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United Nations**

Scaling Up Resilience in Africa's Great Green Wall (SURAGGWA)

Countries: Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria, Senegal

GCF /RAF/524/GCR

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

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Abbreviations

AAD	Action Against Desertification
AE	Accredited Entity
AFR	African Forest Landscape Restoration Initiative
AMA	Accreditation Master Agreement
BCM	Billion Cubic Meters
CGs	Community Groups
CIU	Country Implementation Unit
CRA	Climate Resilient Agriculture
CWA	Climatic Water Availability
DAE	Direct Access Entity
EE	Executing Entity
EHS	Environmental, Health, and Safety Guidelines
EMP	Ethnic Minority Plan
EMPF	Ethnic Minority Planning Framework
ESIA	Environmental and Social Impact Assessment
ESM	Environmental and Social Management
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standards
Ex-ACT	Ex-Ante Carbon Balance Tool
FAO	Food and Agriculture Organization of the United Nations
FCV	Fragile, Conflict and Violence affected contexts
FERM	Framework for Ecosystem Restoration Monitoring
FESM	FAO's Framework for Environmental and Social Management
FFS	Farmer Field Schools
FLO	Funding Liaison Officer
GAP	Gender Analysis & Action Plan

GBV	Gender Based Violence
GCF	Green Climate Fund
GDP	Gross Domestic Product
GGW	Great Green Wall
GGWI	Great Green Wall Initiative
GHG	Greenhouse Gases
HDI	Human Development Index
IDP	Information Disclosure Policy
IDPs	Internally Displaced Persons
IFAD	International Fund for Agricultural Development
IGREENFIN	Inclusive Green Financing Initiative
IPPF	Indigenous Peoples' Planning Framework
IRMF	Integrated Results Management Framework
LTO	Lead Technical Officer
NDA	Nationally Designated Authority
NDC	Nationally Determined Contributions
NEXT	Nationally Determined Contribution Expert Tool
NSC	National Steering Committee
NTFP	Non-Timber Forest Products
OPIM	Operational Partners Implementation Modality
PAA-GGW	Pan Africa Agency for the Great Green Wall
PMU	Programme Management Unit
PSC	Programme Steering Committee
PTF	Programme Task Force
RAF	FAO Regional Office for Africa
RCP	Representative Concentration Pathway
RFP	Request for Proposals
SDG	Sustainable Development Goals
SEAH	Sexual Exploitation, Abuse, and/or Harassment
SEP	Stakeholder Engagement Plan

SEPAL	System for Earth Observation, Data Access, Processing and Analysis for Land Monitoring
SURAGGWA	Scaling Up Resilience in Africa's Great Green Wall
TOC	Theory of Change
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
VC	Value Chain
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security
WCGs	Women's Community Groups
WFP	World Food Programme

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Executive Summary

1. **Methodology for Risk Categorization:** Project-related and inherent environmental, social, and climate risks were determined by: (i) screening the programme activities against FAO's Framework for Environmental and Social Management (FESM) requirements and FAO's guidance for designing and managing interventions in Fragile, Conflict and Violence affected situations (FCV), as well as the Green Climate Fund's (GCF's) Environmental & Social Standards (ESS); (ii) considering the findings of desk research on risks associated with similar programmes/projects and relevant background papers; and (iii) incorporating findings from stakeholder engagement efforts, focus group discussions, and key informant interviews.
2. The initial safeguards review identified patterns of existing issues inherent to the programme area which could increase risk to the programme, its personnel, and/or beneficiaries. Additional desk research highlighted further areas of potential inherent risk and lessons-learned from other programmes and projects. The screening of SURAGGWA activities, coupled with feedback from the field visits and stakeholder consultations (focus group discussions, key informant interviews) provided insight on the latest conditions which could affect the success of the programme and the potential project-specific impacts (both positive and negative).
3. **Framework Approach:** Given that site locations for programme implementation have not been finalized, the design team agreed to use a framework approach consistent with FAO's FESM and GCF's ESS. Documentation is based on the format requested for GCF projects and was agreed upon with FAO's Environmental and Social Management Unit (ESM-Unit) prior to development of this ESMF.
4. **Project Impacts & Inherent Risks:** The safeguards categorization for SURAGGWA is moderate for both social and environmental impacts and risks. Mitigation measures for climate risks have been built into the design of the programme via climate-resilience building activities, as the programme explicitly targets climate mitigation and adaptation by design.
5. **Key social risks and mitigation measures:** Social impacts of the programme are largely positive. The programme activities aim to improve the livelihoods and resilience of communities who rely on common and private lands in the Sahel region, with a focus on increasing inter-community collaboration (e.g. transhumant groups with agro-pastoralists). Participatory planning and community engagement under Component 1 is expected to increase collaboration and avoid inter- and intra-community conflict around land use/management, and improve the management of such conflicts in some areas. Investments in improving land and natural resource management get to the heart of what many communities in the Sahel view as both their most pressing human security concerns, and the factors that contribute to persistent conflict and competition. The programme's investments in land restoration and support to related smallholder value chains will thus contribute not just to climate change mitigation and adaptation, but also to peace-building.¹
6. Component 2 activities are expected to increase community resilience, incomes, and access to financial credit. Institutional capacities built under Component 3 will support improved coordination, collaboration, and management.
7. Social risks and impacts anticipated as a result of project activities include: (i) potential conflict as the value of restored lands increase; (ii) management and/or conflict concerns relating to the land and resource

¹ FAO plays a leading role in UN-wide efforts to combine climate security and peace building efforts, see e.g. https://www.un.org/peacebuilding/sites/www.un.org.peacebuilding/files/documents/climate_security_tr_web_final_april10.pdf

tenure arrangements; and (iii) engaging with vulnerable populations, including traditionally underserved Sub-Saharan African communities. To mitigate these concerns, the programme has built principles and best practices of the *Technical Guide on the Integration of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality* into the engagement process and project activities, and utilizes a participatory approach (also detailed in the Stakeholder Engagement Plan (SEP)) with feedback loops through the programme's Grievance Redress Mechanism (GRM) to reduce the risk of, avoid, and mitigate (when impossible to avoid) potential conflict. This ESMF also details the programme's approach to engaging with vulnerable communities and use of Free Prior Informed Consent in relevant project areas. The complementary Gender Analysis and Action Plan provides guidance, activities, and targets for the programme (particularly under Component 1 and Component 2) so that women are equitably accounted for in the restoration efforts and NTFP benefits. Overall, the safeguards instruments developed to address social risks include the Stakeholder Engagement Plan (SEP, Annex 7, including the GRM), Gender Analysis & Action Plan (GAP, Annex 8), and this ESMF which includes an Ethnic Minority plan (Appendix 6) and a plan to avoid – and where necessary, manage – intra and inter-community conflict, through careful, participatory selection of restoration areas, among others (see Appendix 9, "Conflict Assessment, Prevention and Management", as well as the Exclusion List and the Sub-project Screening Form in Appendices 1 and 2).

8. In selecting its areas of operation, SURAGGWA will avoid regions where there is conflict and displacement due to safety reasons and intervene in areas where the security situation allows the programme to be implemented on the ground. In countries where there has been recent political upheaval, FAO strictly follows high-level UN guidance, including: (i) respecting UN-imposed sanctions; (ii) following UN instructions re interruption of the implementation of "non-critical" activities.²

9. Given the presence of unexploded ordinances (UXOs) and/or Improvised Explosive Devices (IEDs) in some areas across the Sahel, there is a health and safety risk should the programme operate in those areas. This ESMF provides the screening tools to be used at project sites to ensure that these risks are sufficiently addressed. For UXOs, in particular, sites with UXOs/IEDs will either be avoided completely (as part of the negative list), or, if deemed a critical location for restoration activities, will involve identification and removal (if any) by experts as part of site clearance prior to commencing any activities on the programme sites. Sub-project ESMPs³ for areas in which UXOs/IEDs are a risk will include a UXO clearance form (see Appendix 7).

10. Avoidance of areas with the above-mentioned risks will be facilitated by the fact that the programme's land restoration objective, 1.27 million ha, accounts for less than 2% of the total land area identified as needing restoration in the programme countries, which is over 100 million ha. However, the above-mentioned risks are assessed to vary from low to moderate because there are no practical measures that ensure complete avoidance. Nevertheless, when necessary measures are in place and effectively implemented, the likelihood and impact of any negative events are likely to be reduced to a manageable level. Mitigation measures are detailed within Chapter IV of this Environmental and Social Management Framework.

11. **Key environmental risks and mitigation measures:** The programme is expected to have largely positive environmental impacts, including improved climate resilience, soil fertility/soil health, increased soil water

² Currently, none of the 8 SURAGGWA countries are subject to any UN sanctions. The only country with a "UN criticality programme" is Niger, but nearly all emergency, resilience and rural development activities are considered high-priority by the UN, and activities that would be temporarily suspended account for less than 10% of the country's budget for the SURAGGWA programme, i.e. less than 1% of the overall project budget.

³ Under the SURAGGWA programme, there will be 8 sub-projects (one each per a target Host Country).

retention and groundwater recharge, and natural resources management. Cumulative environmental impacts are also assessed to be largely positive. Potential negative environmental impacts are expected to be minor, limited in time/scale, and reversible, as they relate to (i) provision of seeds/seedlings/outputs to farmers to support the landscape restoration activities; (ii) potential indirect increase of pesticide use due to increased production; (iii) increased water consumption due to increased production; and (iv) overlap of project restoration activities with national parks. These risks are managed through overall project design (e.g. training under Components 1 and 2 which will ensure understanding of restoration principles and agroecology/integrated pest management/etc.), limitations to the types of activities held in existing parks (e.g. restoration activities only), and the development and implementation of Environmental and Social Management Plans (ESMP) for project sites. The ESMPs will also take into account the territorial and environmental knowledge of the affected ethnic minorities/vulnerable populations.

12. As with the social risks and impacts, mitigation measures for the environmental risks and impacts are detailed within Chapter IV of this ESMF.

13. **Implementation:** The ESMF will be implemented with the support of: (i) one Regional Environmental & Social Safeguards Specialist in the Programme Management Unit (PMU) throughout the lifespan of the programme; (ii) one National Social Safeguards & Gender Specialist in each Country Implementation Unit (CIU) throughout the lifespan of the programme; (iii) one National Monitoring & Evaluation Specialist in each CIU throughout the lifespan of the programme; and (iv) technical support from the FAO Land Tenure Team provided to each country during the first two years of the programme. Further support at the local level will be determined by inclusion of safeguards-related obligations within the Terms of Reference of the programme staff/implementing agencies. Depending on the site location and related activities, site-specific Environmental and Social Management Plans (ESMPs) will be prepared by the National Social Safeguards & Gender Specialist in collaboration with the on-site implementation team.

1. Introduction

1.1 Context

14. The eight countries of the Great Green Wall (GGW) are among the world's poorest and the most vulnerable to climate change. They ranked at the bottom of the Human Development Index in 2020 and a large majority of their population lacks access to employment, basic health care, education, or access to natural resources. Agriculture, livestock, and forestry activities are the foundation of their economies and more than 70 per cent of rural communities depend directly on rainfed agriculture. The Sahel⁴ has experienced some of the most extreme climate events on earth in the 20th century. Comparison of data from 1900 shows clear long-term climate change with a tendency towards higher temperatures, uncertain precipitation, prolonged drought, increased winds and increased frequency of extreme events. The degradation of ecosystems and consequent depletion of vegetation and biodiversity has undermined livelihoods and increased vulnerability. This has severely impacted the Sahelian agro-silvo-pastoral landscapes, aggravating food and nutrition insecurity and compromising the sustainability of livelihoods.

15. **Project Interventions:** The Scaling-Up Resilience in Africa's Great Green Wall (SURAGGWA) programme is designed to take forward the objectives of the Great Green Wall (GGW), which is an African-led initiative to protect the continent from desertification by attempting to restore natural vegetation on an 8000 km area across a 15 km belt in the continent. The initial ambition has grown to refocus the GGW programme from the mere plantation of trees to the overall development of the area. The proposed SURAGGWA programme aims to help Africa achieve its development objectives. The programme is designed to facilitate a major paradigm shift by building ecological and climate resilience in eight Sahel countries recognized as being among the most vulnerable to climate change in Africa namely, Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria and Senegal. The programme will also build overall capacities for coordination, planning, monitoring, mobilization of financial resources and knowledge management in these countries. SURAGGWA will build on FAO's previous support to the Sahelian countries through its highly acclaimed Action Against Desertification (AAD) initiative funded by the European Union and Turkey; and scale-up successful practices from the GEF/World Bank, African Development Bank (Programme for Integrated Development and Adaptation to Climate Change in the Niger Basin) and FAO's Operation Acacia supported by Italy for sustainable gum Arabic production and food security.

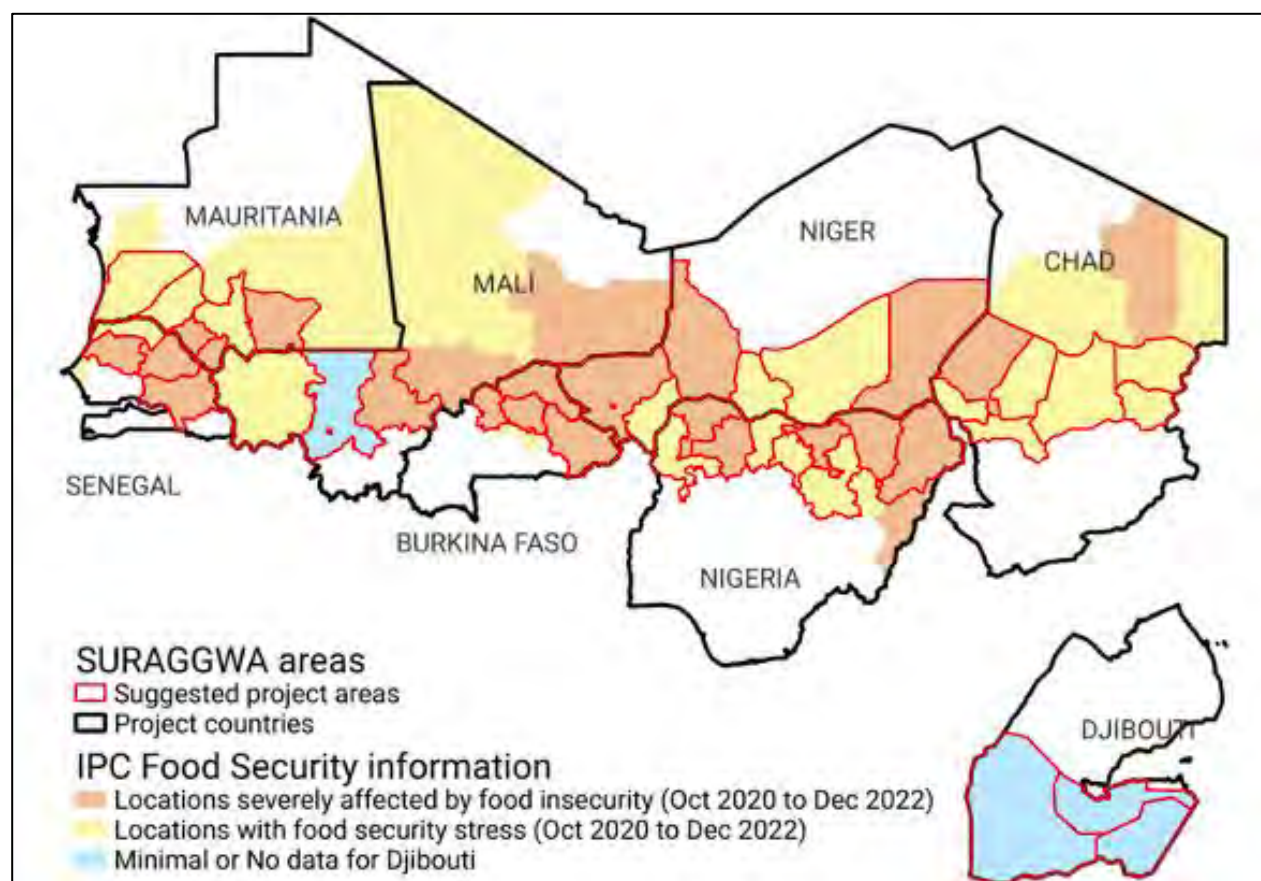
16. SURAGGWA proposes to implement three key interventions that are designed to address the technical, organizational, and financial barriers to alleviate climate change impacts and heighten resilience of local communities. These interventions are as follows:

- Developing a project that scales-up successful restoration practices, promotes biodiversity, regenerates native species, and sequesters carbon;
- Supporting the development of climate-resilient, low emission non-timber forest product (NTFP) value chains benefiting vulnerable communities' livelihoods and food and nutrition security; and
- Strengthening the Great Green Wall's regional and national institutions to secure the sustainability of interventions and scale up successful practices.

⁴ The name Sahel refers to the semi-arid region stretching longitudinally from Senegal in West Africa to Sudan and Ethiopia in East Africa and latitudinally from just north of the tropical forests to just south of the Sahara desert (roughly between 10 ° and 20 °N). However, there is no universally defined list of countries of the Sahel.

17. The programme will work with community organizations to build ownership and sustainability and strengthen community awareness and capacity in understanding ecological elements of their environment. The current initiative will strengthen community participation with a special focus on women's participation and include training and building awareness in addressing climate change and land degradation issues. Given that there are a host of initiatives that are aimed at enhancing access to financial services in some of the selected countries, the current project will build linkages with existing financial institutions and address the specific bottlenecks faced by the target groups in the area targeted by SURAGGWA. This includes establishing linkages with existing providers, building innovative models of value chain financing and de-risking lending to small holders in the region. The programme area can be seen in Figure 1.

Figure 1: Project area



Source: Author's own elaboration.

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

18. **Stakeholder Engagement:** To support development and design of this project, stakeholder engagement was conducted to discern potential positive and negative project impacts, as well as key design opportunities to improve accessibility and participation. Continued stakeholder engagement must involve iterative consultations throughout the programme's life cycle with particular attention to vulnerable populations and groups prone to

exclusion, be that for reasons of gender, orientation, age, ability, religious beliefs, and/or ethnicity. The guidelines for stakeholder engagement are available in the Stakeholder Engagement Plan (SEP, Annex 7).

19. **Ethnic Minorities, Women, and Vulnerable Persons:** to ensure adequate inclusion of ethnic minorities, women, and other vulnerable persons, this ESMF contains a chapter for engagement of ethnic minorities and the related Gender Assessment & Action Plan (GAP) describes how gender-specific activities have been mainstreamed into the programme design. The ESMF and GAP help ensure that considerations for the differentiated needs of ethnic minority (EM) communities, women, and vulnerable persons are built into the programme design and monitoring indicators.

20. **Environmental and Social Management Framework (ESMF):** This ESMF serves as the primary guidance document for management and mitigation of environmental, social, and climate risks and impacts throughout the programme cycle.

1.2 Purpose and Application of the ESMF

21. The SURAGGWA programme involves 8 sub-projects (one per a target Host Country) and activities where specific locations are still to be identified during implementation. Based on the inability to confirm project specific locations prior to project appraisal, this Environmental and Social Management Framework (ESMF) has been prepared. According to FAO's Framework for Environmental and Social Management (FESM) and the Green Climate Fund's (GCF's) Environmental and Social Standards, the Lead Agency of the programme (in this case, FAO) must prepare and disclose an ESMF⁵ before appraisal.

22. The purpose of the ESMF is to ensure that the programme has concrete plans and processes in place to avoid, minimize, and/or mitigate the risks and potentially adverse project-related environmental and social (E&S) impacts, including climate risks, once the SURAGGWA activities and/or sub-projects are identified, planned, and implemented. This living document: (i) assesses and summarizes project-related risks and impacts; and (ii) sets out the principles, rules, guidelines, and procedures to assess any potential risks and impacts of future sub-projects and activities identified later. It provides measures to reduce, mitigate, and/or offset those adverse risks and impacts from the programme and highlights information about areas where activities are expected to be implemented (including any specific E&S-related vulnerabilities of those areas; potential impacts that may occur; and mitigation measures that might be used). Specific objectives of this ESMF are to:

- Assess the potential environmental, social, and climate-related risks and impacts of the programme, both positive and negative, and propose mitigation measures which will effectively address these risks and impacts;
- Establish clear procedures for the E&S planning, review, approval, and implementation of sub-projects and other activities to be financed under the programme;
- Specify appropriate roles and responsibilities and outline the necessary reporting procedures for managing and monitoring E&S issues/concerns related to sub-projects, technical assistance, and activities;
- Determine the training, capacity building, and technical assistance needed to successfully implement the provisions of this ESMF;

⁵ The ESMF examines the risks and impacts when a project is programmatic in nature and consists of a series of subprojects, whereby the risks and impacts cannot be determined until the programme and related subproject details have been identified.

- Outline and address mechanisms for public consultation and disclosure of programme documents, as well as redress of possible grievances; and
- Establish the budget requirements for implementation of this ESMF.

23. This ESMF provides information on (i) items ineligible for project funding; (ii) how to conduct the E&S screening; (iii) risks and impacts classifications; (iv) identification of various E&S documents to be prepared (both prior to and after project approval) and the process to be followed for their preparation (including the clearance process); (v) implementation arrangements; (vi) training and capacity building; (v) grievance redress mechanism; (vi) estimated costs and budget requirements; and (vii) guidelines and specific forms for preparation of the identified E&S documents required. **This ESMF will be applied to all sub-projects and activities to be financed by SURAGGWA.**

1.3 Scope of the ESMF

24. This ESMF was developed based on a desk review of project-relevant government laws, regulations, ordinances, and other legal documents; various background papers and reports pertaining to environmental and social conditions of the proposed project areas; as well as field visits, focus group discussions, key informant interviews, and other consultations in those areas. Safeguards documents prepared for similar programmes and/or projects in related areas (e.g. others financed by IFAD, World Bank, FAO, etc.) were also taken into consideration.

25. This ESMF follows the requirements of FAO's FESM and the GCF Environmental & Social Standards, taking into consideration the related guidance notes and documents. Information is presented in ten sections, as follows:

- I. Introduction
- II. Project Description
- III. Policy, Legal, and Administrative Framework
- IV. Environmental and Social Assessment and Proposed Mitigation Measures
- V. Procedures for Review, Clearance, and Implementation of Sub-project E&S Instruments
- VI. Implementation Arrangements
- VII. Capacity Building, Training, and Technical Assistance
- VIII. ESMF Implementation Budget
- IX. Grievance Redress Mechanism (GRM)
- X. ESMF Consultation and Disclosure

26. Annexes provide more details on: (i) ineligible activities; (ii) E&S screening, risks and impacts classification; (iii) sample Terms of Reference and related guidance to support implementation; and (iv) the ethnic minority framework for the programme.

2. Programme description

2.1 Programme objectives, components, areas, and beneficiaries

27. The SURAGGWA programme is designed to facilitate a major paradigm shift by building ecological and climate resilience in eight Sahel countries⁶ recognized as the most vulnerable to climate change in Africa. It will directly benefit an estimated 6.4 million rural people. The programme will achieve this by addressing the technical, organizational and financial barriers to alleviate climate change impacts and heighten resilience of local communities through (i) developing a project to scale-up successful restoration practices, promote biodiversity, regenerate native species and sequester carbon; (ii) supporting the development of climate-resilient, low emission non-timber forest product value chains benefiting vulnerable communities' livelihoods and food and nutrition security and; (iii) strengthening the Great Green Wall's regional and national institutions to secure the sustainability of interventions and scale up successful practices. The initiative will restore approximately 1.27 million ha of degraded drylands, benefiting 6.92 million vulnerable people in the GGW area, while sequestering 66.7 million tons of CO₂ over the programme's lifespan of 20 years⁷. It will also work with community organizations to build ownership and sustainability and strengthen community awareness and capacity in understanding ecological elements of their environment. The current initiative will strengthen community participation with a special focus on women's participation and include training and building awareness in addressing climate change and land degradation issues.

28. The programme will make a significant contribution to: (i) the countries' Nationally Determined Contributions (NDC) to climate change adaptation and mitigation; (ii) the Bonn Challenge and associated African Forest Landscape Restoration Initiative (AFR100) in committed countries; (iii) the concerted UN system Action plan in support of the GGW, (iv) the UN Decade on Ecosystem Restoration (2021-2030) with GGW as one of its flagship projects, as well as associated Sustainable Development Goals, including SDG 1 which is aimed at eradicating poverty, SDG 2 which commits to zero hunger, gender equality (SDG 5), decent work and economic growth (SDG 8); Climate action (SDG 13); Life on land (SDG 15), and Partnerships (SDG 17).

