.
- Ensuring that members of vulnerable groups from communities can participate fully in the consultation process and enjoy project benefits.

INSTITUTIONAL STRENGTHENING

Numerous natural resource management and restoration projects have been implemented in Sudan, such as the World Bank-led Sudan Sustainable Natural Resources Management Project (SSNRMP). These projects have provided support in a range of areas including capacity building of government departments and agencies, training at community level, raising awareness of land restoration and climate change issues, and facilitation of engagement between government, civil society and private sector stakeholders. The SSNRMP, in particular, supported key institutions involved in natural resource management by strengthening their capacity to develop, implement and monitor programmes and projects. The project also sought to 1) develop effective interagency collaboration mechanisms at the national and state level; 2) assist communities in preparing and implementing investments under integrated land management plans; and 3) strengthen the capacity of Village Development Committees (VDCs) to manage, monitor, and maintain infrastructure.

KEY AREAS WHERE INSTITUTIONAL STRENGTHENING IS REQUIRED INCLUDE:

The current political situation in Sudan - an issue highlighted by several international agencies including IGAD, FAO and the World Bank. The World Bank halted disbursements for operations in Sudan in October 2021 in response to the military's seizure of power from the transitional government. Therefore, currently all SSNRMP activities have been halted. This is undermining the project's impact as critical maintenance activities cannot be undertaken, such as the protection of newly established trees. Buy in from local communities has been undermined by the sudden cessation of project activities, while contractors and suppliers have struggled to secure payment. Even if the project were to be activated again, it would take significant efforts to rebuild trust with stakeholders. The unstable political situation has also resulted in other disruptions, for example recurrent blocking of internet and telephone networks and restricted movement due to insecurity

in certain areas. This has caused delays in the implementation of numerous projects within Sudan.

- Lack of appropriate platforms and mechanisms to support coordination and collaboration between government agencies with NGOs, academia (and other research institutions), development partners and private sector partners in designing and implementing interventions;
- Continuing need for highly skilled technical assistance from stakeholder institutions, due to low capacity of field staff;
- Limited contribution from government in comparison with development agencies;
- Limited capacity to monitor projects and make necessary adjustments based on progress, challenges, and feedback received from stakeholders; and,
- Lack of policy coherence and an inadequate climate policy and regulatory framework to support adaptation measures, particularly in relation to rainfed agriculture.

FINANCING NEEDS

Broadly speaking, the ability of Sudanese stakeholders to mobilize funding in support of GGW initiatives is limited. Technical skills and knowledge of various fundraising sources and procedures needs to be strengthened. Necessary steps to improve the resource mobilization and effectiveness of the GGW focal point office and other government agencies include:

- Review the national and regional project proposals under the GGW umbrella programme and providing guidance and arrangement on projects formulations;
- Identify regional themes which could be of common interest to all GGW member states;
- Prepare concept notes for project proposals;
- Improve documentation of successes and project implementation broadly in order to identify best practices and leverage past and existing projects for future fundraising; and,
- Address key cross-cutting issues within the broader GGW project portfolio.

THE MAIN BOTTLENECKS FOR THE IMPLEMENTATION OF THE GGW INITIATIVE

Co-ordination: There is limited coordination across key institutions and platforms and mechanisms to support such coordination are lacking. Poor coordination undermines implementation and leads to inefficient allocation of resources and the duplication of effort.

High turnover rate of the government staff: A high turnover rate amongst government staff leads to a situation where the accumulation of experience and knowledge within key institutions is undermined.

Lack of coherence and gaps in polices and legislation: There are gaps in the policy framework, for example in the area of agriculture and the broader



food system. There is also a lack of coherence between policies addressing natural resource management, environment and climate change policies. See section 6). The enforcement of implementation laws and legislation is very weak.

Inadequacies in data policy and data sharing:

A national spatial data infrastructure is poorly developed. Data is scattered across government and nongovernmental entities. Much of this data is outdated or has significant gaps. There are poor linkages with global and regional data sharing platforms, while there is also a significant need to improve the technical skills and capacity of government agencies in data management.

Instability, political unrest and conflict: The political situation in the country has been highly unstable, which has affected all aspects of society and impacted programme delivery. The country has faced sanctions, major development partners have halted funding and programme implementation, and conflict has resulted in a great number of people being internally displaced.

Natural disasters: There has been a high frequency of natural disasters, with vulnerable communities particularly hard-hit. These have included floods, earthquakes and wildfires.

Limited linkages between research institutes and universities: Platforms and mechanisms to support collaboration and information exchange between government agencies and private research institutions (academia, think tanks, industry research institutions, etc) are lacking. There is also a lack of well qualified human resources and expertise in critical areas such as natural resource governance, environmental management and climate change.

Knowledge management and technology transfer: Technology transfer between research agencies and

industry is limited and requires capacity development and the establishment of appropriate coordination mechanisms.

Private sector engagement and NGO co-ordination: Engagement of the private sector on climate change

falls significantly short of its potential due to lack of awareness. Private sector opportunities in environmental services, natural resource sectors and climate change / green industries is poorly developed.

POLICY GAPS THAT AFFECT GGW IMPLEMENTATION

- Land degradation is not sufficiently prioritised in national and state level development frameworks;
- There is a lack of a policy to combat land degradation;
- Appropriate and coherent policies for sustainable natural resource management are not sufficiently developed;
- There is a lack of a nationally driven and agreed upon long term vision for smallholder producers;
- Climate change policies and strategies are inadequate;
- Policy frameworks do not adequately address existing inequalities in access to land and natural resources;
- Three is a lack of clarity over the semi-mechanized farming sector. Policy recommendations made by the study "Sustainable Development of the Semi Mechanized Farming Sector in Sudan" prepared for the Government of Sudan and funded by World Bank Multi Donor Trust Fund have not been implemented.
- Gaps and inadequacies in land use plans and laws governing land tenure and land use have resulted in conflicts between land users. The conflicting interests of traditional rainfed farming, pastoralism, and forest uses at local, state and national levels are not adequately addressed within legal and institutional frameworks, which undermines effective land management and restoration.
- Agricultural policy supports horizontal expansion of mechanized farming for agricultural development to support food security and supply grain exports and agricultural industries. The expansion is at the expense of forests and natural resources conservation. This has greatly influenced present day forest and range policies and practices and has resulted in significant land degradation. The agricultural sector is also facing land tenure/ governance and land ownership problems.
- There is a need to operationalise policies that support integrated land management, building on practices and methodologies such as agro-

pastoral and agro-forestry interventions, bush-fallow systems and shelterbelts in the context of traditional agriculture, irrigation schemes and mechanized farming.

- The Forest Policy (1986, revised 2006) encourages forest reservation, conservation and community and private sector participation in forestry development and management. The forest policies are strongly supported by the Comprehensive National Strategies (1992-2002 and 2003-2027) both being concerned with the importance of forests in environmental conservation as well as a source of goods and services for the country and local communities. In addition, the policy emphasises the role of the international community and public participation in tree planting and sustainable management of forests and recognises the need for research in forest development and the importance of forest extension. These components of the forest policy framework reflect good practices that support the implementation of the GGW initiative. These objectives are in line with the objectives of the SSNRMP and indicative of the role that sustainable management of forestry resources can play if the forestry policy framework is coordinated and harmonized with other policies.
- There is a lack of clarity around statutory and customary rights, which needs to be taken into consideration for any GGW intervention. The tensions and contradictions between statutory and customary rights has led to conflict. It is not clear whether statutory or customary rights have legal status in terms of who owns, who controls and who has rights to access land, nor how these issues can be negotiated, contested or amended. As a result, borders between the so called 'government land' and 'tribal land' is highly blurred, with statutory laws appearing to have no legitimacy at community level. This situation has created wide-ranging disputes between the government and communities. Similarly, are important legislative gaps in terms of clarifying the rights and entitlements of smallholders (both farmers and pastoralists) to land and natural resources.