29. The objective of the current project titled *Scaling-Up Resilience in Africa's Great Green Wall* (SURAGGWA) is to promote a major paradigm shift by removing barriers that vulnerable Sahelian producers' face in becoming more resilient to major climate change impacts while *mitigating emissions* in restored landscapes. More specifically, the programme seeks to:

- **Mitigation Objective:** To increase sequestration and reduce emissions of GHG through sustainable land-use management and large-scale restoration of dryland forests and agro-sylvo-pastoral systems.
- **Adaptation Objective:** To enhance resilience of the livelihoods of vulnerable communities to the impacts of a changing climate on productive landscapes, by forming non timber forestry products low-emission value chains alongside the above landscapes' restoration.

30. SURAGGWA will consist of three components designed to help make rural livelihoods more resilient to climate change and sequester carbon by addressing the key barriers identified in the Theory of Change. This will be undertaken through the implementation of **Component 1: Landscape Restoration** for and by local communities, which will address the key issues associated with the degradation of the natural resource base

⁶ Namely Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria and Senegal

⁷ The net result of the SURAGGWA programme is slightly lower at 65.9 million tCO₂e, as it takes into account a slight increase in livestock emissions due to the fodder production contribution of the restored land, see Annex 22, carbon impact potential assessment

through the restoration of agro-sylvo-pastoral landscapes; **Component 2: Value Chains** which will address the challenges rural communities face in accessing markets and financial services; and **Component 3: dealing with Institutional Strengthening** of the Great Green Wall institutions at country and regional level to improve institutional coordination, results monitoring, resource mobilization and knowledge sharing. The set of interventions included in the programme were selected based on their potential to bring about a paradigm shift through providing critical support in a sustainable manner. The trade-offs or the opportunity cost associated with some of the interventions and the rationale for the specific set of interventions chosen have been detailed in Annex 2: Feasibility Study.

Component 1: Large-scale landscape restoration to increase climate change resilience and mitigation, for and by local communities. The aim of this component is to mitigate the negative effects of climate change by helping communities to adapt to the climate risks that threaten local agro-sylvo-pastoral landscapes and the ecosystems they support^{[8][9][10]}. It aims to restore up to 1.273 million hectares of degraded land (please see Table 1 for breakdown by country) by planting resilient indigenous species, non-timber forest products, and forage crops, providing income and employment opportunities for local communities and actors in the non-timber forest product value chain.

- **Output 1.1.** *Local community groups organized, trained and knowledgeable in land restoration activities and monitoring.*
 - Activity 1.1.1. Identify potential sites for restoration and to inform resource base for value chain priorities based on analysis of climate data, GIS maps and potential for impact with local authorities and community.
 - Activity 1.1.2. Identify and mobilize communities for participatory selection of the specific sites, ensuring inclusion of women.
 - Activity 1.1.3. Train programme's restoration teams and community management organizations
- **Output 1.2.** *Native seed supply systems¹¹ have been strengthened to ensure the availability of genetically appropriate seeds that provide increased climate resilience.*
 - Activity 1.2.1. Identify and train community technicians on good quality and quantities of restoration seeds and native seed supply.
 - Activity 1.2.2. Identify, organize and train community members involved in seed and seedling production for land restoration activities.
 - Activity 1.2.3. Establish, equip and operate community nurseries for seedling production and dissemination.
 - Activity 1.2.4. Local communities' seed supply of native seeds is integrated into national seed system.
 -
- **Output 1.3.** *Targeted highly degraded lands restored through arrangements for rainwater harvesting¹² and enhanced soil permeability and through local communities engaging in planting of seedlings and direct seeding.*

⁸ Arias, P. L., & Ledson, M. J. (2019). Land restoration and climate change: challenges and opportunities. *Land Degradation & Development*, 30(2), 627-635.

⁹ Pradhan, S. K., Nguyen, N. T., & Otsuka, K. (2018). Agroforestry for climate change adaptation and mitigation. *Forest Policy and Economics*, 91, 1-8.

¹⁰ Kouakou, K. J., Kropff, M. J., & Giller, K. E. (2017). Restoration of degraded lands for food security and climate change mitigation and adaptation. *Agricultural Systems*, 155, 1-12.

¹¹ Native species referenced in the flora of West and East Africa flora and seed collections of native species through the Millennium Seed bank Partnership of the Royal Botanic Gardens of Kew (since 2001) will be used. Country institutions in Mali (IER herbarium and seed bank), in Niger (Centre National de Semences Forestieres) and in Burkina Faso (also Centre National de Semences Forestieres - CNSF) already housed accessions and reference samples of native species of the regional flora. They are all actively involved in the GGW seed supply and restoration interventions, as part of same ministries of environment, and they contributed to SURAGGWA formulation (2022). They are committed to its implementation and support of training, advising and capacity building on native species collection, handling and propagation. This implementation arrangement will leave no option of introducing invasive non-native species in the restoration activities.

¹² Please see paragraph 31 for details on rainwater harvesting.

- Activity 1.3.1: Highly degraded land restoration plans prepared and implemented through mechanized, animal, and manual traction techniques.
- Activity 1.3.2: Sowing and planting in prepared sites with communities/villages
- Activity 1.3.3: Training of community members in monitoring & maintenance
- **Output 1.4.** *Targeted moderately degraded lands planted with a range of species to restore and enrich the landscapes of agro-forestry, agro-ecology and silvo-pastoral systems, biomes and protected forest ecosystems.*
 - Activity 1.4.1: Sub-national moderately degraded land restoration plans prepared and implemented
- **Output 1.5.** *Rural community capacities strengthened for sustainable management and restoration, and verification of restoration results.*
 - Activity 1.5.1: Village technicians trained and equipped in managing restoration areas and verifying restoration results, in a participatory manner.

Table 1: Breakdown of land restoration targets per country

		Total
Burkina-Faso	1.1 Highly Degraded Land	4,000
	1.2 Moderately degraded Land	36,300
Chad	1.1 Highly Degraded Land	4,500
	1.2 Moderately degraded Land	79,500
Djibouti	1.1 Highly Degraded Land	2,500
	1.2 Moderately degraded Land	21,000
Mali	1.1 Highly Degraded Land	12,440
	1.2 Moderately degraded Land	180,280
Mauritania	1.1 Highly Degraded Land	38,083
	1.2 Moderately degraded Land	174,900
Niger	1.1 Highly Degraded Land	21,403
	1.2 Moderately degraded Land	244,215
Nigeria	1.1 Highly Degraded Land	46,812
	1.2 Moderately degraded Land	322,818
Senegal	1.1 Highly Degraded Land	3,500
	1.2 Moderately degraded Land	81,500
Total area		1,273,751

Source: Author's own elaboration.

31. **On rainwater harvesting**, SURAGGWA would utilize some of the most common methods of rainwater harvesting already used within the Sahel. Traditionally, the following methods are the most common:
- **Contour Bunds and Ridges:** Small earth embankments or stone lines built along contour lines to slow runoff and increase infiltration.
 - **Trench Water Harvesting (Zai Pits):** Small, dug-out pits (20-40 cm wide and deep) designed to collect rainwater and enhance soil moisture for plant growth.
 - **Half-Moon Basins:** Semi-circular earth bunds that trap rainwater for trees and crops, reducing runoff.

- **Percolation Pits and Recharge Wells:** Structures designed to replenish groundwater.
- **Fallow Land Water Harvesting:** Allowing unplanted areas to store water and regenerate soil moisture naturally.

32. The scale of these rainwater harvesting techniques is typically small-scale at the household and community level (for instance, individual farmers use zai pits, half-moons, and contour bunds for small plots of land (0.5-2 hectares)). Landscape and watershed-level rainwater harvesting is larger in scale to cover thousands of hectares using stone bunds, reforestation, and agroforestry techniques. As SURAGGWA uses a landscape restoration approach, the scale of rainwater harvesting is large (across a large area), however the techniques themselves would be small-scale and selected to avoid environmental and social risks, based on the following:

- **Community Engagement:** Ensuring local participation to avoid land-use conflicts.
- **Proper Site Selection:** Preventing unintended waterlogging or depletion of groundwater.
- **Use of Indigenous Techniques:** Leveraging traditional knowledge to optimize effectiveness with minimal ecological disruption.

33. In terms of suitability of the annual rainfall for dryland trees and crops, the Sahel is an arid region with high variability. The amount, annually, is insufficient for conventional agriculture, however rainwater harvesting significantly improves soil moisture retention, making it possible to sustain dryland trees promoted under SURAGGWA. By harvesting and concentrating rainwater in targeted areas (based on the above selection guidance), the trees planted can establish strong root systems, reduce soil degradation, and enhance local ecosystems. Long-term success depends on proper implementation of harvesting techniques and complementary measures such as mulching and agroforestry. The idea is that, whilst the Sahel's natural rainfall is too low for conventional agriculture, strategic rainwater harvesting will enhance moisture availability, support vegetation growth, and combat desertification with minimal environmental risk

Component 2: Development of climate-resilient, low emission non-timber forest product (NTFP) value chains benefiting vulnerable communities' livelihoods. This component aims at improving resilience and livelihoods of the local agro-sylvopastoral communities and smallholder NTFP collectors, processors, and sellers in the Great Green Wall zones in the selected Sahel countries. This will be achieved by supporting the development of non-timber forest product (NTFP) and fodder value chains.

- **Output 2.1:** *Climate resilient and low carbon production and processing practices in selected NTFP value chains adopted by Producer Organizations and MSMEs.*
 - Activity 2.1.1: Train and provide TA to POs and MSMEs in selected NTFP value chains for enhanced organizational and managerial capacities (registration, structuring according to OHADA, training on management, administration etc.).
 - Activity 2.1.2: Train and coach local POs and MSMEs in sustainable production and collection practices to enhance NTFP quality and availability.
 - Activity 2.1.3: Train and coach POs and MSMEs to improve the processing practices (including packaging and labelling) of the selected products.
- **Output 2.2.** *Increased access to markets for smallholder NTFP actors (including micro- and small enterprises)*
 - Activity 2.2.1: Identify NTFPs with market and sustainable production potential that can be integrated in land restoration efforts funded under Component 1
 - Activity 2.2.2: Support to marketing and branding of the NTFP (promotional activities, nutritional value pamphlets of NTFP, organization of trade fairs, tv show, etc.)

- Activity 2.2.3: Support POs and MSMEs in business plan development and management. Activity 2.2.4: Enhance access to national, regional and international markets for NTFP, including through the setting up of norms and standards to improve the marketing of the NTFP.
- Activity 2.2.5: Identify, train and equip POs and MSMEs with emission-lowering technologies and equipment to enhance NTFP processing.
- **Output 2.3.** *Suitable credit and insurance products designed for smallholder NTFP value chain actors (PO, cooperatives, MSMEs) and increased stakeholder capacity for using these financial products in their NTFP value chain activities*
 - Activity 2.3.1: Train and sensitize value chain actors on financial institutions' offerings, enhance financial literacy and financial record keeping
 - Activity 2.3.2: Technical assistance provided to develop five new financial products (of which at least one insurance product) tailored to agriculture and NTFP value chains with financial institutions, including those collaborating with iGREENFIN.
 - Activity 2.3.3: Train staff (loan officers and others) from financial institutions, including those collaborating with iGREENFIN, on how to assess agricultural and NTFP value chain risks and climate-related risks (national and regional level)
 - Activity 2.3.4: Facilitate linkages between last-mile providers of finance (producer organizations, village savings groups, microfinance networks) and financial institutions, including those participating in iGREENFIN.
 - Activity 2.3.5: Pilot access to credit through digital financial solutions in at least one country and facilitate scale up, if successful
 - Activity 2.3.6: Improve knowledge management and exchanges to increase adoption of best practices across local financial institutions

Component 3: Strengthening the Great Green Wall institutions at country and regional level. The component aims to make a significant contribution to developing the capacity of GGW institutions, in coherence and synergy with the efforts of other partners, notably the Accelerator Initiative, and in close complementarity with capacity development activities financed by the GCF, in particular through the iGREENFIN programme. This includes: (i) monitoring and reporting capacities, which will be the major focus of SURAGGWA's institutional strengthening ; (ii) planning and coordination capacities ; (iii) resource mobilization capacities; and (iv) knowledge management and communication capacities.

- **Output 3.1.** *GGW Land restoration monitoring system at national and regional level upgraded and functional*
 - - Activity 3.1.1: Development, testing and deployment of National GGW land restoration monitoring tools and system.
 - Activity 3.1.2: Transfer knowledge and skills for the use of the GGW Land restoration monitoring system by national and regional authorities.
 - Activity 3.1.3: Development and deployment of regional multi-stakeholder Monitoring platform.
 - Activity 3.1.4: Building the capacity of NAGGW and PAGGW to establish databases of ongoing restoration projects and programmes contributing to national and regional GGW results.
 - Activity 3.1.5: Prepare regulatory national frameworks for the surveillance of all GGW labelled interventions in all GGW countries
 - Activity 3.1.6: Develop operational partnerships between the NAGGWs and PAGGW and scientific and technical institutions in the region (such as universities, research institutes, CSEs, Agrhymet, ACMAD) on issues of ecological monitoring and adaptation to climate change

- Activity 3.1.7: Strengthen the capacities of national stakeholders in the use of the relevant tools developed by FAO (for example, Collect Earth and Africa OpenDeal database), and other partners such as the Ecological Monitoring Centre (EMC), the Sahara and Sahel Observatory (OSS) and CILSS.
-
- **Output 3.2. National and Regional GGW institutions planning and coordination capacities strengthened**
 - Activity 3.2.1: Undertake Establish National GGW Coalitions to promote coherent coordination and planning at country-level
 - Activity 3.2.2: Prepare and issue planning and regulatory frameworks for the coordination of all GGW aligned interventions (projects, programmes, activities etc.)
 -
- **Output 3.3. National and regional climate change institutional capacities/frameworks strengthened to integrate land restoration investments in climate change adaptation and mitigation programmes.**
 - Activity 3.3.1: Strengthen public- and private sector understanding of and capacity to engage with carbon markets for climate change adaptation and mitigation through land restoration
 - Activity 3.3.2: Pilot the establishment of domestic carbon accounting framework that integrates agriculture and forestry in Nigeria, and identify additional countries for potential replication
 -
- **Output 3.4. GGW knowledge management and communication capacities are strengthened for mobilizing increased support to climate-resilient land restoration**
 - Activity 3.4.1: Develop innovative and robust methods for evaluating/demonstrating resilience benefits of climate change investments in land restoration and NTFP value chains in GGW.
 - Activity 3.4.2: Communication, visibility and dissemination of knowledge.
 - Activity 3.4.3: Train communication specialists from GGW's national structures to implement their communication plan and develop tools adapted to different target groups, particularly women and youth.
 -

34. **Programme Costs & Financing:** The total project funding will be USD 250 million, of which USD 100 million will come from co-financing and USD 150 million will come from Green Climate Fund (GCF) financing.

35. **Programme Areas:** The programme will be implemented in the Great Green Wall area of the Sahel region which spans across eleven countries, and focus will be on the GGW areas in the following countries: Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria, and Senegal. Areas outside of the GGW are considered as out-of-scope for the programme but can be pertinent in terms of restoration. Final selection of project areas will depend on the baseline survey and security situation in the area at the start of the programme in each country. Selection criteria for the programme areas can be found in Annex 2 of the Full Funding Proposal.

36. **Programme Beneficiaries:** In total, the programme should benefit approximately 8,689,286 people, of which 3,065,208 would be direct beneficiaries and 5,624,263 would be indirect beneficiaries. The programme beneficiaries would be those who live in or adjacent to the GGW areas, including transhumant pastoralists who migrate through lands targeted for restoration. For Component 1, which focuses on land restoration, the main beneficiaries would be rural, climate vulnerable communities in the GGW area of the Sahel. For Component 2, at the village level, the programme will adopt a community-based approach for the inclusion of the small producers and collectors which is likely to involve women as the main beneficiaries. At the market level, the programme will work with value chain actors which could be individuals, SMEs, firms engaged in processing and marketing of the NTFPs in national, regional, or international markets. A list of priority NTFP has been identified based on published reports and interactions at the country level and includes: Balanites oil, Gum Arabic, Baobab powder and leaves, fodder and honey. As such, community members involved within those value chains would be beneficiaries of the programme. Vulnerable groups, such as ethnic minorities, women-headed households, youth, and others identified through the land tenure assessment conducted in the first two years of implementation will be prioritized among the target groups. SURAGGWA's Gender Analysis & Action Plan (GAP,

see Annex 8) proposes specific measures to ensure women's participation in relevant project activities, including minimum participation rates, and these measures have been mainstreamed into the programme design.

2.2 Typology of Investments

37. Screening, management, and mitigation of risks and impacts is most effective when activities that are similar in nature are grouped together (for example: community organization/training activities, land restoration activities, value chain development activities, policy-planning activities). Activities and interventions under the SURAGGWA programme can be categorized as follows:

- **Land Use & Restoration Planning Activities under Component 1:** Activities related to Output 1.1 on organizing community groups for land restoration and value chain development; Activities related to Output 1.4 on restoration of moderately degraded farmland using native species and agroforestry/agro-ecology techniques.
- **Land Restoration & Seed Supply Activities under Component 1** (Activities related to Output 1.2 on strengthening native seed supply systems; Activities related to Output 1.3 on restoration of highly degraded land through soil/water conservation and revegetation techniques; Activity related to Output 1.4 on restoration of moderately degraded farmland using native species and agroforestry/agro-ecology techniques)
- **Value Chain Action Planning & Value Chain Development (Including Financial Access) Activities under Component 2:** Activities on development of NTFP stakeholder platforms related to Output 2.1 on strengthening technical and organizational capacities of stakeholders on NTFP value chains; Activities related to Output 2.2 on improved market inclusion for NTFP smallholders; Activities related to Output 2.3 on increasing VC actors' access to financial and non-financial services.
- **Carbon Finance Activities under Component 3:** Activities related to Output 3.3 on building resource mobilization capacities of regional and national GGW structures.
- **Monitoring, Evaluation, and Reporting System Improvement Activities under Component 3:** Activities related to Output 3.1 on upgrading the national and regional GGW land restoration monitoring, evaluation, and reporting system.
- **Assessments and Advice for Improved Information Sharing and Coordination Activities under Component 3:** Activities on critical analyses of existing consultation and coordination frameworks, outlook report on short and medium-term prospects, etc. related to Output 3.2 on strengthening capacities of national and regional GGW institutions; Activities on development of adapted support and modes of information for different target groups related to Output 3.2 on strengthening knowledge management and communication capacities.
- **Policy & Regulatory Activities under Component 3:** Activity related to Output 3.1 on upgrading the national and regional GGW land restoration monitoring, evaluation, and reporting system; Activities contributing to strategies, preparing regulatory frameworks, integrating into existing strategies/policies/plans related to Output 3.2 on strengthening capacities of national and regional GGW institutions

- **Capacity Building Activities under all Components:**

Component 1: Activity on training on soil conservation/protection/land restoration related to Output 1.1 on organizing community groups for land restoration and value chain development; Activity on training on monitoring and maintenance related to Output 1.3 on restoration of highly degraded land through soil/water conservation and revegetation techniques; Activities related to Output 1.5 on training restoration technicians.

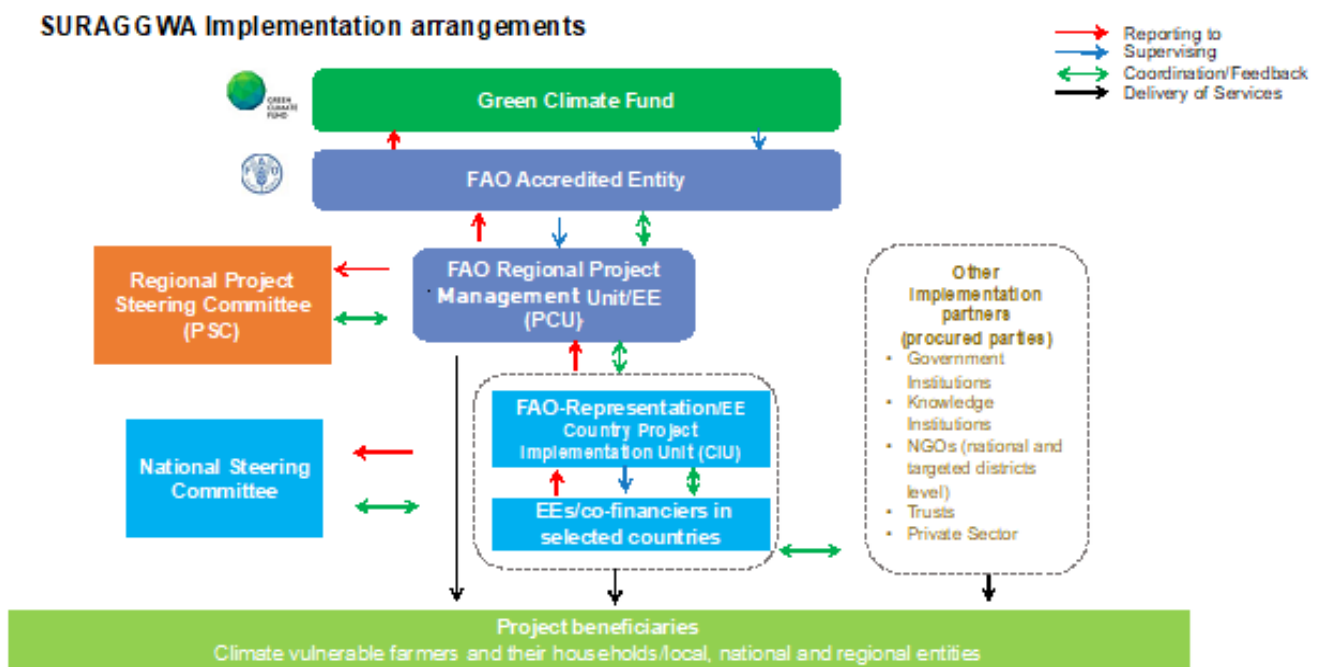
Component 2: Activities on strengthening capacities of NTFP actors for organization and management, improved quality of production, and processing and packaging related to Output 2.1 on strengthening technical and organizational capacities of stakeholders on NTFP value chains; Activity on training of value chain (VC) actors on business management related to Output 2.2. on improved market inclusion for NTFP smallholders; Activity on training VC actors on financial services and financial literacy; training financial institutions on assessing NTFP VC risks and climate risks related to Output 2.3 on increasing VC actors' access to financial and non-financial services.

Component 3: Activity on regional technical assistance and capacity development and national capacity strengthening related to Output 3.1 on upgrading the national and regional GGW land restoration monitoring, evaluation, and reporting system; Activity on assisting functioning of GGW National Coalitions related to Output 3.2 on strengthening capacities of national and regional GGW institutions; Activities related to Output 3.3 on building resource mobilization capacities of regional and national GGW structures; Activities on knowledge exchanges and events/communities of practice/training GGW communications specialists related to Output 3.2 on strengthening GGW knowledge management and communication capacities.

2.3 Programme implementation arrangements

38. The SURAGGWA design envisages working closely with a range of regional and international organizations supporting the implementation of the Great Green Wall initiative (GGW) as well as the National Governments in each of the selected countries for the programme. The Pan African Agency of the GGW (PAGGW) created in 2010 has been given the responsibility for the coordination and monitoring of the implementation of the GGW and for the mobilization of necessary resources in relation with the African Union (AU) and the Member States. They all share a common aim focused on the restoration of degraded land, economic development, increasing adaptation and resilience to climate change and the fight against food insecurity and migration. At the national level, Member States have created National GGW Agencies or focal points to supervise and coordinate the implementation of national GGW priority actions. The PA-GGW is expected to play a key role in coordinating country-level commitments to advancing the objectives of the GGW and is currently being supported by the UNCCD to implement the Great Green Wall Accelerator and by other UN agencies. The implementation of SURAGGWA will build on the synergies with the GGW Accelerator and closely coordinate and complement various efforts with a range of other initiatives working in the GGW area. Figure 2 provides an overview of the implementation arrangements.

Figure 2: Implementation arrangements



Source: Author's own elaboration

39. **A Programme Steering Committee (PSC)** will be set up to provide general oversight and strategic guidance in the successful implementation and ensure that the programme is aligned and well coordinated with the priorities and policies of the GGW. The PSC will identify how best to capitalize on the synergies with other projects and programmes and draw on lessons learned and how best to upscale them in the GGW initiative. The key responsibility of the PSC will be to identify constraints and opportunities for the programme, including ensuring the co-financing flow from the counterparts and if need be, enhance resource mobilization opportunities and make recommendations to the Programme Management Unit on how to overcome constraints and benefit from opportunities to ensure complementarities and visibility of the programme and the GGW global programme with other initiatives. It will support the mobilization of additional resources for scaling up the programme and for identifying synergies and leveraging with other major international initiatives and binding commitments and for highlighting the priorities of the area, the catalytic performances, lessons learned and identifying opportunities for collaboration.

40. The Programme Steering Committee will be virtually housed in the Pan African Agency of the Great Green Wall and its members will consist of representatives of the African Union Commission, as Chair of PSC, assisted by the PA-GGW and two vice-chairs from donor partners and key regional implementation partners, NA-GGW (and/or representatives of National Steering Committees or GGW coalitions) and FAO. The members will be nominated on a rotational basis according to the three major components of the programme and the GGW global vision. The PSC will invite to its sessions key donor and development agencies working in the Sahel on the GGW initiative and the Southern African Development Community (SADC-GGW) as observers, as well as the World Bank, GEF, AfDB, EU, UN system, etc. to draw on their experience. Private impact investors, Direct Access Entities, financial institutions, research institutions and private sector representatives will be invited as

observers as and when appropriate, based on their specific potential contribution to the successful implementation of the programme. PA-GGW will serve as secretariat for the PSC meetings and it will be responsible for building synergies with current and planned projects co-financing the GGW. The tasks of the PSC Secretariat will include: (i) Preparing and sending out Invitation Letters at least one month prior to the opening of the PSC Meeting; (ii) production and dissemination of background documents for the meetings, and (iii) production and dissemination of meeting reports. The PSC will meet on an annual basis either virtually or physically, or in hybrid format. FAO will keep the PSC informed of the progress of SURAGGWA and submit an annual report to the Committee.

41. SURAGGWA will also establish **National Steering Committees (NSC)** in each of the 8 Sahel countries where activities will be implemented on the ground. This will be an inter-ministerial steering committee as part of the GGW national coalitions, which will include the NA-GGW and the NDA as the Co-Chairs, relevant implementing partners, research institutions, technical experts and representatives from the FAO country offices. Private sector partners and representatives from the beneficiary communities will be invited to the NSC as observers and for advice and consultation as and when required. A notification would be issued to establish the programme and national SC's during the inception phase and will be a disbursement condition for each country. Staff of the CIUs will serve as secretariat for the NSC meetings and will prepare background information, reports and organize these meetings.

42. FAO will be both the Accredited Entity (AE) and one of the Executing Entities (EE) for the programme. The programme supervision function will remain independent of the Executing Entity functions performed by the FAO Country Offices. The segregation of responsibilities within FAO will ensure that the Organization can independently and effectively perform the AE functions. Given the complexity and scale of the programme, in terms of the number of countries involved, FAO will assign responsibilities for various aspects of the programme to its Headquarters, relevant regional offices and its country offices for implementation and supervision on the ground. As the AE and the main EE, FAO will retain the responsibility for overall planning and budgeting, procurement, coordinating regional activities, monitoring, reporting, and impact evaluation. To perform the AE functions, FAO will set up a dedicated FAO-GCF Project Task Force (PTF) at its Headquarters in Rome. The programme Task Force (PTF) will be established by FAO as a management and consultative body with a Formulator/Budget Holder (BH), a Lead Technical Officer (LTO) and a Funding Liaison Officer (FLO). Members of the PTF will perform the necessary supervision and oversight functions, including supervision and backstopping missions during the entire implementation period, as required. The PTF will be accountable for the quality of programme documentation and implementation throughout the programme cycle and will actively work to manage the agreed results of the programme and ensure appropriate use of resources. The BH will ensure timely submission of progress reports and closure of the programme. The LTO will coordinate and ensure mobilization of other technical experts within FAO as appropriate. The FLO will be responsible for maintaining corporate relations with resource partners throughout the programme Cycle and will advise on required programme documentation. The FLO will play a key role in preparing the Funding Agreement, coordinating the appraisal process on behalf of the PTF, endorsing project budgets and budget revisions in FPMIS after obtaining clearance from the resource partner as stipulated in the Funding Agreement and clearing project progress and terminal reports prior to submission to resource partners and recipients.

43. FAO will establish a Programme Management Unit (PMU) to facilitate the management of the overall Project. The PMU will be composed of a coordination team, based in the FAO-Sub-Regional Office for Africa in Senegal, to cover for the programme in the 8 countries. In addition, a Liaison Officers will be based at the PA-GGW in Nouakchott, who will closely coordinate with the PA-GGW HQ offices located in Mauritania. The liaison based in PA-GGW Mauritania will enable building synergies with current and planned projects co-financing the

SURAGGWA and better coordination with the Accelerator. The actual implementation of the programme will be undertaken at the country level through Country Implementation Units (CIUs) which will be housed either at the FAO country offices or in the office of the NDA or other institutions such as the GGW national agency selected to implement the programme. A National Coordinator will be nominated by FAO in each country who will work closely with the GGW institutions on the ground in country. FAO will exercise the contractual responsibility for managing the GCF financing directly and disburse all funds to other executing and implementing partners and service providers. CIUs will comprise of relevant staff and expertise from the FAO Country Offices in Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria and Senegal, RAF, and HQ.

44. **Direct implementation** on the ground will be undertaken at country level, through a combination of modalities that will use the well-established FAO capacity in the host country. FAO, line Ministries, service providers, technical partners would be part of Country Implementation Units that will assume responsibility for the implementation of the country level activities. FAO and NDAs will interact with other sectoral ministries, the national GGW agency, regional research institutes, GCF direct accredited entities, service providers and NGOs who would act as implementing partners or service providers for on-the-ground activities under the overall technical support and coordination of FAO's country offices. Working agreements, MOUs and LoAs will be prepared with a host of implementing partners defining their roles and responsibilities. Through its procurement (e.g. LOAs) from service providers following FAO's procurement rules, implementing partners, including mainly the CBO, women and youth groups, local service providers, will get access to funds for their activities. Payments are usually made in three instalments of 30% at start, 50% at half delivery of service and 20% at final delivery. FAO Global Resources Management System (GRMS) allows the Organization to streamline administrative and financial control procedures, reduce transaction costs and integrate all administrative and financial systems into one global system. The system allows decentralization of almost all financial and administrative functions, improving the productivity, control and efficiency of transaction processing and the flow of information within the programme.

45. In order to encourage ownership, local capacity building and sustainability of the arrangements, the programme will also use the Operational Partners Implementation Modality (OPIM) where feasible. This will be negotiated case by case to ensure minimum capacity criteria are met. This modality will be used where the selected partners are assessed to have strong capacity and offer complementary mandates, skills and resources needed to achieve greater impact. Even where it uses the OPIM, FAO will remain fully accountable for the resources it receives from GCF, ensuring that funds are used for their intended purposes and for the technical soundness of the programme results. In transferring funds to operational partners through the OPIM approach, FAO has established accountability measures to ensure that funds are used efficiently and effectively. The established due diligence and oversight measures from formulation to final reporting will be applied by FAO to ensure compliance. Similarly, organisations like the Network of Gums and Resins in Africa (NGARA), the Africa Forest Forum (AFF) and others will be considered for OPIM assessment for the development of NTFPs value chains.

46. **FAO** is a specialized technical agency of the United Nations and is well placed to undertake the planned activities given its potential for addressing climate change adaptation and mitigation, reducing poverty, and boosting resilient livelihoods. FAO is a key technical partner of the African Union and its Member States, which have devised a clear and detailed approach and methodology for solutions in the Sahel. FAO has implemented a large number of climate adaptation and mitigation projects worldwide and is currently supporting regional technical cooperation programmes/projects on NDCs and AFR100. FAO will continue to play a key role of convener and facilitator, bringing countries and partners and sharing experience for scaling up its successful results. In the interest of effective realization of the GGW vision, from 2010 to 2013, with funding from the

European Union, FAO supported the African Union Commission and AU member states as they prepared national climate strategies and action plans, including NAP, NAMAs and NDCs, developed a *Regional Harmonized Strategy for GGW*, created a community of practice, and mobilised partnerships. A major outcome was that all country action plans include large-scale restoration of agro-silvo-pastoral systems, which combine arable farming, agro-ecology, livestock and tree-based production, as one of the highest priorities, which SURAGGWA will up-scale. FAO has designed a comprehensive approach for large-scale dryland restoration for GGW backed by the Global guidelines for the restoration of degraded forests and landscapes. FAO will build on its ongoing partnerships - African Union Commission, PA-GGW, UNCCD, EU, AfDB, UNEP, IFIs (WB, IFAD, AFD, BADEA), regional research and other organizations and NGOs – to ensure proper coordination, experience exchange, avoid duplication and ensure impact in the Sahel. FAO's vast and unique technical and organizational qualities and experience, is well suited to manage this large multi-country project.

47. FAO will be responsible for overall oversight of the programme, including: i) All project evaluation aspects; ii) Administrative, financial and technical supervision throughout implementation of the programme; iii) Supervision of effective management of funds to achieve the results and objectives; iv) Quality control of Project monitoring and reporting to the GCF; v) Project closure and final evaluation. FAO as AE will ensure that the programme is executed in compliance with GCF and FAO rules and regulations, policies and procedures, including relevant requirements on fiduciary, procurement, monitoring and evaluation, environment and social safeguards, and other project performance standards. FAO will assume these responsibilities in line with the detailed provisions listed in the Accreditation Master Agreement (AMA) between FAO and the GCF. As Accredited Entity (AE) of the programme, the FAO's supervision role will be attributed to the HQs, Rome and the FAO Regional Office for Africa (RAF), and relevant Offices and divisions at FAO headquarter (HQ), in Rome Italy, such as the FAO Forestry Division, FAO Office of Climate, Biodiversity, and Environment (OCB) and other technical divisions as required.

48. SURAGGWA will use both private sector and Direct Access Entities (DAEs). The services of private contractors will be procured competitively for renting equipment, purchase of restoration seeds, capacity building and other restoration and income generation (NTFPs) activities. A list of some of the DAE in the programme countries was examined to assess how they might be involved in the programme. Two such entities who will be invited, depending on their comparative advantage and expertise, to share their experiences and implement specific activities, will be the Centre de Suivi Écologique (CSE) and La Banque Agricole, both in Senegal. The specific arrangements in each country were closely coordinated with the NDAs and a preliminary identification of implementing partners is outlined in the Table 2 below.

Table 2. Key institutions responsible for SURAGGWA implementation

Level	Executing Entities (EE)
Regional	FAO Regional Office for Africa (based in Ghana), FAO Sub-Regional Office for West Africa (based in Senegal)
Burkina Faso	FAO Burkina Faso Representation Government of Burkina Faso, acting through Ministry of Environment, Water and Sanitation
Chad	FAO-Chad Representation Government of Chad, acting through Ministry of Environment, Fisheries and Sustainable Development
Djibouti	FAO-Djibouti Representation Government of Djibouti, acting through Ministry of Environment and Sustainable Development

Mali	FAO-Mali Representation Government of Mali, acting through Ministry of Environment and Sustainable Development
Mauritania	FAO-Mauritania Representation Government of Mauritania, acting through Ministry of Environment & Sustainable Development
Niger	FAO-Niger Representation Government of Niger, acting through Ministry of Hydraulics, Sanitation and Environment
Nigeria	FAO-Nigeria Representation Government of Nigeria, acting through Federal Ministry of Environment
Senegal	FAO-Senegal Representation Government of Senegal, acting through Ministry of Environment and Sustainable Development

Source: Author's own elaboration

49. **Access to Finance:** The programme will work directly to strengthen the capacity and promote innovation of at least two accredited entities with the Green Climate Fund. First, Banque Agricole du Senegal is a Senegalese national entity based in Senegal that focuses on the provision of financial products and services to the country, including the programme's areas of intervention. Second, Attarijarwafa Bank, headquartered in Morocco, is a commercial bank that has a pan-African presence in six of the eight SURAGGWA countries. The programme will include capacity development activities for the banks' loan officers on specific areas such as evaluating and assessing agricultural risk and developing new financial products. The programme – in collaboration with UNCDF – will collaborate with the Banque Agricole du Senegal to roll out a digital financial credit product along with e-advisory related to crops/weather to the bank's clients. The Country Implementation Units (CIUs) in each of the countries will cover the functions related to the national activities around access to finance.

50. **Carbon Finance:** In implementing its carbon finance activities, the programme will collaborate directly with national governments and their partners, regional organizations or networks working on carbon markets, in particular the West Africa Alliance on Carbon Markets, ECOWAS, the Africa Carbon Markets Initiative, and the pan-African agency for the Great Green Wall. The Country Implementation Units (CIUs) in each of the eight countries will cover the functions related to the national activities. The PA-GGW will be the regional executing agency that will oversee the implementation of regional activities. For capacity development activities such as trainings or workshops, the programme will collaborate with and leverage the networks of the West Africa Alliance on Carbon Markets.

3. Policy, legal, and administrative framework

3.1 Applicable laws and regulations

51. As the national laws, regulations, and policies relating to programme implementation and, more specifically, implementation of safeguards-related activities and measures vary depending on the country of implementation, Table 3 provides an overview of those most relevant for the eight countries participating in SURAGGWA. Further review will be developed during the first year of implementation, once the country-specific ESMPs are developed. A longer list is provided for Senegal at the bottom of Table 3, as an example for the laws and policies which should be incorporated in the country-specific ESMPs when they are developed during the first year of implementation.

Table 3. Applicable national laws and regulations

Country	Policy Framework	Legislative and Regulatory Instruments
Burkina Faso	<ul style="list-style-type: none"> • National Economic and Social Development Plan 2021-2025 (PNDES-II). • Regional Support Project for Pastoralism in the Sahel-Burkina Faso (PRAPS-BF 2)/Pest and Hazardous Waste Management Plan (PGPDD) • Population Resettlement Policy Framework (CPRP) of the Second Phase of the Regional Pastoralism Support Project in SAHEL-BURKINA FASO (PRAPS-BF 2) • National Strategy for Soil Restoration, Conservation and Recovery in Burkina Faso 2020-2024 and Action Plan for the National Strategy for Soil Restoration, Conservation and Recovery in Burkina Faso 2020-2022 • 2021-2025 Action Plan of the National Hydraulic Development Program for Horizon 2030. • Sector Policy: Environment, Water and Sanitation (PS-EEA, 2018-2027). 	<ul style="list-style-type: none"> • Law No. 017-2018/AN of 17 May 2018 on the code of agro-sylvo-pastoral fisheries and wildlife investments in Burkina Faso. • Law No. 034-2012/AN of July 2, 2012 on agrarian and land reorganization in Burkina Faso • Decree No. 2021-0287/PRES/PM/MINEFID/MFPTPS on the special status of the water, agriculture and environment profession • Law No. 070-2015/CNT on the agro-sylvo-pastoral, fisheries and wildlife orientation law in Burkina Faso • Decree No. 2015-1189/PRESTRANS/PM/MERH/MEF of October 22, 2015 adopting the National Plan for Adaptation to Climate Change (PNA). • Decree No. 2002-471/ PRES promulgating Law No. 0272002/ AN of October 9, 2002 authorizing Burkina Faso to join the Kyoto Protocol on climate change • Law No. 018-2015/CNT authorizing the ratification of the convention establishing the Pan-African agency of the Great Green Wall (AGMV) adopted in N'DJAMENA, June 17, 2010 • Law n°026-2017/an of May 15, 2017 controlling the management of pesticides in Burkina Faso. • Law n°006-2013/AN on the Environmental Code of Burkina Faso. • Law No. 003-2011/AN on the Forest Code in Burkina Faso.

Country	Policy Framework	Legislative and Regulatory Instruments
	<ul style="list-style-type: none"> • Agro-Sylvo-Pastoral Production Sector Policy 2018-2027. • National Strategy for Soil Restoration, Conservation and Recovery in Burkina Faso 2020-2024 and Action Plan for the National Strategy for Soil Restoration, Conservation and Recovery in Burkina Faso 2020-2022 	<ul style="list-style-type: none"> • Law No. 034-2009/AN of June 16, 2009 on rural land tenure. • Law No. 034-2002/year on the orientation law relating to pastoralism in Burkina Faso. • Law n°048-2017/AN of November 16, 2017 on the Animal Health and Veterinary Public Health Code. • Joint Order No. 2000-30/MRA/AGRI/MEE/MEF/MATS/MEM/MIHU regulating livestock grazing and transhumance in Burkina Faso. • Law No. 002-2001/AN on the orientation law relating to water management. • Decree 2012-1065/PRES/PM/MEDD/MATDS of 31 December 2012 classifying bodies of water into fishing areas of economic interest and their management methods. • Decree No. 2001-185/PRES/PM/MEE setting standards for pollutant discharges into the air, water and soil. • Law No. 012-2014/AN of 22 April 2014 on the orientation law relating to the prevention and management of risks, humanitarian crises and disasters. • Volta Basin Water Charter.
Chad	<ul style="list-style-type: none"> • First National Plan for Adaptation to Climate Change of the Republic of Chad • National strategy for water, sanitation and hygiene in schools (2018-2030) • National strategy and action plan for the development of the non-timber forest products sector in Chad • Vision 2030, the Chad we want 	<ul style="list-style-type: none"> • Ordinance No. 043/PR/2018 on Agro-Sylvo-Pastoral and Fisheries Orientation. • Decree No. 1561/PR/MEEP/ 2018 of September 10, 2018 on the creation, powers, composition and functioning of the Designated National Authority of the Green Climate Fund in Chad (AND-GCF) • Order No. 061/PR/MEEP/SG/DG/2018 of July 11, 2018 on the Creation, Powers, Composition and Operation of the Designated National Authority of the Clean Development Mechanism in Chad (AND-MOP). • Law No. 014/PR/98 defining the general principles of environmental protection. • Ordinance N. 006/PR/2020 on the General Staff Regulations of the Water and Forestry Bodies. • Decree no. 579/PR/PM/MAE/2014 setting the terms of forest estate management. • Law No. 025/PR/2019 Determining the Fundamental Principles and Guidelines for Territorial Development in the Republic of Chad • Law No. 9/PR/2004 organizing health policy and collective prophylaxis of diseases considered legally contagious to animals on the territory of the Republic of Chad. • Aw No. 4 of October 31, 1959 regulating nomadism on the territory of the Republic of Chad. • Law No. 016/PR/99 establishing the Water Code. • Law No. 14/PR/2008 on the regime of forests, wildlife, and fishery resources.

Country	Policy Framework	Legislative and Regulatory Instruments
Djibouti	<ul style="list-style-type: none"> • National Development Plan 2020-2024 Djibouti ICI Inclusion - Connectivity – Institutions • National Biodiversity Strategy and Action Program, 2017 • Vision Djibouti 2035 • Law No. 140/AN/06/5th L on national risk and disaster management policy 	<ul style="list-style-type: none"> • Law n°51/AN/09/6th L on the Environmental Code. • Law No. 243/AN/82 regulating logging in the Republic of Djibouti. • Decree No. 2006-0192/PR/MID establishing an institutional framework for risk and disaster management. • Law No. 178/AN/91/2eL laying down the procedures for applying the laws relating to land tenure. • Decree No. 2013-110/PR/MAECI establishing the National Mechanism for Early Warning and Response to Pastoral and Urban Conflicts or CEWERU. • Law n° 93/AN/95/3e L of April 04, 1996 on the Water Code. • Decree No. 2000-0031/PR/MAEM taken pursuant to Law No. 93/AN/95/3rd L of April 4, 1996 on the Water Code, relating to the fight against water pollution
Mali	<ul style="list-style-type: none"> • CSCR – Strategic Framework on Growth and Poverty Reduction • PNCC- National Climate Change Policy • NAPA – National Adaptation Programme of Action • National Strategy for Disaster Risk Reduction • SNPA- National Strategy and Action Plan for Biological Diversity • CSI-GDT- Strategic Investment Framework for Sustainable Land Management • PNIP – SA- National Priority Investment Plan in The Agricultural Sector • PDA- Agricultural Development Policy 	<ul style="list-style-type: none"> • Agricultural orientation law • Decree on the creation, powers, organisation and functioning of the National Platform for the Prevention of Disasters and Disaster Risk Management
Mauritania	<ul style="list-style-type: none"> • National Livestock Development Plan 2018 – 2025 • National Strategy for Sustainable Access to Water and Sanitation (SNADEA) for 2030 • National Strategy for Accelerated Growth and Shared Prosperity (SCAPP 2016-2030), Volume II • National Agricultural Development Plan (PNDA) 2015-2025. • National Food Security Strategy for Mauritania by 2015 and vision 2030 	<ul style="list-style-type: none"> • Agropastoral Orientation Law No. 2013-024. • Law No. 98-016 relating to the participatory management of oases. • Law n° 2000-045 relating to the framework law on the environment. • Law No. 2021-008/PR/ relating to environmental policing. • Law No. 2007-055 of September 18, 2007 repealing and replacing Law No. 97-007 of January 20, 1997 on the Forest Code. • Decree No. 2009-104 of April 6, 2009 implementing Law 2007-055 repealing and replacing Law 97-007 of January 20, 1997 on the Forest Code. • Orientation law N° 2010-001 of January 07, 2010 relating to regional planning • Law No. 44-2000 on the Pastoral Code in Mauritania. • Agropastoral Orientation Law No. 2013-024

Country	Policy Framework	Legislative and Regulatory Instruments
	<ul style="list-style-type: none"> Rural sector development strategy horizon 2025 (SDSR) 	<ul style="list-style-type: none"> Law n° 2004 - 024 of July 13, 2004 on the code of Livestock farming in Mauritania Law n° 2005-30 establishing the Water Code Ministerial Declaration on the Senegalo-Mauritanian Aquifer Basin
Niger	<ul style="list-style-type: none"> National strategy for adaptation to climate change in the agricultural sector (SPN2A-2035). Action Plan 2022-2026 National Plan for Adaptation to Climate Change. Economic and Social Development Plan (PDES) 2022-2026 (3 volumes). Rural Land Policy of Niger DNPGCA Food Crisis Prevention and Management Strategy 2021-2025 National action program to combat desertification and manage natural resources (PAN-LCD/GRN). National Strategy and Plan for Adaptation to Climate Change in the Agricultural Sector SPN2A 2020-2035 Strategic Framework for Agricultural Water in the Sahel. 	<ul style="list-style-type: none"> Ordinance No. 93-015 establishing the guiding principles of the Rural Code. Ordinance No. 2010-29 of May 20, 2010 relating to pastoralism Decree n°2018-538 defining the national alert code Framework Law No. 98-56 of December 29, 1998 relating to environmental management Decree No. 2019-027/PRN/MESU/DD of January 11, 2019 on the terms of application of Law No. 2018-28 of May 14, 2018 determining the fundamental principles of Environmental Assessment in Niger Law No. 2004-040 establishing the forestry regime Decree n.2018-191/PRN/ME/DD of March 16, 2018 determining the methods of application of law n. 2004-040 of June 8, 2004 on the forestry regime in Niger. Law No. 2001-32 of December 31, 2001 on the orientation of land use planning policy. Law No. 2004-48 on the framework law relating to livestock farming Decree No. 97-007PRN/MAG/EL fixing the status of pastoral areas Ordinance n°2010-09 of April 1, 2010 establishing the Water Code in Niger. Order No. 0122/MEE/LCD/DGH/DL of 18 October 2010 determining the conditions for exercising community management of water points in the rural water supply sub-sector Water Charter of the Lake Chad Basin (Version of 2011)
Nigeria	<ul style="list-style-type: none"> National Agricultural Technology and Innovation Policy (NATIP). 2022-2027 National Strategy to Combat Wildlife and Forest Crime in Nigeria 2022-2026 2050 Long-Term Vision for Nigeria (LTV-2050) National Climate Change Policy for Nigeria: 2021-2030 Economic Sustainability Plan, 2020 	<ul style="list-style-type: none"> Agricultural Research Council of Nigeria Act Climate Change Act, 2021 Plant Variety Protection Act, 2021. Act no. 5 of 2021. National Agency for the Great Green Wall (Establishment) Act, no. 3 of 2015 Forest Law. 1956, 1961. National Environmental (Pulp, paper, wood and wood products sector) Regulations, 2013. S.I. no. 34/2013 Forest Regulations. Date of original text: 1956 (1963) Land Use (Validation of Certain Laws, etc.) Act 1979 (No. 94 of 1979) Land Use Act 1978