Existing projects aligned with the GGW in Sudan

Sudan Sustainable Natural Resource Management Project (SSNRMP) Phase I and II: Phase on of the

SSNRMP was launched in 2014 and included three states (Gaziera, Kassala and White Nile). Phase two was launched in 2018 and brought in three additional states (River Nile, Northern State and North Kordofan). The project seeks to increase the adoption of sustainable land and water management practices in targeted landscapes through the adoption of improved soil and water management practices; forested ecosystem rehabilitation and rangeland management; creation of sustainable alternative livelihood activities related to natural resource management; and strengthened capacity to implement sustainable land and water management and biodiversity conservation. The three core components of the project are 1) Institutional and policy framework; 2) Community-based sustainable management of rangelands and forests and biodiversity; and 3) Project management, monitoring and evaluation. The project has three main national partners that implements its activities, namely the Forest National Corporation, the Administration of Pasture and Forage, and the General Administration of Wildlife Conservation.

Gums for Adaptation and Mitigation in Sudan

(GAMS): The project is implemented jointly by the FAO and Sudan's Forest National Corporation, in collaboration with the Higher Council for Environment and Natural Resources. It aims to enhance rural smallholder households' resilience to climate change in eleven localities in the states of North, West and South Kordofan through climate-resilient gum agroforestry and rangeland restoration. The project has two main components: 1) Restoration of smallholder gum agroforestry systems and improvement of the gum value chain, and 2) Enhance climate change adaptation at landscape level through establishment of livestock routes, restoration of rangelands and enhancement of policy/institutional environment. The project was launched in January 2021.

Boosting Restoration, Income, Development,

Generating Ecosystem Services (BRIDGES): The BRIDGES project is jointly financed by the Government of Turkey and the FAO and seeks to contribute to the implementation of the national GGW programmes in several African states. In Sudan, BRIDGES focused on Kassala State in eastern Sudan. The project was launched in 2019. The focus of the BRIGES project is rehabilitation of degraded forests through large scale restoration techniques which combine direct sowing and seedling plantation of useful native fodder species. Land restoration techniques are aligned with existing agrosilvo-pastoral systems through participation with local communities living around targeted areas.

Land degradation neutrality (LDN): The framework presents principles to be followed by all countries that choose to pursue LDN. Principles govern application of the framework and help prevent unintended outcomes during implementation and monitoring of LDN. There is flexibility in the application of many principles, but the fundamental structure and approach of the framework are fixed to ensure consistency and scientific rigor. Those principles are as follows:

- Maintain or enhance land-based natural capital;
- Protect the rights of land users;
- Respect national sovereignty;
- For neutrality, the LDN target equals (is the same as) the baseline; and,
- Neutrality is the minimum objective: countries may elect to set a more ambitious target.

There is a need to integrate planning and implementation of LDN into existing land use planning processes and GGW activities in Sudan to help achieve the objectives of land restoration and environmental conservation. There are several elements that should be considered:

- Counterbalance anticipated losses in land-based natural capital with interventions to reverse degradation in order to achieve neutrality;
- Manage counterbalancing at the same scale as land use planning;
- Counterbalance "like for like" (counterbalance within the same land type);
- Balance economic, social and environmental sustainability;
- Base land use decisions on multi-variable assessments, considering land potential, land condition, resilience, social, cultural and economic factors;
- Apply the response hierarchy in devising interventions for LDN: "avoid > reduce > reverse" land degradation;
- Apply participatory processes: include stakeholders, especially land users, in designing, implementing and monitoring interventions to achieve LDN;
- Reinforce responsible governance: protect human rights, including tenure rights; develop a review mechanism; and ensure accountability and transparency;
- Monitor using the three UNCCD land-based global indicators: land cover, land productivity and carbon stocks;
- Use the "one-out, all-out" approach to interpret the result of these three global indicators;
- Use additional national and sub-national indicators to aid interpretation and to fill gaps for ecosystem services not covered by the three global indicators; and,
- Apply local knowledge and data to validate and interpret monitoring data.

DATA PLATFORMS LINKED TO RESTORATION THE GGW CAN BUILD OFF

There are many platforms developed in Sudan to support data sharing. Existing data geoportals are oriented towards natural resources management, land degradation, land restoration, biodiversity and GHG emissions monitoring and management. Key data platforms are outlined below.