Country	Policy Framework	Legislative and Regulatory Instruments
		<ul style="list-style-type: none"> • Jigawa; Zinder: Mémorandum d'entente sur l'organisation et la gestion de la transhumance transfrontalière entre la Région de Zinder (République du Niger) et l'Etat de Jigawa (République Fédérale du Nigeria), 13 août 2022 • Water Resources Act • Water Resources (Amendment) Act • Water Charter of the Lake Chad Basin (Version of 2011)
Senegal	<ul style="list-style-type: none"> • Vision Senegal 2050: Natinal Development Strategy 2025-2029 • PNADT – National Land-Use Development Plan (2035) • Great Green Wall Integration Program • Great Green Wall Integration Program • PAN - National Adaptation Plan • PNDD – National Sustainable Development Policy • PNAE – National Action Plan for the Environment • Senegal's National Climate Change Strategy • National Programme for the Prevention and Reduction of Major Risks and the Natural Disaster Management • PNIA- National Agricultural Investment Program 	<ul style="list-style-type: none"> • Law n° 2001-01 from 15 January 2001 on the Environment Code • Law n° 2004-16 from 4 June 2004 on the agro-silvo-pastoral orientation act • Law n° 96-06 from 22 March 1996 on the Local Community Code • Law n° 96-07 from 22 March 1996 on the transfer of environmental powers to local communities and Decree n° 96-1134 from 27 December 1996 <p>Detailed list of relevant laws in Senegal:</p> <ul style="list-style-type: none"> • Loi d'orientation agro-sylvo-pastorale. Date of text: 25 May 2004 • Loi n° 2009-27 portant sur la biosécurité. Date of text: 08 July 2009 • Arrêté Ministériel n° 17070 du 15 octobre 2013 portant modification de l'arrêté n° 4741 du 14 avril 2009 portant création et organisation de l'unité de coordination et des organes de supervision du Projet d'Appui aux Filières Agricoles (PAFA). Date of text: 15 October 2013 • Décret n° 2009-1408 portant missions, organisation et fonctionnement du Comité National de Biosécurité (CNB). Date of text: 23 December 2009 • Arrêté ministériel n° 5122 MAEL-UPA portant création et organisation du Programme national d'infrastructures rurales (PNIR). Date of text: 19 May 2000 • Décret n° 96-1134 portant application de la loi portant transfert de compétences aux régions, aux communes et aux communautés rurales, en matière d'environnement et de gestion des ressources naturelles. Date of text: 27 December 1996 • Arrêté ministériel n° 3313 portant création et organisation du Projet de Promotion des Micro entreprises rurales (PROMER). Date of text: 23 April 1996 • Décret n°2017-932 portant création de la zone économique spéciale intégrée de Diass (ZESID). Date of text: 09 May 2017 • Décret n° 2008-1260 portant reconnaissance, organisation et fonctionnement des Organisations Interprofessionnelles Agricoles (OIA). Date of text: 10 November 2008

Country	Policy Framework	Legislative and Regulatory Instruments
		<ul style="list-style-type: none"> • Décret n° 2008-1259 portant organisation et fonctionnement du Système National de Recherches Agro-Sylvo-Pastorales (SNRASPS). Date of text: 10 November 2008 • Décret n° 2008-1262 instituant un régime de protection sociale agro-sylvo-pastorale. Date of text: 10 November 2008 • Arrêté ministériel n° 5621 du 22 août 2006 portant création, organisation de l'Unité de Gestion et des Organes de Supervision et de Coordination du Programme de Développement des Marchés agricoles et agro-alimentaires du Sénégal. Date of text: 22 August 2006 • Arrêté ministériel n° 5620 en date du 22 août 2006 portant création, organisation de l'Unité de coordination technique et fiduciaire et des organes de supervision et de coordination du programme des services agricoles et organisations de producteurs, deuxième phase (PSAOP 2). Date of text: 22 August 2006 • Décret n° 2019-785 du 17 avril 2019, relatif aux attributions du Ministre de l'Agriculture et de l'Équipement rural. Date of text: 17 April 2019 • Décret n° 2017-1600 du 13 septembre 2017 relatif aux attributions du ministre délégué auprès du premier ministre, chargé du suivi du programme d'urgence de développement communautaire (PUDC). Date of text: 13 September 2017 • Décret n° 2017-1573 du 13 septembre 2017 relatif aux attributions du Ministre de l'Agriculture et de l'Équipement rural. Date of text: 13 September 2017 • Décret n° 2017-1602 du 13 septembre 2017 relatif aux attributions du ministre délégué auprès du ministre de l'agriculture et de l'équipement rural chargé de l'accompagnement et de la mutualisation des organisations paysannes. Date of text: 13 September 2017 • Arrêté ministériel n° 22998 du 18 décembre 2015 portant création, organisation de l'Unité de Gestion et des organes de Supervision et de Coordination du Projet d'Appui aux Politiques Agricoles (PAPA). Date of text: 18 December 2015 • Arrêté ministériel n° 18811 en date du 21 septembre 2015 portant transformation des Centres d'Initiation Horticole (CIH) en Centres d'Initiation et de Perfectionnement dans les métiers de l'Agriculture (CIPA). Date of text: 21 September 2015

Country	Policy Framework	Legislative and Regulatory Instruments
		<ul style="list-style-type: none"> • Décret n° 2015-679 du 26 mai 2015 portant création d'un Cadre harmonisé de suivi-évaluation des politiques publiques (CASE). Date of text: 26 May 2015 • Arrêté Ministériel n° 2066 du 14 février 2013 portant création, organisation et fonctionnement du Programme d'Appui au PNIA Sénégal (PAPSEN). Date of text: 14 February 2014 • Décret n° 2014-47 du 20 janvier 2014 abrogeant et remplaçant le décret n° 2003827 du 10 octobre 2003 portant organisation et fonctionnement des chambres de commerce, d'industrie et d'agriculture (CCIA). Date of text: 20 January 2014 • Arrêté Interministériel n° 18585 du 28 novembre 2013 fixant la redevance d'adduction et de drainage dans la vallée du fleuve Sénégal (FOMAED). Date of text: 28 November 2013 • Décret n° 2013-1268 du 23 septembre 2013 relatif aux attributions du Ministre de l'Agriculture et de l'Équipement rural. Date of text: 23 September 2013 • Arrêté Ministériel N°4 671 du 2 avril 2013 modifiant et remplaçant l'arrêté N°7.067 du 9 août 2010 portant création, organisation de l'unité de gestion et des organes de supervision et de coordination du programme de développement des marchés agricoles et agroalimentaires du Sénégal (PDMAS). Date of text: 02 April 2013 • Arrêté Ministériel n° 1080 du 7 février 2013 portant composition et fixant les règles de fonctionnement du Conseil de Surveillance de l'Agence nationale pour l'Insertion et le Développement agricole (ANIDA). Date of text: 27 February 2013 • Décret n° 2012-371 du 27 mars 2012 abrogeant et remplaçant le décret n° 99-86 portant règlement d'établissement de l'Institut Sénégalais de Recherches Agricoles (ISRA). Date of text: 27 March 2012 • Arrêté ministériel n° 12917 du 18 novembre 2011 portant création d'un Comité technique de formulation et de préparation du Projet de Développement et de Financement de l'Agrobusiness au Sénégal. Date of text: 18 November 2011 • Décret n° 2011-1028 du 25 juillet 2011 abrogeant et remplaçant le décret n° 2006-1336 du 29 novembre 2006 portant création, organisation et fonctionnement de l'Agence nationale du Plan de Retour vers l'Agriculture. Date of text: 25 July 2011

Country	Policy Framework	Legislative and Regulatory Instruments
		<ul style="list-style-type: none"> • Arrêté ministériel n°457 MMIAPME-SG du 5 janvier 2011 portant organisation des services régionaux des Mines, de l'Industrie, de l'Agro-industrie et des PME. Date of text: 05 January 2011 • Arrêté n° 10834 MDCL/SG du 25-11-2009 instituant un comité de pilotage du programme national de développement local (PNDL). Date of text: 25 November 2009 • Arrêté ministériel n° 7245 MEF-ANSD du 28 juillet 2009 créant et fixant les règles d'organisation et de fonctionnement des sous comités et groupes thématiques des programmes statistiques (CTPS). Date of text: 28 July 2009 • Arrêté ministériel n° 6579 portant création du Comité Technique de Constat, de déclaration des calamités naturelles frappant les zones rurales et ayant causé de sinistres aux activités agricoles, d'élevage, de sylviculture et de pêche. Date of text: 29 June 2009 • Décret n° 2008-1261 portant création et fixant les règles d'organisation et de fonctionnement du Fonds de la Grande Offensive Agricole pour la Nourriture et l'Abondance (GOANA). Date of text: 10 November 2008 • Décret n° 2008-513 du 20 mai 2008 portant création et fixant les règles d'organisation et de fonctionnement de l'Agence nationale de la Recherche scientifique appliquée (ANRSA). Date of text: 20 May 2008 • Arrêté ministériel n° 9565 en date du 18 octobre 2007 portant modification de l'arrêté n° 004805 du 15 juin 2007 relatif à la création et organisation du Comité d'Orientatation et de Suivi de la composante appui aux organisations de producteurs du programme des services agricoles et organisations de producteurs 2ème phase (PSAOP2). Date of text: 18 October 2007 • Décret n° 2007-1146 du 4 octobre 2007 portant organisation, fonctionnement du Fonds National de Développement AgroSylvoPastoral (FNDASP). Date of text: 04 October 2007 • Décret n° 2007-1147 du 4 octobre 2007 portant organisation et fonctionnement du Conseil Supérieur et des Comités régionaux d'Orientatation AgroSylvoPastorale. Date of text: 04 October 2007 • Arrêté ministériel n° 3105 MAHDHORT du 24 juin 2005 portant création, organisation et fonctionnement du Programme de Production de Bissap au Sénégal. Date of text: 24 June 2005 • Arrêté Ministériel n° 2015 du 26 avril 2005 portant création et organisation de la Cellule de Coordination des Projets et Programme d'Appui à la Décentralisation. Date of text: 26 April 2005

Country	Policy Framework	Legislative and Regulatory Instruments
		<ul style="list-style-type: none"> • Arrêté Primatorial n°1875 du 14 avril 2005 portant création d'un Comité national de Pilotage et d'un Comité technique de la Stratégie de Croissance accélérée. Date of text: 14 April 2005 • Arrêté Primatorial n° 837 du 3 mars 2005 portant création d'un comité interministériel de formulation et de préparation du programme national de développement local. Date of text: 03 March 2005 • Décret n° 2004-1254 du 17 septembre 2004 portant création et fixant les règles d'organisation et de fonctionnement du Centre national de Recherche scientifique (CNRS). Date of text: 17 September 2004 • Arrêté ministériel n° 6841 du 9 octobre 2003 portant création, organisation et fonctionnement du Programme de Développement Hydro-agricole de la Basse-Casamance. Date of text: 09 October 2003 • Arrêté ministériel n° 3751 MFPTEOP-DTSS du 06 juin 2003 fixant les catégories d'entreprises et travaux interdits aux enfants et jeunes gens ainsi que l'âge limite auquel s'applique l'interdiction. Date of text: 06 June 2003 • Arrêté ministériel n° 3749 MFPTEOP-DTSS du 06 juin 2003 fixant et interdisant les pires formes du travail des enfants. Date of text: 06 June 2003 • Arrêté ministériel n° 3748 MFPTEOP-DTSS du 06 juin 2003 relatif au travail des enfants. Date of text: 06 June 2003 • Arrêté ministériel n° 3307 portant organisation des Directions régionales du Développement rural. Date of text: 15 March 2000 • Arrêté ministériel n° 3303 portant organisation de la Direction de l'Horticulture. Date of text: 15 March 2000 • Arrêté ministériel n° 3309 portant organisation de la Direction de la Protection des Végétaux. Date of text: 15 March 2000 • Arrêté ministériel n° 3304 portant organisation de la Direction de l'Analyse de la Prévision et des Statistiques. Date of text: 15 March 2000 • Arrêté ministériel n° 3302 portant organisation de la Direction de l'Agriculture. Date of text: 14 March 2000 • Décret n° 2000-187 autorisant la ferme pilote à générer et à utiliser ses propres ressources. Date of text: 08 March 2000 • Décret n° 99-909 portant organisation du Ministère de l'Agriculture. Date of text: 14 September 1999 • Arrêté ministériel n° 6309 M.A. portant création, organisation et fonctionnement du projet de promotion des petites et moyennes entreprises horticoles (P.P.M.E.H.). Date of text: 07 September 1999

Country	Policy Framework	Legislative and Regulatory Instruments
		<ul style="list-style-type: none"> • Arrêté ministériel n° 5710 portant création du comité national de coordination et de suivi du programme des Services agricoles et d'Appui aux Organisations paysannes (PSAOP). Date of text: 18 August 1999 • Arrêté ministériel n° 2542 en date du 7 avril 1999 portant création et organisation du projet d'Aménagement et de Développement villageois (PADV). Date of text: 07 April 1999 • Décret n° 99-85 portant création et organisation d'un Fonds national pour la Recherche agricole et agro-industrielle (FNRAA). Date of text: 04 February 1999 • Décret n° 98-982 fixant les règles d'organisation et de fonctionnement de l'Institut sénégalais de Recherches agricoles (I.S.R.A.). Date of text: 04 December 1998 • Arrêté ministériel n° 2613 portant création et organisation du Projet de promotion des exportations agricoles (PPEA). Date of text: 15 April 1998 • Arrêté ministériel n° 2489 ME-MA-UPA portant création et organisation d'un sous réseau national du réseau sahélien de documentation scientifique et technique (RESADOC, RESADOC -SENEGAL). Date of text: 27 March 1997 • Arrêté ministériel n° 6167 M.A. portant création du Groupe de Réflexion stratégique sur le Programme d'Investissement agricole (PISA). Date of text: 08 August 1996 • Décret n° 2009-1409 portant missions, organisation et fonctionnement de l'Autorité Nationale de Biosécurité (ANB). Date of text: 23 December 2009 • Arrêté primatorial n° 7265 portant création du Comité de Pilotage du Programme national d'Infrastructure rurales (PNIR). Date of text: 18 August 2000 • Arrêté ministériel n° 7269 portant création du Comité de Pilotage du projet des Micros entreprises rurales (PROMER). Date of text: 31 July 1997 • Circulaire 989/MAER/CT/SMD Date of text: 05 June 2018 • Loi 2000-14 du 10 janvier 2000 autorisant le Président de la République à ratifier la Convention sur la procédure de consentement préalable en connaissance de cause applicable dans le cas de certains produits chimiques et pesticides dangereux qui font l'objet du commerce international, adoptée à Rotterdam le 11 septembre 1998. Date of text: 10 January 2000

Source: Author's own elaboration

52. **Laws Pertaining to Gender Equality:** Laws pertaining to gender equality/women's rights are available in the supporting Gender Assessment and Action Plan documents. For the sake of brevity, those laws are not covered in detail within this ESMF and project reviewers, implementers, and managers are advised to refer directly to those documents for further information.

53. **Changing Nature of Laws and Regulations:** These laws, regulations, and guidelines (etc.) may change over time throughout the programme area. In instances where changes occur, e.g. via an amendment or a newer law/regulation/guideline/etc. repealing one of those previously listed, the programme should comply with the most up-to-date legislation.

3.2 Application of FAO and GCF Environmental, Social, and Climate Risks Standards/Procedures

54. Based on the FAO FESM and GCF ESS, the following safeguards documents were prepared: (i) Environmental and Social Management Framework (ESMF), with appendices covering the Ethnic Minority Plan (appendix 7) and the integration of Conflict assessment, prevention and management in all project activities (especially under Component 1 Land Restoration, see appendix 9 as well as the Exclusion List in appendix 1); (ii) Stakeholder Engagement Plan (SEP, see separate Annex 7); and (iii) Gender Assessment & Action Plan (GAP, see separate Annex 8). The documents have been publicly disclosed in advance of implementation and board approval to respect the Pelosi Amendment¹³ as a best practice, even though the programme is not high risk (the risk rating is only moderate), and the documents collectively respond to the safeguard standards described below.

Environment and Social Standards (ESSs) Relevant to the programme

55. FAO and GCF both stipulate that FAO-supported and GCF-funded programmes and projects must meet their environmental and social standards (ESS) which were designed to avoid, minimize, reduce or mitigate the adverse environmental and social risks and impacts of projects. These standards include (presented here in the order used by FAO):

- ESS 1: Natural Resources Management;
- ESS 2: Biodiversity, Ecosystems, and Natural Habitats;
- ESS 3: Plant Genetic Resources for Food and Agriculture;
- ESS 4: Animal, Livestock, and Aquatic Genetic Resources for Food and Agriculture
- ESS 5: Pest and Pesticide Management;
- ESS 6: Involuntary Resettlement and Displacement;
- ESS 7: Decent Work;
- ESS 8: Gender Equality;
- ESS 9: Indigenous Peoples and Cultural Heritage.

56. Not explicitly listed as a standard, but considered a vital part of project design, implementation, and safeguarding is stakeholder engagement. Provisions to ensure meaningful engagement are provided within the Stakeholder Engagement Plan (Annex 7) and initial feedback and engagement was mainstreamed into the SURAGGWA programme design.

57. The proposed project investments are designed to have positive social and environmental benefits and the programme has been classified as moderate risk (Category "B"). Based on the programme activities, as described in Chapter 2, the following Environmental and Social Safeguard Standards will be relevant: ESS1, ESS3, ESS4, ESS5, ESS7, and ESS9. To comply with these standards, given that not all the sub-activities can be identified during appraisal, specific safeguard instruments were prepared as identified in Table 4.

¹³ The 1989 Pelosi Amendment requires disclosure of environmental impacts at least 120 days prior to board approval for high- and sometimes substantial-risk projects (URL: <https://www.gao.gov/archive/2000/ns00192.pdf>)

Table 4. List of safeguards standards relevant to the programme

Safeguard Standard	Relevance	Safeguard Instruments & Mitigation Measures
ESS 1 – Natural Resources Management	YES	Exclusion List (Appendix 1) and the programme mainstreams the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests into the activities.
ESS2 – Biodiversity, Ecosystems, and Natural Habitats	NO	Exclusion List (Appendix 1)
ESS3 – Plant Genetic Resources for Food and Agriculture	YES	ESMF/ESMP
ESS4 – Animal, Livestock, and Aquatic Genetic Resources for Food and Agriculture	YES	Exclusion List (Appendix 1), and ESMF/ESMP
ESS5 – Pest and Pesticide Management	YES	Exclusion List (Appendix 1), ESMF/ESMP with project activities focused on agroecology and Integrated Pest Management (IPM), with some communities occasionally using the biopesticide neem.
ESS6 – Involuntary Resettlement and Displacement	NO	Exclusion List (Appendix 1)
ESS7 – Decent Work	YES	ESMF/ESMP; with, where needed, sensitization sessions on decent rural employment, age-appropriate works, and Occupational Health and Safety. The programme incorporates support from the FAO Land Tenure Team to integrate the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests in the approach.
ESS8 – Gender Equality	NO	The programme already incorporates a Gender Analysis and Action Plan, with specific gender-targeted activities built into the programme design.
ESS9 – Indigenous Peoples and Cultural Heritage	YES	ESMF, FPIC (detailed in Appendix 6 as part of the ethnic minority plan), and a chance-find mechanism (Appendix 5)

Source: Author's own elaboration

58. As FAO is the Accredited Entity, the safeguards follow FAO's ESS, however Table 5 provides an overview of how the GCF's Environmental and Social Standards align with FAO's ESS, for ease of reference.

Table 5. Alignment between GCF environmental and social standards and FAO's ESS

GCF Environmental & Social Standards	FAO Environmental and Social Standards
1 – Assessment and Management of Environmental and Social Risks and Impacts	ESS 1 – Natural Resources Management ESS8 – Gender Equality
2 – Labour and Working Conditions	ESS7 – Decent Work
3 – Resource Efficiency and Pollution Prevention	ESS5 – Pest and Pesticide Management
4 – Community, Health, Safety, and Security	ESS7 – Decent Work (partially)
5 – Land Acquisition and Involuntary Resettlement	ESS6 – Involuntary Resettlement and Displacement
6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources	ESS2 – Biodiversity, Ecosystems, and Natural Habitats ESS3 – Plant Genetic Resources for Food and Agriculture ESS4 – Animal, Livestock, and Aquatic Genetic Resources for Food and Agriculture
7 – Indigenous Peoples (and, more specifically, the GCF Indigenous Peoples' Policy)	ESS9 – Indigenous Peoples and Cultural Heritage
8 – Cultural Heritage	

Source: Author's own elaboration

59. Details each relevant safeguards standards relevant to SURAGGWA are detailed in **Table 6**.

Table 6 Details on safeguards standards relevant to SURAGGWA

Safeguards Standard	Relevance to Project
ESS 1 – Natural Resources Management	<p>SURAGGWA may involve (positive) changes to existing tenure rights, as it supports pathways 3-9 identified in the <i>Technical Guide on the Integration of the VGGT into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality</i>. The process for engagement will build on best practices used by the FAO Land Tenure team and related projects in the region, facilitating national and local stakeholder processes to ensure a responsible governance of tenure and engaging both groups with statutory and customary (formal/informal) tenure and land-use rights. If restoration requires a (temporary) exclusion of grazing or other uses, this would be negotiated locally with all relevant user groups prior to the start of the restoration activities.</p> <p>For further details on the SURAGGWA's approach to avoiding issues re: ESS6 (resettlement/displacement), land use/access rights, and ensuring community consensus, please see paragraph 57.</p>

Safeguards Standard	Relevance to Project
ESS3 – Plant Genetic Resources for Food and Agriculture	<p>The programme works with local partners (national seed centers, local communities producing surplus seeds) for restoration in some instances and, depending on the necessity, may involve transfer of seeds and/or planting materials for cultivation. The preferred approach of the programme is to mobilize and train communities involved in restoration for local seed collection. Where necessary, we may build on existing seed exchange networks between the national seed centers in the eight countries.</p> <p>Specifically, native species referenced in the flora of West and East Africa flora and seed collections of native species through the Millennium Seed bank Partnership of the Royal Botanic Gardens of Kew (since 2001) will be used. Country institutions in Mali (IER herbarium and seed bank), in Niger (Centre National de Semences Forestieres) and in Burkina Faso (also Centre National de Semences Forestieres - CNSF) already housed accessions and reference samples of native species of the regional flora. They are all actively involved in the GGW seed supply and restoration interventions, as part of same ministries of environment, and they contributed to SURAGGWA formulation (2022). They are committed to its implementation and support of training, advising and capacity building on native species collection, handling and propagation. This implementation arrangement will leave no option of introducing invasive non-native species in the restoration activities.</p>
ESS4 – Animal, Livestock, and Aquatic Genetic Resources for Food and Agriculture	<p>The programme will help rehabilitate and regenerate the land and soil in highly degraded and moderately degraded lands of the Sahel region (i.e. increasing trees and agroforestry in the area). While it won't operate inside protected areas, it may operate in their proximity in some cases. Interaction with protected areas will be exclusively positive; for example, restoration of sand dunes to prevent siltation of protected Ramsar wetland sites.</p>
ESS5 – Pest and Pesticide Management	<p>There will be no procurement or supply of chemical pesticides; however, there is always a risk that increased production in a given area may result in increased (indirect) use of pesticides. To mitigate this, the principles of agro-ecology and Integrated Pest Management (IPM) are indicated in this ESMF, and practices taught under the programme will include some sensitization on ecological pest management. In some communities, there may be use of the bio-pesticide Neem.</p> <p>Additionally, the programme may provide some direct inputs in the form of seeds to farmers, in cases where local community seed production is insufficient. The provision will come with training on the restoration activities and management of the plant species involved. The programme will not provide any pesticides.</p>

Safeguards Standard	Relevance to Project
ESS7 – Decent Work	<p>Many of the beneficiaries will be low-income pastoralists and/or agro-pastoralists. The programme will help build their resilience and increase access to finance. Value Chain analyses are done under Component 2. Additionally, the following aspects related to ESS7 are relevant:</p> <ul style="list-style-type: none"> • Some youth work as unpaid contributing family workers and/or are increasingly abandoning agriculture in rural areas; • The programme operates in situations where gender inequality exists in the labour market; • The programme will involve sub-contracting and, in some instances, employ workers directly; • Given that the programme disaggregates targets by men, women, and youth, we anticipate that youth (only those <u>above</u> the nationally-defined minimum employment age) will be involved in some age-appropriate activities under Component 2 (and/or possibly Component 1). Some restoration activities will have involvement from the family, and some of the youth involved (defined by ILO as anyone between 15-24) may fall within the category listed here (15-18).
ESS9 – Indigenous Peoples and Cultural Heritage	<p>Although the some GGW countries do not officially recognize indigenous peoples, there are a number of ethnic minorities within the region who fit the definition of indigenous for the purposes of FAO and GCF safeguards; as such, ESS 9 is triggered.¹⁴ Specifically, there are pastoralist communities considered by the IWGIA as indigenous (which count as “Sub-Saharan African historically underserved traditional local communities”). In order to address the requirements of Free Prior and Informed Consent (FPIC), consultations were held during the design phase to determine differentiated needs and priorities, key concerns, and their preferred method(s) of grievance redress. Attendees were told about potential positive and negative impacts of the programme, and whilst all confirmed support for and interest in the programme, iterative discussions will be confirmed at local levels once the programme has been approved. This approach has been taken in order to avoid losing trust of the communities (e.g. promising to implement a sub-project when their village might not be selected as a final site). The plan for addressing indigenous/ethnic minority communities is addressed in the Appendix on the Ethnic Minority Plan.</p>

Source: Author's own elaboration

¹⁴ ESS 9 recognizes indigenous peoples' traditions and knowledge present opportunities for many of the challenges that humankind will face in the coming decades. This is of particular significance in relation to indigenous food systems in the face of increasing food demand and traditional knowledge with respect to

60. **ESS6 on Involuntary Resettlement and Displacement** has not been triggered because, as mentioned in Appendix 8 of this ESMF, there will be no resettlement or displacement (also covered in the Appendix 1 Exclusion List). If restoration requires a (temporary) exclusion of grazing or other uses, this would be negotiated locally with all relevant user groups prior to the start of the restoration activities and would therefore be voluntary. The consultations are designed to cover safeguards aspects on land use/access, areas to be restored, community consent and preferences, etc., and are intended to build the consensus/ensure that participation is voluntary and agreed upon. The consultation approach builds on best practices used by the FAO Land Tenure team and related projects in the region, closely following the guidance within FAO's VGGT, and facilitating national and local stakeholder processes to ensure a responsible governance of tenure and engaging both groups with statutory and customary (formal/informal) tenure and land-use rights.

3.3 Gap analysis and gap filling measures

61. FAO and GCF both classify programme and sub-projects into one of three classifications: *high risk*, *medium risk*, or *low risk* and disclose a project's risk classification and basis for that classification in programme documents and on the FAO and GCF websites. The GCF accepts the standards and risk classifications of Accredited Entities, like FAO, thus for this project the ESMF utilizes the FAO screening guidance for risk classification.

62. Based on the programme's moderate risk rating for environment and social considerations, some of the national regulations in each SURAGGWA country are adequate for the programme's investments, while additional gap-filling measures will be used if the national legislation is less stringent than the FAO/GCF safeguards requirements. As the programme covers eight countries, the country-specific gaps analysis between legislation and the FAO/GCF safeguards will be conducted by the Regional Environmental & Social Safeguards Specialist, with the support of the National Social Safeguards & Gender Specialists following the principles laid out in this ESMF, whereby the more stringent policy applies. Capacity building efforts pertaining to regulation and oversight are also incorporated as part of the safeguards management of the SURAGGWA programme and as part of the programme design (e.g. monitoring and evaluation activities).

4. E&S baseline, risks, and proposed mitigation measures

4.1 Environmental & social baseline: project areas

63. The information in this baseline is largely based on the annexes of the comprehensive project funding proposal. If more detailed information is needed, readers are encouraged to consult the

adapting to climate change vulnerabilities and impacts. Indigenous peoples are estimated to comprise about 5% of the world's population, yet 15% of the global poor. An agenda that pursues global food security, sustainable natural resources management and poverty alleviation is incomplete unless it addresses indigenous peoples' needs. For this reason, FAO approved in 2010 its Policy on Indigenous and Tribal Peoples which is based on international legal agreements, such as the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted by the General Assembly in 2007, and ILO Convention 169. The FAO Policy on Indigenous Peoples underpins ESS 9 and provides the corporate guidance to respect, include and promote indigenous peoples' issues in FAO's work. The core principles of the policy are: self-determination: respect for indigenous knowledge, cultures and traditional practices that contribute to sustainable and equitable development; and Free, Prior and Informed Consent (FPIC). ESS 9 furthermore recognizes the importance of tangible and intangible cultural heritage for current and future generations.

annexes, which cover topics such as: an overview of the major crops, the impacts of climate change in the Sahel region, water availability and challenges, the effect of climate change on the agricultural sector, geospatial analysis for target area selection, socio-economic conditions, project design considerations, policy alignment, and a greenhouse gas assessment.

64. For each sub-section, the baseline provides a regional overview, followed by more detailed information for Senegal, to be used as the example format when developing the full Environmental & Social Management Plans (ESMPs).

Geographical Location and Topography

65. For the purpose of this environmental and social baseline, only information relevant to safeguards has been included. Additional information has also been provided to address aspects not already covered in the annexes, specifically: information on (i) topography and geology; (ii) water, and groundwater uses, quality and resources; (iii) terrestrial flora and fauna; and (iv) biodiversity dynamics.

- **Regional overview**

66. The Sahel, located in sub-Saharan Africa that stretches across several countries, including Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad and Sudan. This region is characterised by a relatively flat topography with arid and semi-arid plains covered by steppes and savannahs. The geography of the Sahel is marked by high latitude, low rainfall and high temperatures, which contribute to an arid to semi-arid climate. Altitudes vary little and are generally between 200 and 600 metres above sea level. However, some areas may have isolated hills and mountains.

67. The Sahel region is characterized by a diverse topography and geography across its various countries. Burkina Faso's relatively flat relief with localized landforms and an important hydrographic network in the south is in stark contrast to Chad's desert environment that covers more than a third of the country and is physically separating the populations of the north from those of the south. The Chadian Sahara is a large basin bounded to the east by the Ennedi plateau and to the north by the Tibesti mountains, which include the highest peak in the country, the Emi Koussi volcano at 3,415 meters above sea level. Mali's relief is marked by plateaus in the south and west, an alluvial plain of the Inner Niger Delta in the center, and crystalline massifs in the northeast. In Mauritania, most of the territory is in the Sahara Desert, with plains and reliefs that are not very uneven, as well as rocky deserts. In the north, there are high plateaus with a peak at 915 meters altitude, such as the Kedia of Idjil, while in the center of the country, the basin of Hodh El Chargui is bordered in the southeast by sandstone plateaus. Senegal, on the other hand, is generally flat, with only eastern Senegal being rugged with sandstone plateaus forming the foothills of Fouta-Djallon and small doleritic and granitic massifs. Niger, Nigeria, and Djibouti also exhibit their unique topographies, such as Niger's highly variable landscapes ranging from sandy dunes to high mountains, Nigeria's varied landscapes with plateaus, hills, and plains, and Djibouti's rugged terrain with volcanic plateaus, high mountains, and deep valleys. Overall, the Sahel region's diverse topography and geography have significant implications for its ecosystems, population distribution, and economic development. Detailed topography and geography for the programme areas can be found in Annex 2 of the Full Funding Proposal.

68. The geography and topography of the Sahel are important factors to consider in understanding the vulnerability of the region and its people. According to the Food and Agriculture Organization of the United Nations, the Sahel region is currently experiencing land degradation,

biodiversity degradation and declining agricultural productivity, resulting in increased vulnerability for local populations¹⁵. Climate changes, such as rainfall and temperature variations, have had a significant impact on Sahelian ecosystems, which can lead to deterioration in water and soil quality, as well as reduced food resources for local populations¹⁶.

- **Senegal eco-geographical overview**

69. Senegal is a relatively flat country with an average altitude of less than 50 m over nearly ¾ of the territory. There are rare accidents in the relief: the volcanic peninsula of Cape Verde, the "cliff" of Thiès and the first foothills of the Fouta Djallon massif on the Guinean border where the highest point is 581 m. Its coastline stretches along the Atlantic Ocean for more than 700 km, from Saint-Louis to Gambia. From Dakar to Saint-Louis, the coast is formed by alignments of dunes, separated by fertile lowlands called Niayes. To the south of the Cape Verde peninsula, the coast is more indented and the cliffs of Toubab Dialao then give way to mangrove swamps, where the arms of the Sine and Saloum rivers penetrate the land, forming a labyrinth. The estuaries of Senegal, Saloum and Casamance rivers are below sea level at high tide.

70. The soils have a decreasing pedological aptitude from west to east. They are very diversified. A distinction is made between sandy and dry soils in the north, ferruginous soils in the central regions and lateritic soils in the south. The reduction of vegetation cover, deforestation, water and wind erosion, salinisation and acidification have led to soil degradation, thus reducing their suitability for cultivation.

71. Senegal is composed of five distinct eco-geographical zones, each of which possesses its own unique features and characteristics. These include: (i) the *Niayes Coastal Plains* located in the western part of the country, characterized by low-lying terrain, sandy beaches, and its significance for tourism and fishing activities; (ii) the *Ferlo Sylvopastoral Area* located in the upper center and northeast of the country, featuring hot temperatures and scarce vegetation; (iii) the *Groundnut Basin*, situated in the lower center and northern regions of Senegal, known for its high temperatures, low rainfall, and fertile soil with well-drained characteristics; (iv) the *Senegal River Valley* located in the eastern part of the country, with fertile land, abundant water resources, and a high population density; (v) *Eastern Senegal*, which encompasses a diverse geography including fertile plains, rolling hills, and rocky outcroppings, and experiences a mixture of semi-arid and tropical climates depending on the region; and (vi) the *Casamance Region*, located in the southern part of the country, characterized by dense forests, mangroves, wetlands, and abundant wildlife and vegetation diversity. These six eco-geographical zones form the diverse landscape of Senegal and collectively contribute to the unique features and resources of the country.

72. For the purposes of this project, districts have been selected within the Ferlo Desert, Groundnut Basin zone, and Senegal River Valley based on climate vulnerability scoring.

73. **Topography & Geology in Ferlo Desert.** The Ferlo forest-pastoral zone encompasses an expansive area of 36,289 km² and is currently experiencing a highly advanced process of desertification, characterized by a significant decline in vegetation cover as a result of both drought and the unsustainable harvesting of woody plants by herders. The region is comprised of various soil types, including: (i) weakly developed tropical ferruginous soils with siliceous sands, which serve as transhumance rangelands; (ii) slightly leached tropical ferruginous soils with a sandy-clay texture or

¹⁵ State of the Sahel's land resources and ecosystems. FAO, 2019.

¹⁶ Diouf, A. et al. (2020). Impacts of climate change on Sahelian ecosystems: a review of the literature. Yale University, USA

ferruginous concretions, used for both rangelands and groundnut cultivation ; (iii) sub-arid brown soils ; and (iv) sub-arid brown-red soils formed on Ogolian dunes, predominantly utilized for millet and cowpea cultivation.

74. ***Topography & Geology in Groundnut Basin.*** The Groundnut Basin is a region spanning 38,728 km², characterized by tropical ferruginous soils with limited leaching that are formed on sand. These soils are highly sandy, containing less than 5% organic matter, and often suffer from degradation due to excessive exploitation and overgrazing. Despite their depleted state, these soils remain suitable for early groundnut cultivation. In addition to these soils, the Groundnut Basin also encompasses sub-arid brown soils, commonly referred to as "deck soils," which are hydromorphic intergrades with poor drainage. These soils are utilized for sorghum cultivation during the winter months and for grazing during the dry season. Other soil types present in the Groundnut Basin include: (i) leached tropical ferruginous soils with a sandy texture and clay leaching, also known as "beige soils."; (ii) poorly developed soils of non-climatic origin, such as gravelly lateritic cuirass, which are used for rangelands; (iii) leached tropical ferruginous soils with ferruginous stains and concretions, referred to as "new soils," that are cultivated for groundnuts. Finally, in the south-western portion of the Groundnut Basin, there are clayey-silt soils that are abundant in organic matter. These soils are used for the cultivation of groundnuts, sorghum, maize, and cassava.

75. ***Topography & Geology in the Senegal River Valley.*** The Senegal River Basin encompasses an area of 22,472 km² and serves as a crucial hub for traditional flood recession crops such as sorghum, maize, and rice, as well as irrigated areas. This river holds significant significance for the Senegalese people and the geopolitical balance of West Africa, due to its international nature and long watercourse. The presence of alluvial plains and sandy uplands along the left bank of the Senegal River results in a diversity of soil types. These include: (i) poorly developed soils of non-climatic origin; (ii) erosion soils with a coarse, stony, or stony texture and hydromorphic characteristics, exhibiting slight humus bearing on the surface with ferruginous streaks at depth; (iii) hydromorphic sub-arid brown soils with slight halomorphic properties; (iv) non-degraded halomorphic soils formed on deltaic alluvium; (v) mineral hydromorphic soils with pseudo-gley characteristics, formed on clay-loam alluvium; (vi) leached tropical ferruginous soils lacking iron. The Senegal River Basin offers a complex array of soil types, each with unique characteristics and potential use cases for different production systems.

Climate

- **Regional overview**

76. There are local specificities and trends in each SURAGGWA country, but the majority of the countries selected for this project experience hot semi-arid and hot desert climates. In general, the countries have one-to-two hot seasons in spring/summer and one cold season in autumn/winter. The average temperature ranges from 20 to 35°C all year round, while the annual precipitation ranges from 60 to 1050 mm. However, most of this precipitation (ranging from ¼ to almost all of the annual precipitation) occurs during a single month, usually August. These weather conditions create significant challenges for agriculture, particularly in terms of water availability. These countries have shown a general increase in average temperatures and a decrease in annually accumulated precipitation in some countries. Additionally, there has been a change in the distribution of precipitation, with fewer but more intense rain episodes. These trends are consistent with the programmed trends under both RCP4.5 and RCP8.5 scenarios. Furthermore, the annual Standardized Precipitation Evapotranspiration Index (SPEI) is expected to decrease in some countries, pointing to a consistent decrease in groundwater availability and an increase in geological

droughts. These trends indicate that climate change is likely to have a significant impact on water resources and agricultural productivity in these countries.

77. In terms of historic trends, the mean temperature has risen by about +0.3°C per decade in every country in the SURAGGWA programme, with a total increase of around +1.5°C during the last 50 years. Most of the countries in the programme have experienced a decrease in their annually accumulated precipitation. However, Niger and Nigeria have shown an increase in both their largest 1-day precipitation and average largest 5 days precipitation, indicating a change in the precipitation distribution with less but more intense rain episodes.

78. Currently, the temperature ranges from 25 to 35°C during warm and cold seasons, depending on the country. The annually accumulated precipitation varies between 60 mm in Mauritania to 1050 mm in Nigeria. Most countries experience a rainy season in August and a minimum in December/January, with the exception of Djibouti, Mauritania and Mali, which have a rainy season in August and no precipitation between November to April.

79. In terms of projected trends, both the mean and maximum temperature are expected to increase for all countries in the programme. The annual precipitation in Senegal is expected to decrease, while the results for Burkina Faso, Chad, Djibouti, and Mali are less clear. The maximum number of consecutive rainy days is expected to decrease in Burkina Faso, Mauritania, Niger and Senegal, while it is expected to increase in Djibouti. The largest 1-day precipitation and accumulated largest 5-days precipitation are expected to increase in most countries, indicating a change in the precipitation distribution. Finally, the annual Standardized Precipitation Evapotranspiration Index (SPEI) is expected to decrease in Chad, Mali, Mauritania, Niger and Senegal under both scenarios, indicating a decrease in ground water availability and an increase in geological droughts.

- **Senegal climate and meteorology**

80. The climatic differences between the coastal zone and the interior regions in the country can be attributed to its geographical position. The territory is exposed, in part or entirely, to the influence of the maritime trade winds, the harmattan, and the monsoon due to an unobstructed relief, which facilitates atmospheric circulation. As a result, a Sudano-Sahelian climate with two seasons prevails. The rainy season, from June to October, is characterized by the monsoon, a hot and humid wind originating from the Saint Helena anticyclone. The dry season, from November to May, is dominated by the northerly trade winds, including the maritime trade wind from the Azores anticyclone and the harmattan from the Libyan anticyclone.

81. The temperature variations follow the seasonal rhythm and are influenced by a combination of meteorological, and geographical factors. The minimum temperatures are usually recorded in January, while the maximum temperatures occur during the rainy season. The distribution of isotherms follows a general north-south course, with a significant moderating effect of the sea on the northern coast. The temperatures in this region are moderate, ranging from 16°C to 30°C. However, the most prominent feature of the climate is the marked spatial variability of rainfall, which fluctuates between more than 1000 mm in the south and less than 300 mm in the north on average. This rainfall distribution allows for the country to be divided into two major climatic regions separated by the 500 mm isohyet.

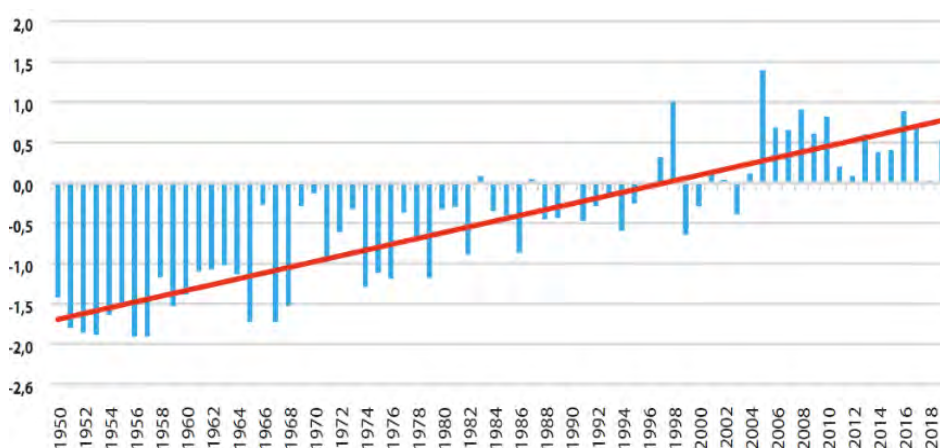
82. The country has two distinct rainfall regimes: the northern Sahelian regime, with rainfall less than 300 mm, and the southern Sahelian regime, with rainfall between 300 and 500 mm. The

Sudanian region south of the 500 mm isohyet includes the northern Sudanian regime, with rainfall between 500 and 1000 mm, and the southern Sudanian regime, with rainfall exceeding 1000 mm.

Historic and current situation

83. *Temperature* - In Senegal, temperature variations can be understood through inter-annual and intra-annual variability. The evolution of temperatures in Senegal is marked from 1970 to 2018 by an increase of between 0.2 and 0.8°C depending on the locality; it is more marked at the level of minima than maxima (DEEC, 2015).

Figure 3. Variation in annual mean temperature compared to normal (1981-2010) from 1950 to 2019, Senegal



Source: ANACIM, 2020

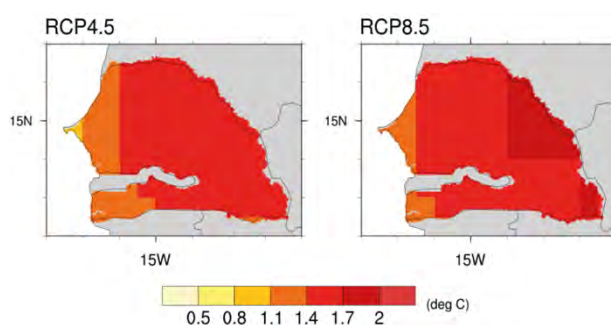
84. Overall, three periods stand out: the first from 1950 to 1968 with lower temperatures than the 1961-1990 normal, the second from 1969 to 1994 with temperatures generally close to normal and the third from 1995 to 2018 with temperature differences that can exceed 1°C, within which 1998 and 2005 appear as the warmest years (see Figure 3). However, the warming of the last eleven years (2010-2019) does not reach 1°C. However, during the warm seasons, average temperatures are increasingly higher.

85. *Pluviometry* - Senegal has experienced two (02) major periods in terms of rainfall trends: a period marked by a highly significant drop in rainfall between 1950 and 1986 and another marked by a non-statistically significant increase in rainfall from 1987 to 2019. The period between 1950 and 1986 is marked by two climatic periods : a humid period between 1950 and 1969 and a dry period from 1970 to 1986. From 1987 onwards, there has been a timid return of precipitation, characterized by a normal period marked by high interannual variability of precipitation (1987-1998). The last twenty (20) years correspond relatively to a humid period, except for a few years (2002, 2004, 2012 and 2018).

Future trends

86. *Temperature* - In Senegal, the climate projections carried out by ANACIM and LPAOSF within the framework of the CPDN also foresee an increase and strong interannual variability of temperatures by 2035. This increase of between 1 and 1.8°C will be more marked in the north, south-east and west of the country. This increase is more pronounced with the extreme scenario RCP8.5 and reaches a value of +2°C (see Figure 4). This shows that Senegal could face an increase in extreme events such as heat waves.

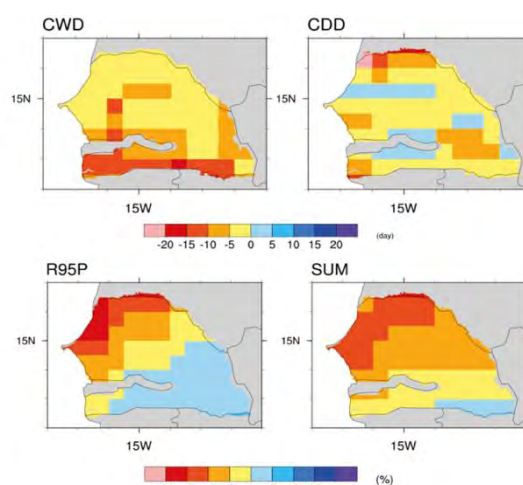
Figure 4 Temperature trends by 2035 in Senegal, according to the RCP4.5 and RCP8.5 emission scenarios



Source: ANACIM/LPAOSF, 2017

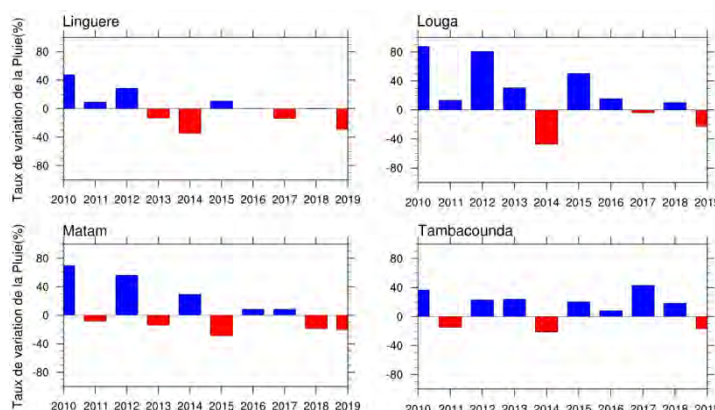
87. *Pluviometry* - Many studies have been devoted to climate change through temperature and rainfall. Overall, these studies show a decrease in rainfall by 2035 with a different percentage from one model to another (DEEC, 2017; USAID, 2014; Bodian et al, 2016; Gaye, 2010). Thus, for the RCP8.5 scenario, there is a decrease in wet sequences (consecutive rainy days) and a non-homogeneous variability for rainfall breaks (consecutive dry days) on average. But what is most noteworthy is the increase in extreme events. Indeed, the average rainfall trend will be downward over the whole country, associated with a scarcity of heavy rainfall in the northwest and more extreme rainfall (exceeding the 95th percentile) in the southwest (see Figure 5).