GGW Focal Point/Sudan Sustainable Natural Resources Management Project Geoportal: This is one of the most important data platforms supported by the SSNRMP. This project will help map and coordinate GGW activities. Other geoportals at the national level will be linked regionally with relevant platforms. As preliminary assessment of the geoportal revealed areas that require further support, including network management, technical hardware, training of staff in working with the platform and capacity building related to data collection and management, including mobile data collection tools.

Sudan Biodiversity Database Management

Geoportal: The main objectives of this project are to help in 1) building IGAD Member States' biodiversity databases and developing linkages with global biodiversity databases, 2) transformation of all biodiversity data into the GIS data to enable all data to be integrated into the GIS platform. The project also has a capacity building component related to biodiversity data collection and management. The platform provides different types of biodiversity data collected from a number of institutes.

Environmental Database Information Management

System: The EDIMS Geoportal is a type of web GIS application prepared by the HCENR under the project Strengthening Targeted National Capacities for Improved Decision Making and Mainstreaming of Global Environmental Obligations, which is funded by GEF. This initiative seeks to compile all natural resources and environmental data in one platform. The website address of the EDIMS is (https://edims.hcenr.gov. sd/). The platform allows the EDIMS partners to share their information and communicate with each other. It includes the following platforms: 1. Biodiversity Database Management, 2. Land Heath Surveillance (under the land degradation and land desertification unit in HCENR) and 3. Climate Information.

Measurement, Reporting and Verification System

(MRVS): The MRV is supported by the REDD+ project for the Forests National Corporation to prepare all data relevant to the Forests National Corporation. The Sudan National Forest Monitoring System framework is designed to integrate the various flows of information to produce the REDD+ data that feed into various national and international reports, including the National Communication to the UNFCCC. The system is designed in such a way that it will go beyond the measurement of forest carbon and will provide information on other parameters such as forest health, biodiversity, socioeconomic and environmental functions of forests and legal frameworks related to forests. The Sudan National Forest Monitoring System builds upon existing systems at federal and state levels to enable the assessment of different types of forest with scope for improvement in line with the gradual implementation of REDD+ activities.

Sudan Geoportal Database Management: The Sudan Geoportal is one of the key outcomes of the strategic partnership between the National Information Centre, the Sudan Survey Authority and the Central Bureau of Statistics, with the support of UNICEF Sudan. The aim is to enrich the digital content of spatial information on the Internet so as to support planning and decision-making. The portal can be accessed at http://sgdc.geoportal. gov.sd/.

Soil Information System Geoportal: This one of the most important platforms providing data in soil types, soil erosion, land capability, land suitability and related data needed in the area of agriculture and land restoration. It also provides the digital mapping of soil carbon storage and water capacity. This project supported by the FAO as part of Global Soil Facility project. The implementing agency is the Ministry of Agriculture and the Agricultural Research Corporation. The address of the geoportal is https://susis.sd/

Framework for National GGW Plan

Table 1: Framework for the National GGW Plan

Leve	rage	Actions /Opportunities	Responsibilities		
GGW	GGW VALUE PROPOSITION				
1.	Creating multiple benefits	 Create synergy between the national action plan of the country and the GGW Justify relevance of the GGW/LDN to achievement of SDGs Work closely throughout the implementation of the GGW activities. 	 GGW Sudan coalition working group, National Council for Combating Desertification, Ministry of Finance, Higher Council of Strategic Planning, National Council of Population. UNCCD, GGW partners working group, National Council of Population. GGW partners working group, Ministry of Finance, UNCCD 		
2.	Fostering policy coherence	 Review main sectoral policies to assess GGW coherence. Ensure that the main sectors of agriculture, forestry, environment, etc., work closely throughout the implementation of the GGW project activities. Integrate GGW activities into the national land use policy. The National focal points of the three Rio conventions (UNCCD, UNFCCC and CBD) should work closely throughout the implementation of the GGW. 	 GGW partners working group, National Council for Combating Desertification GGW partners working group GGW partners working group National focal points of the UNCCD, UNFCCC, CBD 		
3.	Advancing climate action	 Integrate GGW programmes into the National Adaptation Plan (NAP) and National Determined Contribution (NDC). The GGW partners working group should work closely with the National Focal Point of the UNFCCC, especially with regard to the implementation of the NAP and preparing of NDC. Promote synergy in the implementation of the NAP and the NDC 	 GGW partners working group, focal point of UNFCCC WI partners working group, focal point of UNFCCC GGW partners working group, focal point of UNFCCC 		
4.	Leveraging financing opportunities	 The GGW partners working group should utilize opportunities to mobilize climate finance, private investments and national budgetary resources. Develop transformative GGW partners proposals. Utilize funding from: (a) Green Climate Fund (b) the GGW Fund Integrate LDN into the national budget 	 GGW partners working group, focal point of GCF, Ministry of Finance GGW partners working group, focal point of GCF, UNCCD GGW partners working group, Ministry of Finance 		