Figure 5 Spatial variability of number of consecutive rainy days (CWD), consecutive dry days (CDD), extreme rainfall (R95P) and total rainfall (SUM) by 2035 for the RCP8.5 scenario



Source: ANACIM/LPAOSF, 2017

Figure 6 Rate of change of annual rainfall in the last decades (2010-2019) compared to the 1981-2010 normal



Source: Mbaye, 2020

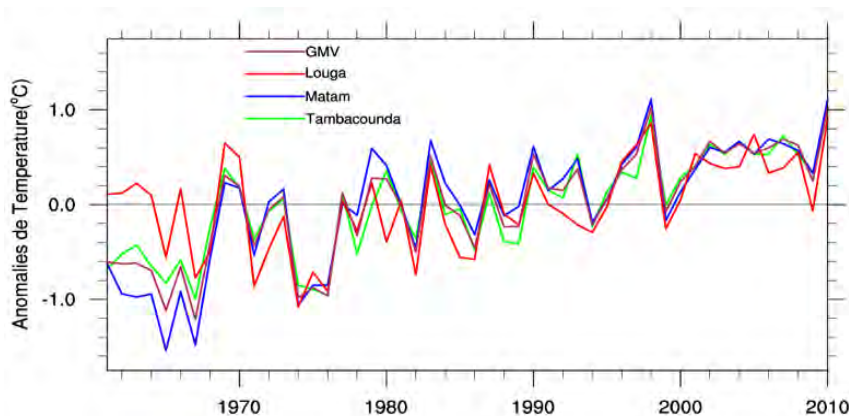
88. **Current rainfall and temperature situation in the SURAGGWA target area.** As can be seen from the rainfall records in the areas selected for the SURAGGWA (i.e. Linguère, Louga, Matam and Tambacounda), there are significant changes in annual precipitation and some extreme precipitation indices during the period 2010-2019 compared to the normal period of 1981-2010 (see Figure 6).

89. Analysis of annual rainfall anomalies in the five regions shows an increase in rainfall in Louga, and Tambacounda regions between 2010 and 2018. A decrease in rainfall was observed in Linguère in 2013, 2014, 2017 and 2019, while an increase was observed in the other years. Matam experienced five deficit years and five surplus years in the period 2010-2018. Reduced rainfall has had negative consequences for agriculture, livestock and natural resources in the affected areas. A recent study also shows high inter-annual variability in rainfall intensity, very heavy rainfall and extremely heavy rainfall in Linguere and Matam from 2010 to 2019. The period was characterised by

an abrupt alternation between wet and dry years in Linguere and Matam. The cumulative annual rainfall in the five cities was higher during the study period compared to the normal period 1981-2010. Louga had the highest rate of variation in rainfall events above 50mm, followed by Matam, Tambacounda and Linguere, respectively, for rainfall intensity and extremely heavy rainfall events (99th percentile).

90. All three SURAGGWA zones experienced cooling from 1961 to 1969, followed by a mixture of warm and cold years from 1970 to 1999, and an increase in surface temperature from 2000 to 2010 (see Figure 7). These changes have had varying impacts on local populations in terms of heat waves. The regions showed similar inter-annual temperature variations, with Tambacounda having lower temperature amplitudes due to higher humidity and its latitudinal position. Matam had larger amplitudes due to its continental climate and dryness, while Louga had an intermediate position due to its mix of continental and coastal characteristics. The large temperature differences were beneficial for photosynthesis in areas with high daytime temperatures and low night-time temperatures.

Figure 7 Temperature anomalies in the last decades (2010-2019) compared to the 1981-2010 normal

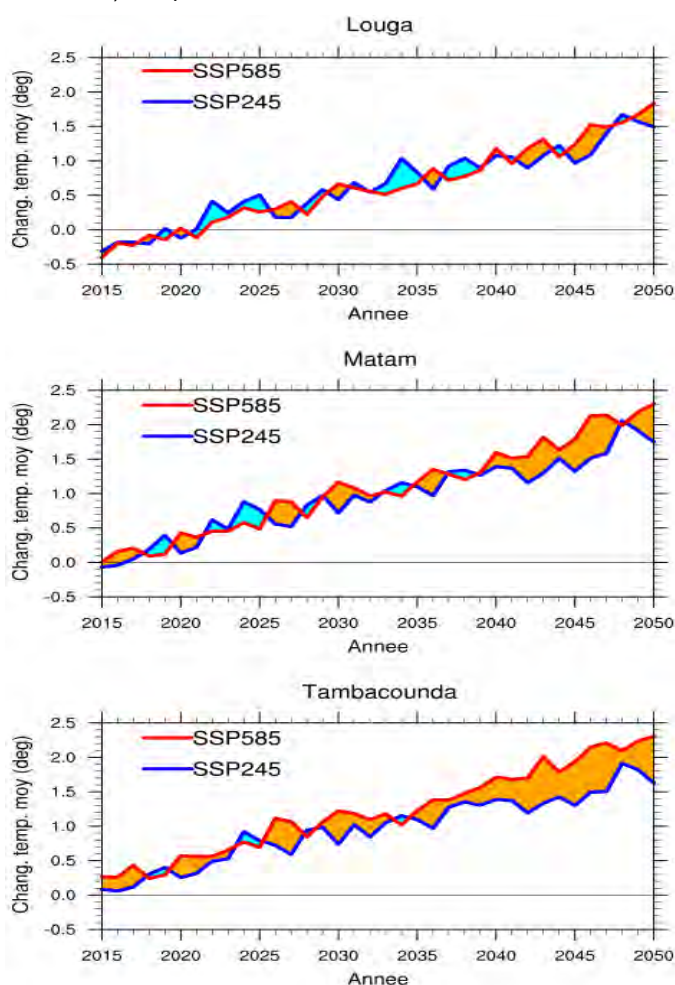


Source: Mbaye 2020

91. **Future trend in the SURAGGWA target area.** Trends in rainfall patterns in Louga, Matam, and Tambacounda from 2015 to 2050 under two different climate scenarios (SSP2-4.5 and SSP5-8.5) suggest that there is a downward trend in mean annual rainfall in these regions, with a sharp decrease between 2015 and 2025 (see Figures 8, 9). This downward trend is likely to be linked to an increase in the advection of warm, dry air from the Sahara, which may lead to a reduction in moisture and rainfall over the region.

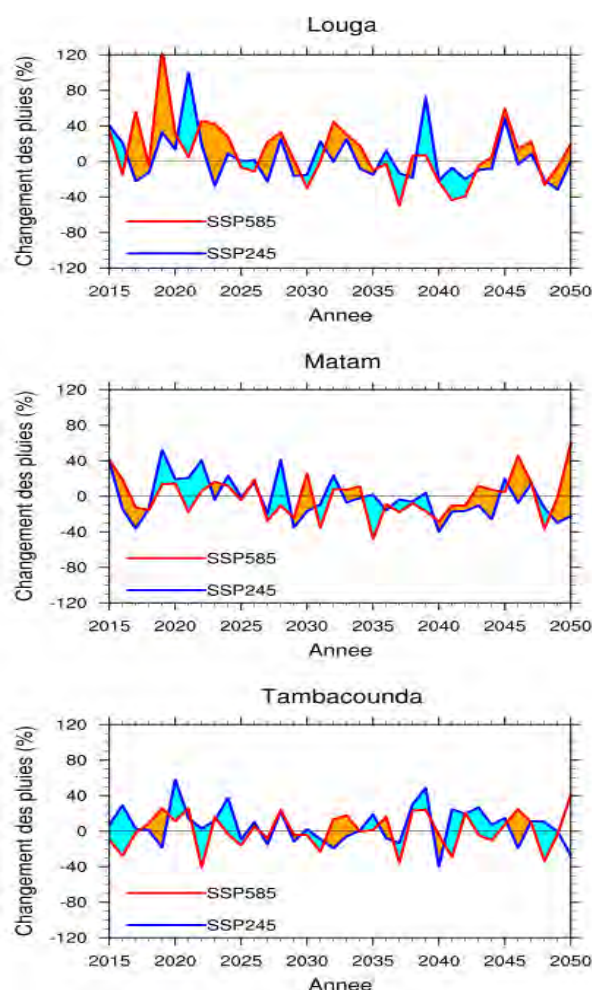
92. While the general trend is towards decreasing rainfall, it is important to note that there are also years with positive rainfall anomalies, indicating above average rainfall, and years with negative anomalies, indicating below average rainfall. This suggests that, although overall precipitation levels may be declining, there is still variability from year to year.

Figure 9 Temperature anomalies in the last decad (2019) compared to the 1981-2010 normal



Source: CSE, 2021

Figure 8 5-day interannual precipitation changes in relation to the 1981-2010 normal



Source: CSE, 2021

The peak of the rainy season shifts from August to September, and there is a maximum of rainfall around 13°N latitude. This indicates a latitudinal gradient in rainfall, with greater amounts of rainfall at lower latitudes. Finally, it should be noted that the changes in observed rainfall patterns are based on model simulations, and that the observed trends are consistent with previous research on rainfall patterns in the Sahel region and highlight the potential impacts of climate change on water resources and livelihoods in the region.

- **Senegal greenhouse gas (ghg) emission sources and carbon storage**

93. In Senegal, the energy sector is responsible for 95% of the country's CO₂ emissions. In 2010, the main sources were oil products, with 1,641 GgECO₂ emitted, and biomass, with 6,556 GgECO₂

emitted. However, the introduction of coal in electricity production is expected to cause emissions to rise to 9,498 GgECO₂ in 2030 for electricity production, while emissions from biomass will increase to 8,684 GgECO₂ in the same year (CSE, 2020). From 2015 to 2030, electricity generation capacity in Senegal is projected to increase by 355.3%, resulting in a 366.4% increase in CO₂ emissions. This significant rise in emissions is due to the increased demand for energy. Most of the new electricity production capacity will be based on fossil fuel combustion, with the share of oil, gas, and coal rising from 89% to 96% between 2015 and 2030. Coal, which was not used for electricity generation in 2015, will represent 51% of total capacity in 2030 (DEEC, 2019).

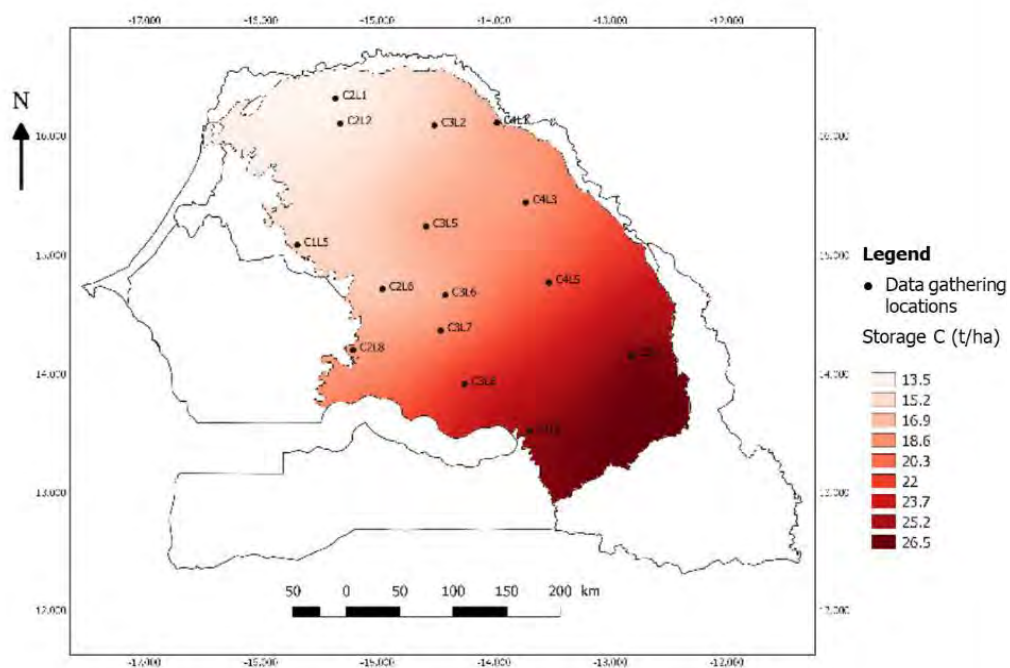
94. The agriculture sector is a significant contributor to greenhouse gas emissions, but it also offers opportunities for mitigation and can help improve the adaptive capacity of vulnerable populations to the impacts of climate change. According to the DEEC, the estimation of GHG emissions for the livestock sub-sector is based on the national livestock population (including cattle, sheep, goats, pigs, camels, horses, and poultry) and the growth rates specified in the Plan *Sénégal* Émergent - PSE/PRACAS. In 2010, GHG emissions from this sub-sector were estimated at 87.35 Gg CO₂eq, rising to 118.96 Gg CO₂eq in 2030, representing an increase of 36.2% over the period.

95. The estimation of GHG emissions covers rainfed crops, irrigated rice cultivation, fertilizer use, and burning of plant waste, but not emissions from savannah fires or agricultural land use. Emissions are expected to rise from 2.8 Gg CO₂eq in 2010 to 8 Gg CO₂eq in 2035 due to intensified rice cultivation. To support increased agricultural production, the use of chemical fertilizers and the burning of agricultural waste are expected to increase. The overall emissions from these two components are projected to increase from 12 Gg CO₂eq in 2010 to 18 Gg CO₂eq in 2035.

96. The forestry sector in Senegal comprises of 13 million hectares of forest, of which 5 million are managed by local authorities, 1.3 million are classified forests, and the remainder are parks, reserves, and others. The primary activities that contribute to emissions are fires, household consumption of firewood, and charcoal production, which impact roughly 16% of the forested area (forests under and out of control). Despite the State's efforts to improve forest resource management through measures such as the use of the Casamance millstone, promoting butane gas, and disseminating improved stoves, vegetation cover is disappearing at a rate of approximately 40,000 hectares per year (FAO, 2020).

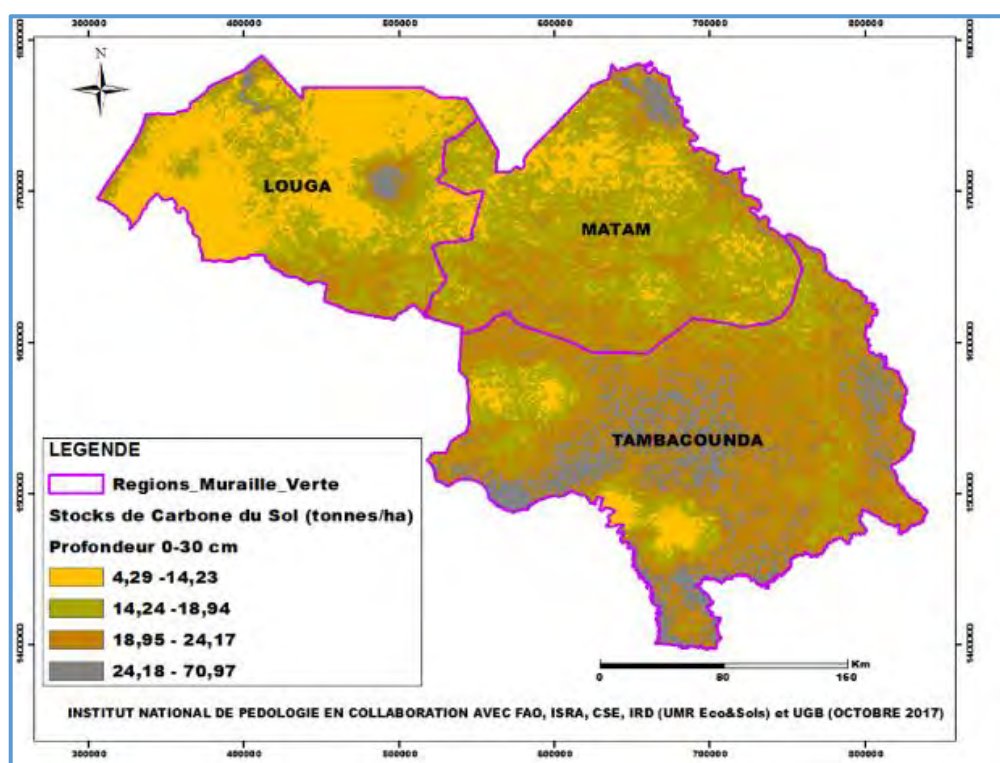
97. ***Carbon stock and sequestration in the SURAGGWA area.*** Carbon sequestration in northern Senegal is of paramount importance in the fight against climate change and the preservation of natural ecosystems. It reduces greenhouse gas emissions, maintains an ecological balance essential for biodiversity, regulates local and regional climate, and creates economic and social opportunities for local communities. Recent data indicate that sandy soils in the Ferlo region of Senegal contain varying amounts of organic carbon in the 0-30 cm surface layer (see Figure 10). The range of carbon stocks observed in the region is between 9.29 to 29.72 / 18.51 t.ha⁻¹, with a north-to-south axis trend. This trend was also observed in the 2017 INP study, which reported organic carbon stocks ranging from 4.3 t C ha⁻¹ to 24.1 t C ha⁻¹. The highest stocks are mainly found in the Tambacounda region, where the storage potential can be as high as 71 t C ha⁻¹ in some places (see Figure 11).

Figure 10 Soil C stock in the sylvopastoral zone of Senegal under the influence of trees



Source: Blanfort et al, 2019

Figure 11 Variability of soil carbon stocks in the SURAGGWA regions



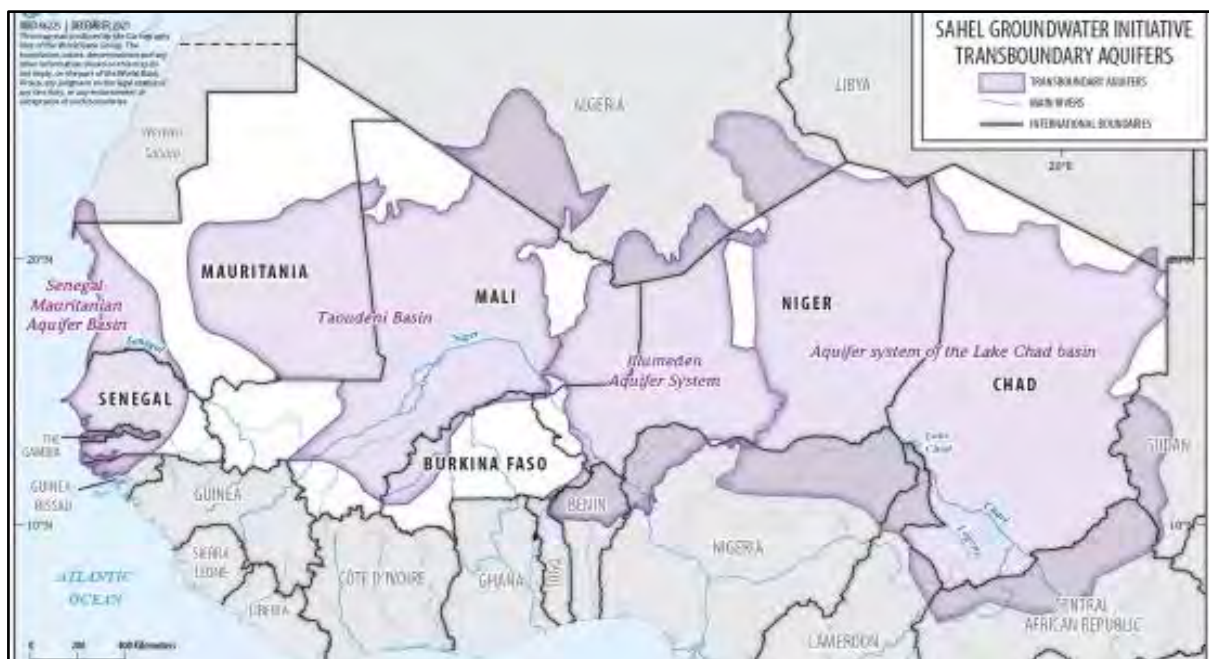
Source: National Institute of Soil Science, 2017

Water Resources & Groundwater

- **Regional overview**

98. According to the IPCC, the Sahel is one of the most vulnerable countries to the impacts of climate change in terms of surface and groundwater. The challenges of addressing climate change impacts in this region are not only due to the cumulative pressures of development on limited water resources, but also because climate change pressures are intensified by growing populations and economies, both of which place even greater pressures on existing water resources. Thus, the demands of water resource management in the Sahel over the coming decades are both a climate change and a development challenge (UNEP, 2009). Recent studies show that a long-term increase in temperature will significantly affect the hydrological cycle, changing the rainfall regime and the magnitude and timing of runoff. The large rural and semi-arid regions of the Sahel are particularly at risk as they are largely dependent on rain-fed agriculture. Increased climate variability, including increased droughts and floods, rising temperatures and decreasing rainfall in these regions therefore pose a significant risk to these agro-pastoral communities. In particular, there is a need to protect critical catchment areas, as deforestation and poor land-use management in these areas have significantly reduced their effectiveness as critical catchment areas. Their protection and restoration is therefore of importance to ensure the continuity of supply functions.

Figure 12 Map of Sahel transboundary aquifers



Source: World Bank, 2021

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

99. The Lake Chad Basin aquifer system, the Illumedden aquifer system, the Taoudeni Basin aquifer, and the Senegal-Mauritania Basin aquifer are all important sources of groundwater for West Africa (see Map 2.). Together, they are estimated to contain over 150,000 cubic kilometers of water. All four aquifer systems are under significant stress due to increasing demand, population growth, and climate change. The IPCC's Fifth Assessment Report projects that these aquifer systems are all expected to experience significant climate-related changes in the coming decades, including decreases in precipitation and changes in recharge rates. By the end of the century, the Lake Chad

Basin is projected to experience a decrease in annual precipitation of between 10% and 20%, while the Taoudeni Basin may experience a reduction of up to 60%^{[17][18][19][20]}.

100. Meanwhile, the Senegal-Mauritania Basin and the Illumedden aquifer system are expected to experience more moderate reductions of up to 20%. The impacts of these changes could be significant, given the high demand for water in the region. Areas such as Burkina Faso, Mauritania and Niger, which have low but sufficient per capita water resources, are expected to experience physical water scarcity by 2025. Increasing demand from a growing population and planned irrigation projects along the Niger and Senegal rivers have led to reductions in flows of 25-60% over the past 30 years, causing increasingly severe low flows with frequent breaks in water flow, depletion of reservoirs and reduced water supply to cities.

101. By the end of the 21st century under RCP4.5 and 8.5, river discharge, runoff, actual evapotranspiration, and soil moisture are projected to decrease, mainly related to a decline in precipitation. The most extreme changes in soil moisture and runoff are likely to occur in the driest and hottest part of the northern basins. Sustainable management and conservation of these aquifer systems will be crucial. The countries in the region will need to work together to ensure that the aquifers are managed in a sustainable and equitable manner. This may include efforts to improve water use efficiency and explore alternative water sources, as well as the development of rainwater harvesting techniques, the use of treated wastewater, and the use of alternative sources such as desalination. It is important to note that there is a high level of uncertainty associated with the programmeions for these aquifer systems, due in part to the limited data available on their hydrogeology and recharge rates. Therefore, continued monitoring and research will be important to better understand and address the challenges facing these critical groundwater resources.

- **Senegal water resources**

102. The Senegal-Mauritania Basin is a transboundary aquifer system and stretches across Senegal, Mauritania, Mali, and Guinea, with an estimated to contain around 2,500 cubic kilometers of water. The aquifer is primarily composed of sandstone, and is recharged by rainfall, as well as by inflow from adjacent aquifers. It is divided into three main sub-basins: the Upper, Middle, and Lower Senegal-Mauritania basins (see map 1). According to IPCC last study, the basin is expected to experience a number of climate-related changes in the coming decades such as : (i) decrease in annual precipitation of between 10% and 20% by the end of the century, compared to the period from 1961 to 1990; (ii) changes in evapotranspiration rates, related to increase in annual mean temperatures of between 1.5°C and 3.5°C by the end of the century; and (iii) decrease of the recharge rates for the aquifer by between 5% and 20% by the end of the century, depending on the scenario RCP 4.5 and RCP 8.5.

103. **Surface water resources.** Senegal has significant quantities of surface water resources, estimated at between 20.9 and 23.5 billion m³/year (World Bank, 2020). However, these water resources are unevenly distributed and poorly managed. In the various river basins, the watercourses have tropical regimes that depend heavily on rainfall. There are two hydrological seasons: a period of high water between August and November and a period of low water between December and July; observations show an increase in flows in recent years, linked to a slight recovery in rainfall.

¹⁷ IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects.

¹⁸ Gharbi, A.F., and Sid'Ahmed, M.M.O., 2017. Water Resources in Mauritania: Current State and Future Challenges. Water, 9(9), p.711.

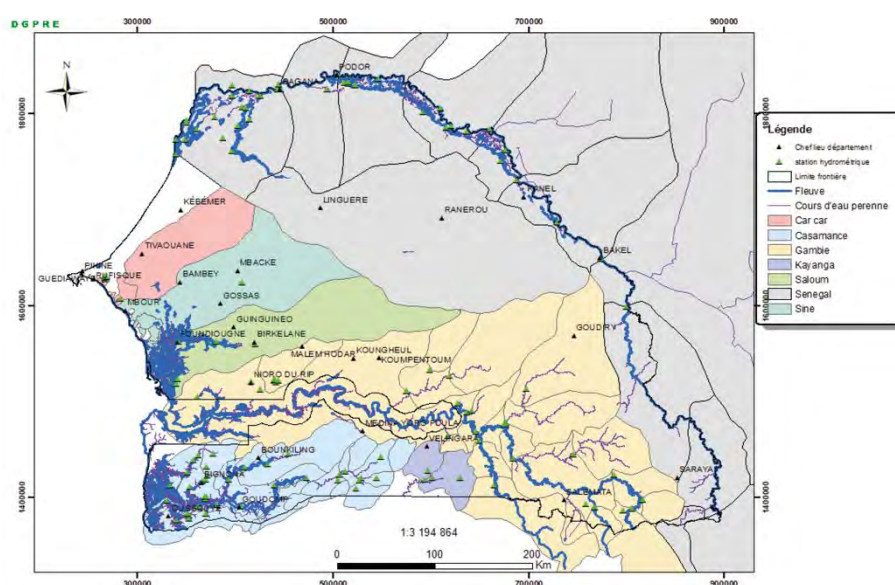
¹⁹ Issa, O.M., Xu, W., Gaye, C.A.T., and Dembélé, A., 2018. Hydrogeological setting and conceptual hydrogeological model of the Taoudeni Basin aquifer system (Mali, West Africa). Environmental Earth Sciences, 77(4), p.142.

²⁰ Razack, M., and Margat, J., 2012. Groundwater in the Lake Chad Basin. Paris, France: UNESCO-IHP, 82 p.

Several lakes and ponds complete the hydrographic network, the most important being the Lac de Guiers, the ponds in the Ferlo area, the bolongs in the estuarine zones and the small lakes in the Niayes region (CSE, 2020).

104. SURAGGWA's catchment areas are concentrated solely in the Senegal River basin (see Map 3). The Senegal River drains a large transboundary catchment area of 300,000 km² that extends over four states: Senegal, Mauritania, Mali and Guinea. With a length of 1790 km, the river has its source in the Fouta Djallon Massif (Republic of Guinea). Its two main tributaries are the Bafing, 760 km long, which rises in the Fouta-Djallon and the Bakoye, which rises on the Mandingo plateau and joins the Bafing after 560 km at Bafoulabé (in Mali). It is the most important river in the national hydrographic network. Its inflows are of the order of 20 billion m³ in an average year at the Bakel station. The hydrographic network of the Senegal River is made up of a network of defluents which are perennial hydraulic axes: the Doué, the Diamel, the Gayo, the Ngalenka, the Taouey-Lac de Guiers-bas Ferlo complex and the system of defluents of the delta: Gorom-Lampsar, Djeuss, Kassak, Diovol, Ngalam, the three Marigots and the Lac de Guiers, which is an important freshwater reserve of nearly 500 million m³ and which contributes nearly 120,000 m³ to the water supply of Dakar

Figure 13 Map of the main watersheds and the national river system



Source: DGPPE, 2020.

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

105. The Lac de Guiers belongs to the Senegal River basin system and is located on the left bank of the Senegal River Delta. It is a narrow, flat lake depression with a surface area of 240 km² and an average water volume of 600 million m³ at the 1.5 m IGN elevation (CSE, 2020). It is connected to the Senegal River by the Taoué canal to the north; to the south, the lake is extended by the downstream part of the Ferlo fossil network, while to the north-west, the Nieti-Yone marigot links it to the Ndiel basin. A freshwater reserve of major importance for Senegal, Lac de Guiers provides more than 50% of the drinking water needs of the city of Dakar and the secondary towns around the drinking water supply line. The development of the lake reserve has undergone several successive phases until its current situation, which marks the crowning of more than a century of achievements, notably by the increase in its annual inflow which has risen from 1.2 to 2.3 billion m³ since 2015 with the

implementation by the Office des Lacs et Cours d'eau (OLAC) of major rehabilitation works on the protection and regulation works, among others, within the framework of the programme for the Restoration of the Ecological and Economic Functions of the Lac de Guiers (PREFELAG).

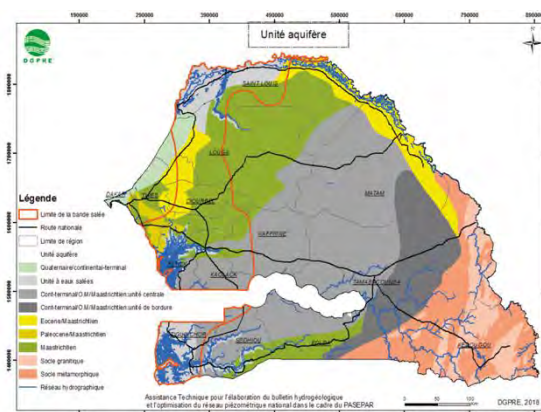
106. **Groundwater resources.** In Senegal, there are four (4) major aquifer systems, corresponding to the main geological formations: the (i) superficial, (ii) intermediate, (iii) deep and (iv) basement aquifer systems. Also, the SURAGGWA programme will intervene in the superficial, intermediate, and deep aquifers with water reserves ranging from 50 billion to 400 billion m³ of water (see Map 4).

Table 7 Senegal's aquifer systems

Aquifer systems	Reserves (in billion cubic meters BCM)
Superficial aquifer system (QT, CT, OM)	Between 50-75 BCM
Intermediate aquifer system (EO, PA)	Between 60-110 BCM
Deep aquifer system (Maastrichian)	Between 300-400 BCM
Basement aquifer system	Low volume around 3,6 BCM

Source: Author's own elaboration.

Figure 14 Map of Senegal's aquifers



Source: DGPPE, 2018

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

107. **Surface water quality.** Studies compiled by the CSE focus on the quality of Lac des Guiers as a good measure of water quality vis-à-vis its socio-economic role in Senegal and highlight its hydrological system and the presence of pesticides, heavy metals, bacteria and nutrients. The results show that between 2013 and 2019, the lake maintained a good ecological and chemical status. Cyanobacteria concentrations remained well below the maximum allowable concentration (the concentration remained well below 800 cells/ml with an alert threshold at 100,000 cells/ml), and pesticide residues were all below threshold concentrations for aquatic life protection. Comparison of water quality assessment studies between 2013 and 2015 showed a decrease in the frequency and spatial occupancy of pesticide contamination, as well as changes in the types of pesticides detected. Indeed, the maximum contamination level (MCL) per pesticide, which expresses the degree of water pollution, was higher in the 2013 campaign than in the 2015 one. The average MCL was 50 times the tolerance in the 2013 study, whereas it was 8 times in the 2015 study.

108. However, there was an increase in phosphorus input concentrations from 1.6 mg/l in 2017 to 5.3 mg/l in 2018, and the nitrate concentration increased from 5.57 mg/l in 2017 to 5.81 mg/l in 2018. There was also a persistent issue with faecal germ contamination leading to periodic algal bloom dominated by cyanobacteria, particularly in Lake Guiers. The Bango reserve also presented a worrying trophic state, with a high concentration of chlorophyll and periodic eutrophication due to agricultural intensification. There were also negative impacts on the storage capacity of both water bodies due to the strong proliferation of *Typha domingensis* and sedimentation of the depressions.

Overall, the findings suggest the need for continued monitoring and mitigation efforts to ensure the continued health and sustainability of Lake Guiers and the Bango reserve.

109. **Groundwater water quality.** Groundwater quality is a significant concern in Senegal, with variations in water quality depending on the location and depth of the catchment. High levels of certain hydro-chemical parameters can make water unsafe for drinking and limit its use for agricultural and industrial purposes. According to the World Health Organization (WHO), the maximum allowable limit for chlorides in drinking water is 600 mg/l, and the limit for fluorides is 1.5 mg/l.

110. In a north-south strip joining the deltaic zones of the Senegal River, the Casamance River, and the Saloum branch, high levels of chlorides and fluorides are found in the water tables. In the central strip of the Maastrichtian aquifer, significant amounts of salty and/or fluoridated water are present. Chloride levels in this region can range from 750 to 3500 mg/l, while fluoride levels can be between 1.5 and 7.5 mg/l, far exceeding WHO standards.

111. In addition to chlorides and fluorides, high levels of iron can also limit the use of groundwater in certain regions such as Matam. The iron content in these areas can reach as high as 3.5 mg/l, making water unsuitable for certain uses. The Niayes area is also affected by high iron content, leading to reddish discoloration of water extraction systems and clogging of drip irrigation pipes. These hydro-chemical parameters are a significant obstacle to ensuring reliable access to safe water for populations in Senegal. They also limit the potential for agricultural production, industry, and tourism in affected regions. Addressing the issue of groundwater quality in Senegal will require a multi-faceted approach, including improved monitoring, increased investment in water treatment infrastructure, and public education on the importance of safe water practices.

112. **Water uses.** According to the CSE, almost 98% of the total water withdrawal from the Senegal River between 2018 and 2019 was for agricultural use, amounting to 1.98 billion cubic meters of water. This highlights the significant demand for water in the agricultural sector in Senegal. In 2019, the total groundwater abstraction in Senegal was estimated at over 417 million cubic meters per year, which supports a variety of activities including urban and rural water supply, industry, and tourism. Withdrawals from surface waters to meet the demand for agriculture and urban water supply were estimated at 2.6 billion cubic meters per year in the same year. The combined withdrawal from both surface and groundwater resources in Senegal was just under 3 billion cubic meters per year, representing almost 12% of all renewable resources annually. This indicates that the availability of water resources in Senegal is not a major issue, but rather the challenge lies in mobilizing these resources.

113. **Agropastoralism and water.** Agriculture in Senegal relies heavily on rainfed farming, flood recession farming, and irrigated farming, with the latter being widely practiced in the floodplains of the Senegal River and developments in the Senegal River valley. The Senegal River valley is the main production area, providing 60% to 70% of local rice production in the country (JICA, 2014). The OMVS has re-evaluated the potential of irrigable land in the valley to just over 170,000 hectares, of which only half is currently cultivated. The goal is to increase this potential to 255,000 hectares by the time of the SDAGE (OMVS, 2012).

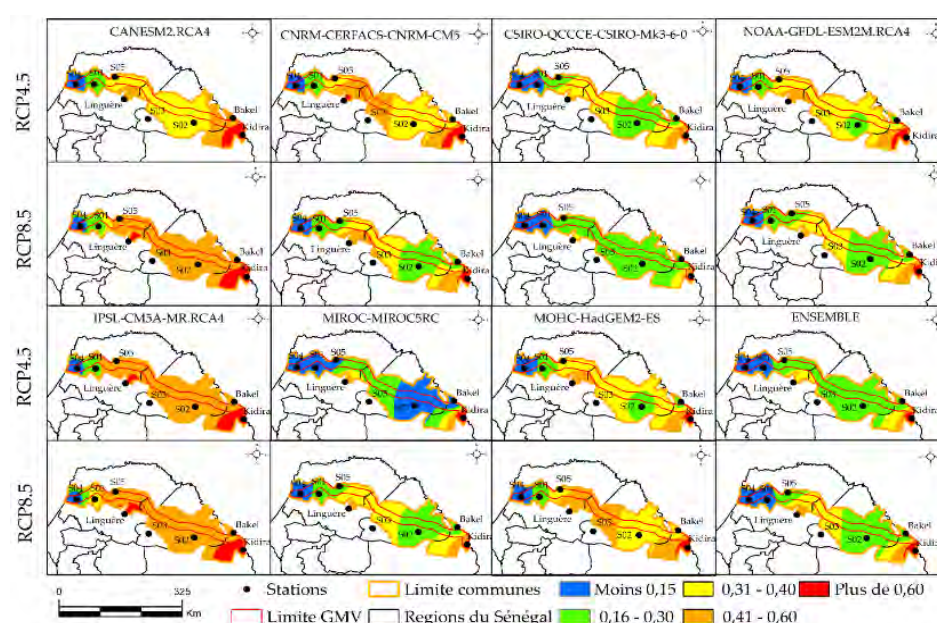
114. Despite the construction of dams, including Diama and Manantali, the damming of the banks of the Senegal River, and the creation of reservoirs and artificial lakes, agriculture remains highly dependent on uncontrolled hydro-climatic variability. Livestock farming is also an important sector in Senegal, with an estimated 5,198,798 livestock units in 2019, according to the Ministry of Livestock

and Animal Production. During the dry season from October to June, which lasts for nine months, the livestock consume around 181,957 m³ of water, assuming an average consumption of 35l/day. Artificial hydraulic structures, especially boreholes, are the main sources of water for livestock during this period. As a result, the number of boreholes has increased, and improvements in surface facilities have allowed for better watering of livestock. In the administrative regions of Saint-Louis, Louga, Matam, Kaffrine, and Tambacounda, 628 boreholes have been counted, with a density of 0.9 boreholes/km² and an average distance of 8 km between functional boreholes

115. An analysis of the climate projections in the SURAGGWA area to 2050 based on the rates of change in reference evapotranspiration (Figure 12) and the precipitation projections of the RCP 4.5 and 8.5 scenarios gives the results presented in the table below on future agricultural water requirements²¹ per year (m³/ha). The results show an increase in water requirements by 2050 for both projection scenarios. This increase is more pronounced for the RCP8.5 scenario.

116. Simulations of water requirements for livestock show that the entire SURAGGWA area has an estimated pastoral water requirement of 10,023,894 m³. A simulation of a 10-50% increase in water requirements was carried out. The results show a variation from 11 026 282 m³ (10% increase) to 15 035 840 m³ (50% increase).

Figure 15 Map of Senegal's aquifers



Source: CSE, 2021.

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

²¹ Average water requirements of onions, tomatoes, peppers, and potatoes.

Table 8 Water requirements in m3/ha

Areas	Water requirements in m3/ha		
	Current situation	Horizon 2050/RCP4.5	Horizon 2050/RCP8.5
Dahara	31,050	36,100	36,900
Ranérrou	23,840	26,400	27,300
Oourossogui	23,840	25,950	27,000
Louga	28,700	35,840	36,910

Source: Author's own elaboration.

Table 9 Livestock simulation of water demand increase in %

Areas	Livestock simulation of water demand increase in %			
	Current situation (needs In m ³)	10%	30%	50%
Bakel	2,053,421	2,258,763	2,669,447	3,080,131
Kanel	1,111,994	1,223,194	1,445,593	1,667,992
Linguère	3,715,193	4,086,712	4,829,750	5,572,789
Louga	2,344,067	2,578,473	3,047,286	3,516,100
Ranerou	799,219	879,140	1,038,984	1,198,828

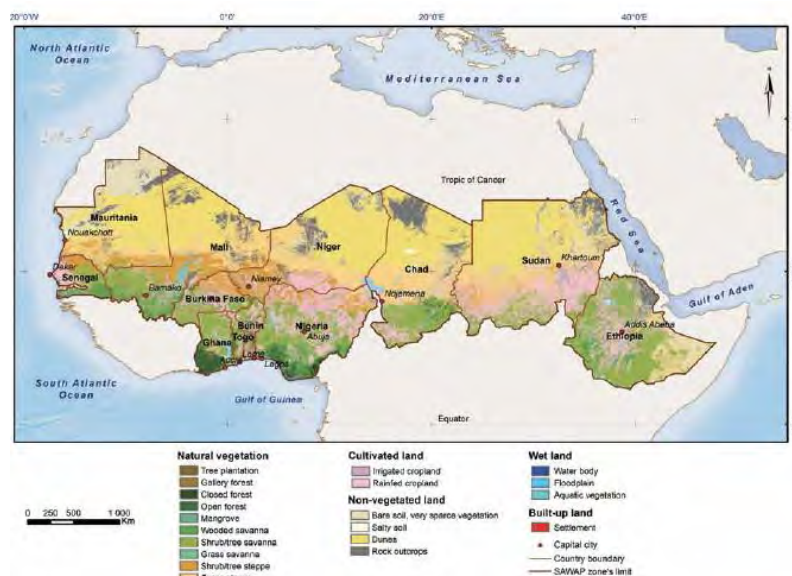
Source: Author's own elaboration.

Terrestrial Flora and Fauna

- **Regional overview**

117. The Sahelian zone is home to a considerably rich ecosystem due to its geographical extent and bio-climatological diversity. Forests, savannahs, tiger bush, steppes, deserts, wetlands and marine ecosystems coexist in this region (see Map 5). These different ecosystems, ranging from dry savannah to tropical forest, provide habitats for over 2,000 species of amphibians, birds and mammals (IUCN, 2015). The region's forests, particularly those in the Upper Guinea countries, are home to remarkable biodiversity. The lowland forests of West Africa, which account for more than a quarter of Africa's mammals, are home to around 320 species of mammals, 9,000 species of vascular plants and 785 species of birds (Conservation International, 2008). The Upper Guinea Forest is renowned for its primate diversity, with nearly 30 distinct species, and is considered one of the most critical primate conservation areas in Africa (CILSS, 2016).

Figure 16 Land use map



Source: OSS, 2015

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations

118. The Sahel's ecosystems are already degraded due to prolonged drought, agricultural expansion, deforestation, erosion, proliferation of invasive species and biodiversity loss due to poaching (Climate Change Profile West African Sahel, 2018). Between 1975 and 2013, forest cover was reduced by 37% in West Africa. Endangered mammals such as cheetah, giraffe and lion, once common in the region, are now largely absent outside of protected areas (e.g. the Aïr and Ténéré National Nature Reserve in Niger and the Sahel Partial Wildlife Reserve in Burkina Faso) due to excessive hunting for food and sport (FAO, 2020).

119. Climate change threatens to further degrade land, vegetation and water resources through increased incidence of drought, desertification and flooding and the programmed shortening of the rainy season (IPCC, 2014). About 50% of Chad, 65% of Mauritania and Mali, 80% of Niger and the northernmost point of Burkina Faso are within the limits of the Sahara Desert, which is expanding southwards into the Sahel at a rate of 1-10 km per year (FAO, 2020). Due to the long-term decrease in rainfall between the 1970s and 1990s, the ecological zone of the Sahel has shifted 25-35 km southwards. This has led to a loss of biodiversity and the conversion of arable land to sand dunes (FAO, 2016). This migration of sand dunes has buried a large area of viable agricultural land, causing people to migrate southwards and the consequent intensification of resource needs as more people settle on the remaining arable land. Increased drought episodes threaten to dry up land and water resources that are vital for the region's flora and fauna, including migratory bird species that use the southern Sahel as a stopover point before crossing the Sahara desert (Climate Change Profile West African Sahel, 2018).

120. In response to these environmental challenges, countries in the region have established protected areas to preserve the area's unique flora and fauna. This includes the Sahel Partial Wildlife Reserve in Burkina Faso, which is home to species such as the oryx algazelle, cheetah and damalisque (IUCN, 2015). Niger has also created the Aïr and Ténéré National Nature Reserve to protect

endangered species such as the West African giraffe, addax and West African lion (IUCN, 2015). However, the number of protected areas in the region is still insufficient to protect the region's biodiversity, with only 6% of the area considered protected (Climate Change Profile West African Sahel, 2018).

121. Efforts are underway to promote more sustainable land use, including the adoption of sustainable agricultural practices and community land management. These initiatives are essential to protect the region's biodiversity, maintain ecosystem services for local populations and combat the environmental changes that threaten the region (UNDP, 2021).

122. The Sahelian zone is home to remarkable biodiversity, with diverse ecosystems and thousands of unique species, but it faces many environmental challenges. Pressures from human activities and climate change have put the region's fauna and flora at risk, underlining the need for more effective conservation measures and sustainable initiatives to maintain the ecosystems and natural resources that are essential for local populations.

- **Senegal terrestrial flora and fauna**

123. Senegal has a diverse ecosystem consisting of terrestrial, fluvial, lacustrine, and coastal marine ecosystems, as well as agricultural and special ecosystems with unique characteristics. The SURAGGWA region's terrestrial ecosystems mainly comprise steppes and savannahs, each with relatively high diversity. The steppes, covering an area of 3,553,787 hectares in northern Senegal, are plant formations formed by a discontinuous herbaceous carpet composed mainly of fast-growing annual species such as *Indigofera oblongifolia*, *Chloris prieurii*, *Schoenefeldia gracilis*, *Borreria verticillata*, and other herbaceous species belonging to the genera *Aristida*, *Cenchrus*, and *Sporobolus*. Most of these species show strong adaptation to arid conditions. The shrub and tree strata are relatively weak in these steppes, and depending on their density, they are classified as grassy steppe, bushy steppe, shrub steppe, or tree steppe.

Figure 17 Senegal land use map



Source: CSE, 2015

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

124. The SURAGGWA region also has several types of savannah differentiated by the size and density of woody species. The grassy savannah, for instance, is characterized by grasses of at least 80 cm in height and a soil cover rate of 100%, mostly belonging to the Poaceae family. This savannah covers 11,313 ha. Agroforestry parks are also present in the northern and northwestern zone of SURAGGWA. These agrarian landscapes are characterized by the association of cultivated plants and woody plant species spared by farmers, with the following main species : *Faidherbia albida*, *Acacia tortilis* subsp. *Raddiana*, *Acacia senegal*, *Adansonia digitata*, *Cordyla pinnata*, *Elaeis guineensis*, *Parkia biglobosa*, *Sterculia setigera*, *Borassus akeassii*, *Detarium senegalense*, *Balanites aegyptiaca*, *Neocarya macrophylla* et *Vitellaria paradoxa*.

125. **Animal diversity.** Senegal is home to a diverse array of animal and plant species, with a total of 4330 animal species identified, including both invertebrates and vertebrates. Among the invertebrates, insects, molluscs, and crustaceans are the most extensively researched groups. Insects, with over 300 families, are the most diverse group, accounting for 46% of the total. Molluscs, with 111 families, represent 16% of the total and are particularly rich in marine species. The most commonly exploited molluscs in Senegal are cephalopods, bivalves, and gastropods. Crustaceans, with 18 families, also include several important species such as shrimps, crabs, and lobsters.

126. Senegal has a total of 1696 vertebrate species, including 779 fish species, 698 of which are marine. Amphibians are represented by two species, while reptiles include 100 species. The bird group comprises 623 species from 100 families, including eight poultry species. Mammals are represented by 192 species, divided into 65 genera and 32 families^{[22][23][24]}.

127. In terms of plant diversity, Senegal boasts numerous varieties and races, with a total of 174 cultivated plant varieties identified. These include 69 varieties of cereal crops (rice, sorghum, millet, and maize), 30 varieties of grain legumes (groundnuts and cowpeas), 73 varieties of vegetables (onions, tomatoes, chillies, aubergines, potatoes, etc.), and varieties of industrial crops (sugarcane and cotton). Wild fruit trees also contribute to the intra-specific diversification of plant species^{[25][26]}.

128. Animal diversity in Senegal also includes various domestic breeds, such as 10 breeds of cattle, eight of sheep, five of goats, eight of horses, and two of pigs. Local breeds of camels and donkeys are also represented. Poultry is also well diversified. The diversity of animal breeds enables human populations to raise livestock in different ecosystems, providing important goods and services for their livelihoods.