Leve	erage	Actions /Opportunities	Responsibilities			
LEVE	LEVERAGE POINTS					
5.	National development programmes, priorities and objectives	• The GGW partners working group should work closely with the government in the implementation of national development projects related to the seven priority intervention areas: 1) natural resources management; 2) market access and trade; 3) livelihood support; 4) pastoral disaster risk management; 5) research and knowledge management; 6) conflict resolution and peace building; and 7) coordination.	GGW partners working group			
6.	Country commitments and engagements	 The GGW partners working group should work closely, through the focal point of the GGW and others such as the National Council for Combating Desertification, environmental agencies, and with the Council of Ministers in order to integrate GGW programmes in the National Action Plan The National Focal Point of the GGW/UNCCD and the GGW partners working group should work closely with national focal points of the CBD and the UNFCCC, especially in the implementation of the projects related to the biodiversity and the NDC, respectively. 	 GGW partners working group GGW partners working group, focal point of UNCCD 			
wн	D TO ENGAGE TO CREATE LEVE	RAGE				
7.	Senior government	 All the following stakeholders should be involved in the GGW partners working group: National Council for Combating Desertification - Ministry of Environment, Natural Resources & Physical Development - Ministry of Agriculture and Forestry - Forests National Corporation - Ministry of Animal Resources and Fisheries - Ministry of Water resources and Electricity - Ministry of Tourism, Antiquities & Wildlife - Minister of Federal Governance - Central Bureau of Statistics - Ministry of Finance and Economy Planning - Ministry of Welfare and Social Security (National Council of Population - SDG)- Ministry of Oil & Gas - Ministry of Minerals - Ministry of Education - Ministry of Higher Education and Scientific Research - Ministry of information (Media). 	• GGW partners working group			
8.	National coordination mechanisms	 GGW partners working group should work closely with: Higher council for Environment and Natural Resources - National Council for Combating Desertification - National Team for the Implementation of the 2030 Agenda - National Drought & Desertification Control Unit (NDDCU), as coordination units. 	GGW partners working group			
9.	International development partners	• The GGW partners working group should engage international development partners, for example, UNDP, FAO, the World Bank and the EU Delegation.	GGW partners working group			
10.	National non-governmental stakeholders	 The GGW partners working group should engage national NGOs working in the field of land degradation in Sudan. Specially those projects and activities at the local level, for example: Sudanese Environment Conservation Society, Environmentalist Society, Sudanese Society for Combatting Desertification, Sudanese Society for Forests, etc. The GGW partners working group should engage professional associations and scientific associations working in the field of land degradation at local level. The GGW partners team should engage the private sector in Sudan. 	• GGW partners working group			

Engagement opportunities in 2023 for the GGW in Sudan

There are many consultations and activities planned by various agencies and departments that are relevant for national GGW activities. The table below summarises key collaboration opportunities emerging from the consultations conducted as part of the development of this national assessment.

Table 2: Proposed GGW Activities Plan 2023

ID	EVENT ACTIVITIES RELATED TO THE GGW	HOST INSTITUTION	DATE	EVENT LINK
1	Monitoring Verification and Reporting (MRV) activities related to the land restoration and land degradation, forest fire activities	MRV Unit, Forest National Corporation, Ministry of Agriculture	Jan-Feb 2023	Forests National Corporation
2	Rangeland and Forage Policy discussion	Rangeland and Forage Department, Ministry of Animal Resources	Jan 2023	Rangeland Department/ Ministry of animal resources
3	Rangeland vulnerability analysis and assessment	Rangeland and Forage Department, Ministry of Animal Resources	Jan 2023	Rangeland Department/ Ministry of animal resources
4	Flood vulnerability and land degradation vulnerability mapping for all Sudan	FAO/HCENR and University of Khartoum	Jan 2023	www.hcenr.gov.sd
5	Agriculture/crop modelling risk to the climate change	FAO/HCENR and University of Khartoum	Feb 2023	www.hcenr.gov.sd
6	Environmental indicators and their relation to climate change	HCENR/Desertification Department	Feb-Mar 2023	www.hcenr.gov.sd
7	Environmental and desertification database management	HCENR/Climate change Department/Desertification Unit	Feb 2023	www.hcenr.gov.sd
8	GGW database management/ uploading and working on the preparations of the data relevant using the GGW/ Geoportal	GGW Focal Point Unit/ Ministry of Agriculture/ Natural Resources Department	Jan 2023	Natural Resources Department/Ministry of Agriculture
9	The training course on web GIS work for monitoring the Forests National Corporation database and working with the Forests National Corporation geoportal	MRV Unit/ Forests National Corporation	Jan-Feb 2023	Forests National Corporation / Rangeland Department
10	Training on using the hot spot for highly vulnerable areas (flood, desertification and agricultural degradation)	Faculty of Geography/ University of Khartoum and HCENR	Jan-Mar 2023	Faculty of Geographical and Environmental Sciences/ University of Khartoum

5 Overall recommendations

- Institutional and policy reform in land governance and administration: Such reforms should involve nation-wide and state level reviews of existing institutions and the explicit definition of the relationship between the different government institutions related to land and natural resource management, including community governance structures. This will require a critical review of existing laws and regulations related to natural resource management, land management, forestry governance, climate change and related themes, with the objective of identifying gaps and updating, harmonizing, and augmenting the current policy framework.
- Investment in capacity development of relevant government institutions: Existing institutional arrangements for land and natural resource management/land degradation/ climate change and related institutes are challenged by limited technical and human resource capacity and a lack of coordination, exacerbated by high staff turnover.
- Capacity building of local government structures: Such interventions should include addressing the power of tribal leaders and chiefs in their role as land administrators, conflict mediators, local development agents and mobilizers of community action.
- Knowledge and information management: Taking into account the current status of information gaps and fragmentation, there is crucial need for improvement of knowledge and information management and dissemination at all levels. Improved data is required on themes such as land use patterns, land values, traditional land users, title holders, land leases, land compensation, etc. Disaggregation of data by gender should institutionalized.
- Enhancing research capacity: This would involve training programmes on land and natural resourcesrelated issues for academic and other researchers, supporting enhanced access to research funds, greater exposure to international and regional experiences, and support to undergraduate and graduate research projects.

- Strengthening community platforms/forums: Such forums for popular discussion and consultation are critical to address issues related to access and use of land and natural resources and for identifying mechanisms for negotiating the diverse interests of the various social groups, including the state.
- National strategy for climate adaptation: Support the development and operationalization of an inclusive and conflict-sensitive national strategy for adaptation to climate change as a priority agenda.
- National land use plan: There is an urgent need for the development of a national land use map, integrated with relevant laws and land management systems. Community land use mapping under IFAD projects can provide an important entry point. The land use map should be based on detailed scientific knowledge that consider the dynamic nature of drylands.
- Ground level knowledge exchange: There is a need to invest in regional knowledge exchanges involving farmers, pastoralists, planners and decision makers, community based organisation and other local actors. Such exchanges can support the integration of emerging good practice related to land restoration, measures to combat desertification, enhancement of climate resilience, water management and other themes.
- Addressing natural resources-based conflict: Competition and conflict over access and use of land and natural resources, linked to issues of identity and tribal politics, have been widely recognized as a major cause of instability and a serious threat to sustainable use of land and other natural resources in the country. Addressing these issues will remain a prerequisite for realizing the objectives of the GGW.