129. **Biodiversity dynamics.** The forest area in Senegal has experienced significant degradation over the years. According to the Ministry of Environment and Sustainable Development (MEDD) report in 2020, the forest area reduced from 9,348,000 ha in 1990 to 8,273,000 ha in 2015, and further decreased to 8,188,160 hectares in 2017. The rate of change in forest area from 2016 to 2019 was -0.49 annually. The average annual losses of 40,000 ha have remained unchanged. The Global

²² Baldé, M. D., Faye, A., & Diallo, M. A. (2015). Biodiversity in Senegal: Perspectives and challenges for conservation and sustainable development. *International Journal of Biodiversity and Conservation*, 7(4), 234-244.

²³ Diop, E. S., Diouf, M., & Dossa, L. H. (2019). Evaluation of the conservation status of biodiversity in Senegal: Implications for policy and management. *Journal of Environmental Management*, 237, 203-213.

²⁴ Dossa, L. H., & Diouf, M. (2016). Biodiversity conservation in Senegal: Legislation and institutional arrangements. In *Protected Areas in West Africa* (pp. 189-204). Springer, Cham.

²⁵ MEDD (Ministère de l'Environnement et du Développement Durable). (2014). *Inventaire et cartographie des habitats et des espèces de la biodiversité marine et côtière du Sénégal*. MEDD.

²⁶ Ousmane, B., & Aidara, O. (2018). Agricultural biodiversity in Senegal: an overview of the state of knowledge. *African Journal of Agricultural Research*, 13(47), 2642-2652.

Forest Watch also reported a reduction of about 6.9% in Senegal's forest area between 2001 and 2016. This degradation has even impacted sacred sites.

130. The degradation in forest area varies across different ecosystems. For example, in the Senegal River valley, the gonakier forests' area reduced by 43% between 1984 and 2012. In Casamance and Eastern Senegal, the gallery forests decreased by 22% and 50%, respectively, between 1972 and 2012, according to the CSE report in 2013. During the same period, the vegetation of the Niayes ecosystem experienced a decline of around 57%.

131. Aquatic ecosystems have also experienced significant degradation, such as the drying up of surface water bodies, salinization, acidification, pollution, and a sharp decline in biological potential. The fishery resources have also reduced, including pelagic resources like sardinella, which contribute 70% of the total tonnage of catches landed by the country's pirogues, as reported by Baldé in 2019.

132. The areas occupied by mangroves do not always show a regressive dynamic. From 1965 to 2017, the mangrove in the RBDS reduced from 55,831.03 ha to 53,691.69 ha, equivalent to an average loss of 41 ha per year. The abusive cutting of mangrove wood, cutting of mangrove roots during the harvesting of oysters, and significant population growth contributed to the degradation of the mangrove. The surface area of tans has increased considerably to the detriment of the mangrove. In the Saloum Delta National Park, the evolution of *Rhizophora* mangle stands is quite variable, with a regressive dynamic in the north and a progressive dynamic inside the Park. In this Park, salinization combined with anthropogenic factors has led to the mortality of many individuals of the species.

133. The degradation of terrestrial and aquatic ecosystems inevitably leads to an increase in vulnerability and a decline of some species. The latest assessments show three lists of species, namely those that have disappeared from Senegal, those that are rare, and those that are threatened with extinction (see Table 7).

Table 10 Threatened plant species reported by the Nature Conservation Monitoring Centre

Species overexploited for their wood	Species overexploited for their fruits	Species overexploited for their roots, bark or sap	Rare species with degraded habitat
<ul style="list-style-type: none"> - <i>Pterocarpus erinaceus</i> - <i>Bombax costatum</i> - <i>Borassus akeassii</i> - <i>Oxytenanthera abyssinica</i> - <i>Raphia sudanica</i> - <i>Khaya senegalensis</i> - <i>Dalbergia melanoxylon</i> - <i>Cordyla pinnata</i> 	<ul style="list-style-type: none"> - <i>Saba senegalensis</i> - <i>Landolphia heudelotii</i> - <i>Parkia biglobosa</i> - <i>Adansonia digitata</i> - <i>Faidherbia albida</i> - <i>Cordyla pinnata</i> 	<ul style="list-style-type: none"> - <i>Sterculia setigera</i> - <i>Cassia italica</i> - <i>Cassia sieberiana</i> - <i>Grewia bicolor</i> - <i>Detarium microcarpum</i> - <i>Cochlospermum tinctorium</i> - <i>Tinospora bakis</i> - <i>Cocculus pendulus</i> - <i>Sclerocarya birrea</i> - <i>Flemingia faginea</i> - <i>Securidaca longipedunculata</i> - <i>Combretum micranthum</i> - <i>Nauclea latifolia</i> - <i>Zanthoxylum zanthoxyloides</i> 	<ul style="list-style-type: none"> - <i>Cyrtosperma senegalensis</i> - <i>Linaria sagitta</i> - <i>Rocella tinctoria</i> - <i>Anthocleista djalensis</i> - <i>Mitragyna stipulosa</i> - <i>Pentaclethra macrophylla</i> - <i>Sterculia tragacantha</i> - <i>Cola laurifolia</i> - <i>Pandanus candelabrum</i> - <i>Calamus deerratus</i>

		- <i>Ximenia americana</i> - <i>Ficus thonningii</i>	
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Source: IUCN, 2020

134. The primary drivers of biodiversity loss in the SURAGGWA intervention zone are linked to anthropogenic activities, including fraudulent and abusive exploitation of natural resources, agro-sylvopastoral practices, bush fires, and demographic pressure. In addition to these human causes, there are natural factors such as climate change and its associated impacts, as well as other socio-economic, legal, and institutional constraints.

135. In particular, unregulated and unsustainable exploitation of plant resources is a significant factor contributing to the decline and disappearance of plant species in the region. The increasing domestic demand for charcoal production, driven by population growth, has led to the rise in the value of this commodity, which increased by 7.7% from 25.7 billion CFA francs in 2014 to 28.8 billion CFA francs in 2017 (MEDD, 2019). This mounting pressure on natural resources has caused habitat degradation and the depletion of animal populations, resulting in the loss of biodiversity.

136. Bushfires are among the primary drivers of forest ecosystem degradation, resulting in significant biodiversity loss. These fires destroy large areas of forest each year, leading to the death of numerous animal species and compromising the survival of plant species, especially those less adapted to fire. The natural regeneration of many plant species is hampered by these fires. According to the *Centre de Suivi Écologique's* report on bushfire monitoring in Senegal for the 2018-2019 season, a total of 448,561 ha of forested areas were burned compared to 535,546 ha for the 2017-2018 season, representing a relative decrease of 16 %^[27].

137. The destruction and fragmentation of habitats is mainly due to a combination of factors such as agriculture, urbanisation, artisanal and industrial mining, the construction of dams and heavily trafficked asphalt roads. The effects of climate change are important indirect causes that are partly responsible for the degradation of habitats. The construction of motorways (toll roads) and railways and the installation of high-voltage power lines cause the fragmentation of ecosystems. Barriers now reduce the exchange between animal populations, the colonization of suitable environments and the possibility for animals to move freely in their habitat. This situation can lead to a breakdown in the trophic chain and the disappearance of species ^{[28][29]}. The conquest of new land has also been to the detriment of forest ecosystems and has greatly contributed to the destruction of habitats, particularly in the agro-sylvopastoral area of the Ferlo.

138. As with the hydro-agricultural development of the Lac de Guiers, the construction of dams, embankments and hydro-agricultural developments have led to the proliferation of plants such as *Salvinia molesta*, *Pistia stratiotes* and *Typha domingensis*. These invasive aquatic plants have caused negative consequences in Senegal, especially in the Senegal River. Overall, in the Senegal River basin, figures on the affected areas vary widely and are estimated to be between 60,000 and 80,000 ha (OMVS, 2013). Assessments also indicate an increase of around 15% per year. Typha is a threat to biodiversity, particularly to fish and bird species in the Senegal River delta (DEEC, 2014).

²⁷ MEDD. (2020). Évaluation environnementale initiale du Sénégal : rapport final. Ministère de l'Environnement et du Développement Durable.

²⁸ Baldé, A. (2019). Analyse de l'état des ressources halieutiques au Sénégal. Comité Scientifique et Technique des Pêches Maritimes et des Élevages Marins.

²⁹ Ndour, I. (2005). Étude de la dynamique des peuplements de *Rhizophora mangle* dans le Parc National du Delta du Saloum (Sénégal). Université Cheikh Anta Diop de Dakar.

139. Some natural ponds in the Linguère area, which are a source of water (in the dry season) for fish, are invaded by *Diodia scandens*. This situation, which persists, is a constraint to the survival of wild animals for whom the ponds are the only sources of watering during the dry season.

Land Tenure

- **Regional overview**

140. Security of tenure is a significant challenge in the Sahel region. Most of the land owned or used by individuals, families, or communities in rural areas does not have any formal or customary right of occupancy. This situation poses a serious problem for people living in these areas, as they are often vulnerable to losing their land or being displaced by powerful actors. Moreover, access to land is often limited for certain groups, such as women and youth. In many rural communities across the Sahel, women are unable to own or access land independently of their male partners. Additionally, in societies with patrilineal inheritance systems, many young people and women do not have access to family lands.

141. These land tenure arrangements can have a highly negative impact on development efforts aimed at promoting sustainable and climate-resilient value chains in the region. Without secure ownership or at least guaranteed access to land for women and youth, it is challenging, if not impossible, to develop such value chains. It is critical to address these challenges and promote secure land tenure to facilitate sustainable development in the Sahel region. One approach to improving land tenure security is to recognize and document group rights to rangelands, grazing lands, forests, and artisanal fishing waters. Additionally, smallholder farmers' land and water rights in irrigation schemes should also be recognized and documented. Strengthening women's secure access to land is also crucial. Geographic information systems can be used to map land and natural resource rights, use, and management. Identifying best practices in securing these rights through business partnerships between smallholder farmers and investors is another potential approach.

142. One of the key challenges to securing land tenure in the Sahel region is the lack of formal land registration systems. This situation leaves rural communities vulnerable to land grabbing and other forms of exploitation by powerful actors. For instance, a study of land tenure insecurity in Senegal found that land grabbing by large-scale agribusiness projects and urban expansion was a significant problem, with rural communities often unable to defend their land rights due to a lack of legal recognition (Diagne et al., 2016). In Burkina Faso, the government has attempted to address land tenure insecurity by implementing a land tenure regularization program. This program aims to provide formal land titles to rural communities, including those that have traditionally used customary land tenure systems. However, challenges remain in implementing the program effectively, such as a lack of resources for the government agencies responsible for land administration (Kaboré, 2019). In Niger, traditional land tenure systems have played an important role in maintaining community ownership of land. However, the expansion of large-scale agriculture and mining projects has posed a significant threat to these systems, with rural communities often forced to accept unfair compensation for their land or to relocate altogether (Barnaud et al., 2019).

143. Overall, there is a clear need for innovative approaches to securing land tenure in the Sahel region, particularly for vulnerable groups such as women and youth. Regarding FAO experience, some potential solutions include strengthening the legal recognition of customary land tenure systems, promoting participatory land use planning, and supporting community-based land governance systems (see Table 8 below).

144. The SURRAGWA project is designed to facilitate a major paradigm shift by building ecological and climate resilience in eight Sahel countries. The programme aims at working with local communities and their organisations to build ownership and sustainability of the programme's interventions; hence, participation of local stakeholders, including women and youth, is at the core of the success of SURRAGWA.

Table 11 Existing support and possibilities for land tenure activities under SURAGGWA

Country	Main Tenure Achievements supported by the FAO	FAO supported Multi-stakeholder mechanisms on Tenure Governance	Possible Service Provider for certain land tenure activities
Chad	Support to revision of the draft land code and the formation of a national land policy (Ongoing under a TCP)	No, but support could be considered to the Comités départementaux d'actions (CDA) les Comité provincial d'actions (CPA) to become more inclusive.	Plateforme Pastorale du Tchad
Niger	Support to the preparation of the Etats généraux du foncier in 2018, the preparation of the Rural Land policy Adopted in 2021 and Establishment of Transhumance Committees	Yes, FAO support local 6 transhumance committees for conflict prevention and	Réseau des organisations des pasteurs et éleveurs du Niger (ROPEN) and Rassemblement Démocratique des Femmes du Niger (RDFN)
Senegal	Support to the Establishment of the National MSP and improved local tenure governance Support provided, through the national MSP steering committee, to a pilot integrated approach on land and natural resources management at the local level (adoption of a local land charter)	Yes, FAO support to 5 local Multi-stakeholder platforms on land tenure	Le Conseil national de concertation et de coopération des ruraux du Sénégal (CNCR) Institut sénégalais de recherches agricoles (ISRA)
Burkina Faso	Support to the national MSP and local trainings on the 2009 Land Code and the VGGT	No	Confederation Paysanne (CPF)
Mauritania	Support to the inclusive tenure reform process through a national MSP and improved governance of pastoral lands	Yes, 2 local MSPs and 4 local transhumance committees	FAO worked with GNAP – new partners are currently being identified
Mali	Support to the revision of the Agricultural Land Law through support to a national MSP	Yes, 2 local MSP in Kayes and Segou ten local land commissions and 7 local transhumance committees	Centre Sahélien de Prestations, d'Études, d'Ecodéveloppement et de Démocratie Appliquée (CSPEEDA)
Djibouti	N/A		
Nigeria	N/A		

Source: Author's own elaboration.

- **Senegal land tenure**

145. Senegal faces significant challenges related to land insecurity and degradation. While the law on the national domain (LDN) serves as the primary framework for land management, farmers typically rely on customary law. This conflicting governance system creates various risks for farmers and their land, such as the inadequate recognition of fallowing and pastoralism as crucial land development practices (CSE, 2010), and the low level of sustainable investment in family farms due to the non-transferability and non-transferability of land as stipulated by the LDN (CNRF, 2016). Urban expansion and land speculation, driven by the rising demand for housing and the growth of large cities, continue to threaten the land rights of rural communities. Furthermore, the surge in large-scale land transactions fueled by agricultural entrepreneurship and agribusiness exacerbates the situation. For example, a COPAGEN study (in CNRF, 2016) recorded 40 transactions involving a total area of 844,796 ha in 2013 alone. This disparity in land governance highlights the urgent need for a more integrated approach that recognizes and respects customary practices while promoting sustainable land use and equitable land tenure.

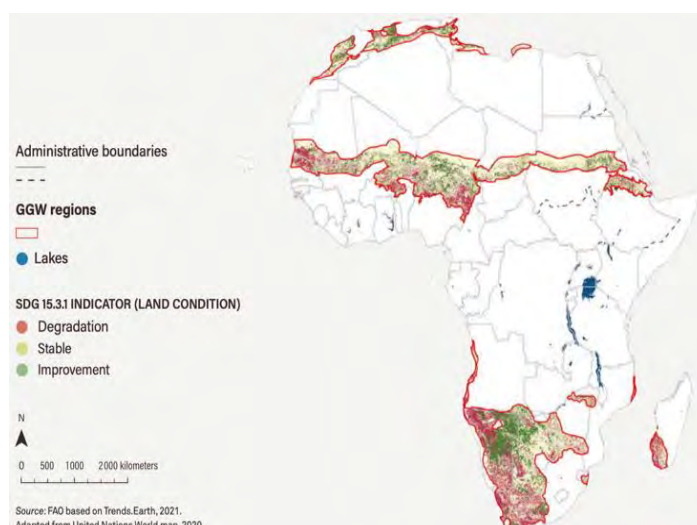
Land degradation

- **Regional overview**

146. The Sahel is one of the ecosystems that is most sensitive to climate change and variability. Severe drought periods since the 1970s have led to a degradation of natural resources and ecosystems, negatively impacting the development of affected countries. FAO defines land degradation as a *“reduction in the condition of the land, which affects its ability to provide ecosystem goods and services and to assure its functions over a period of time”*. According to the UNCCD's "Global Land Outlook, West Africa" report, about 65% of agricultural lands in the region have suffered from soil degradation. The primary causes of soil degradation are drought due to climate variability, overgrazing, unsustainable land use practices, and deforestation. The report further highlights that climate change contributes to land degradation and desertification, posing a serious threat to crops, forests, rangelands, and livestock-dependent communities³⁰.

³⁰ UNCCD, *“The Global Land Outlook, West Africa,”* Bonn, Germany, 2019.

Figure 18 Map of SDG 15.3.1 indicator (land condition) in the GGW area



Source: FAO, 2022

Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

147. In addition, climate change is expected to have a significant influence on the ecology and distribution of tropical ecosystems, though the magnitude, rate, and direction of these changes are uncertain. With rising temperatures and increased frequency and intensity of droughts, wetlands and riverine systems are increasingly at risk of being disrupted and altered, with structural changes in plant and animal populations³¹. Increased temperatures and droughts can also impact succession in forest systems while concurrently increasing the risk of invasive species, all of which affect ecosystems.

148. Land degradation in the Sahel is also impacted by population growth, which is expected to result in increased deforestation and land degradation. Among others, agriculture is the main source of livelihood for about 80% of the population in the Sahel, and the traditional agricultural practices are poorly suited to the region's fragile ecosystem, which makes it more vulnerable to land degradation. Moreover, the use of unsustainable land use practices, such as slash-and-burn, has led to the depletion of soil nutrients, leaving the soil vulnerable to erosion³².

149. In terms of the balance between countries indicating land degradation versus land improvement in the GGW Sahel (Figure 13), Senegal, Mauritania, Burkina Faso, Nigeria, and Djibouti have a negative trend ratio (see Table 9, below). Nigeria and Mauritania are the countries with highest proportion of degraded land (32 percent and 18 percent) compared to the total regional degraded area (12 and 7 million ha, respectively).

³¹ T. M. Shanahan et al., "CO₂ and Fire Influence Tropical Ecosystem Stability in Response to Climate Change," *Nat. Publ. Gr.*, no. July, pp. 1–8, 2016, doi: 10.1038/srep29587.

³² S. Doso Jnr, "Land degradation and agriculture in the Sahel of Africa: causes, impacts and recommendations," *J. Agric. Sci. Appl.*, vol. 3, pp. 67–73, 2014, doi: DOI:10.14511/jasa.2014.030303.

Table 12 Assessment results of degradation vs. improved land in the GGW regions by country

Country	GGW area (Mha)	Degraded (Mha)	Improved (Mha)	Difference (Mha)
Senegal	6.99	3.32	0.87	2.45
Mauritania	23.72	6.90	2.76	4.13
Mali	36.26	2.95	7.08	-4.13
Burkina Faso	12.70	3.75	1.95	1.81
Niger	46.40	3.46	10.23	-6.77
Nigeria	38.64	12.25	7.60	4.65
Chad	26.37	2.02	3.61	-1.59
Djibouti	1.06	0.22	0.03	0.19

Source: FAO, 2022.³³

150. Land degradation results in a loss of vegetation cover, reduced soil fertility, and erosion, leading to a decrease in carbon sequestration and storage in plant biomass and soil organic matter. As a consequence, these depletions cause an increase in carbon emissions, contributing to climate change. In fact, it is estimated that the Sahel region has lost about 330 million metric tons of carbon over the past three decades due to land degradation (FAO, 2021).³⁴ On the other hand, as a remedy, restoration efforts can promote carbon sequestration and storage, leading to increased carbon stocks in terrestrial ecosystems. Therefore, monitoring the carbon balance in degraded lands can serve as an important indicator of land degradation and restoration efforts.

151. Estimations of terrestrial carbon stocks in the GGW area are used as a baseline for assessing the impact of future restoration efforts. Such analyses are based on available comprehensive datasets of plant carbon (above- and below-ground biomass).³⁵ These data revealed that the GGW Sahel region, as of 2010 (the latest period for available datasets), has a vegetation carbon stock of 1,166 GtC and a density of 6.3 tC/ha. The stock of soil carbon (SOC) at 1m depth are reported to be 9,865 GtC and 53.2 tC/ha respectively (FAO, 2022). These values provide insight into the variability of carbon stocks across the GGW region and serve as a baseline to compare with the impacts of future restoration efforts.

- **Senegal land degradation**

152. Land degradation is a major obstacle to Senegal's economic and social development, as land is a vital resource. According to the UNCCD, land degradation affected 6.03% of the country's land area from 2001 to 2015. A reduction in land productivity, the biological production capacity of the land and the source of all food, fiber, and fuel needed by humans, is often one of the primary characteristics of land degradation. In Senegal, the proportion of land affected by declining productivity was estimated at 5.57% from 2001 to 2015 (see. Map 1). Changes in land cover, such as the distribution of vegetation types, water bodies, and artificial infrastructure, also indicate land degradation when associated with a loss of productivity. The proportion of land affected by land

³³ FAO, 2022 "Africa Open Data for Environment, Agriculture and Land and Africa's Great Green Wall" Rome, (<https://www.fao.org/documents/card/en/c/cc0725en>).

³⁴ FAO, 2021

³⁵ Harmonized global map of above- and belowground terrestrial carbon storage (tonnes (t) of C per hectare (ha)) in biomass and soil for the reference year 2010 (Soto-Navarro et al., 2020).

cover degradation was estimated at 0.32% in Senegal from 2001 to 2015 (see Map.2). Soil organic carbon (SOC), an indicator of soil quality associated with nutrient cycling, stability, and overall structure, and having direct implications for water infiltration, soil biodiversity, and vulnerability to erosion, was also affected by degradation. The proportion of land affected by SOC degradation was estimated at 0.37% in Senegal from 2001 to 2015.

153. In SURRAGWAs areas, land degradation is a result of natural and/or anthropogenic factors, such as population growth, land tenure insecurity, bad practices, abusive clearing of woodlands for agriculture, and climate stress. These deteriorating climatic conditions have negative consequences on the land, including: (i) a decrease in freshwater resources linked to the rise of the salt wedge and the penetration of marine waters, which accentuates the salinization of the land; and (ii) severe erosion (water and wind) and its corollary, namely the depletion of soil nutrients, estimated between 1996 and 1999 at about 38kg/ha of NPK. The various forms of pressure on natural resources lead to degradation that manifests itself biophysically through erosion and salinization of land. Water erosion affects approximately 77% of degraded land in Senegal, with numerous threats to the land, including fields, pastures, and infrastructure. Wind erosion leads to a decrease in soil productivity, the degradation of soil structure, drying of the soil, and damage to plants, as well as the silting up of infrastructure such as irrigation networks, crop plots, pastures, communication routes between villages, etc. Land salinization affects areas whose estimates vary widely, such as Eastern Senegal (100,000 ha), the Senegal River Valley (40,000 ha). According to estimates, the Senegal River area concentrates 60% of saline land according to the work of INP (2008) and LADA (2007). In the southeast zone, the proportion of salty land is over 26%.

Sexual Exploitation, Abuse, and Harassment (SEAH)

154. For social-baseline context regarding SEAH within SURAGGWA beneficiary countries, please refer to the gender assessment, which covers regional and national-level context pertaining to SEAH. Redress mechanisms for SEAH are detailed within the SEP, and each safeguards specialist has SEAH sensitization obligations within their Terms of Reference.

4.2 Assessment of potential risks and impacts of the programme

155. The safeguards categorization for SURAGGWA is moderate for both social and environmental impacts and risks. Mitigation measures for climate risks have been built into the design of the programme via climate-resilience building activities, as the programme explicitly targets climate mitigation and adaptation by design.

156. **Key social risks, impacts, and mitigation measures:** Social impacts of the programme are largely positive. The programme activities aim to improve the livelihoods and resilience of communities who rely on common and private lands in the Sahel region, with a focus on increasing inter-community collaboration (e.g. transhumant groups with agro-pastoralists). Participatory planning and community engagement under Component 1 is expected to increase collaboration and potentially improve conflict resolution around land use/management. Component 2 activities are expected to increase community resilience, incomes, and access to financial credit. Institutional capacities built under Component 3 will support improved coordination, collaboration, and management.

157. Social risks and impacts anticipated as a result of project's activities include: (i) potential conflict as the value of restored lands increase; (ii) management and/or conflict concerns relating to

the land tenure arrangements; and (iii) engaging with vulnerable populations, including traditionally underserved Sub-Saharan African communities. To mitigate these concerns, the programme has built principles and best practices of the *Technical Guide on the Integration of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality* into the engagement process and project activities, and utilizes a participatory approach (also detailed in the Stakeholder Engagement Plan (SEP)) with feedback loops through the programme's Grievance Redress Mechanism to reduce the risk of, avoid, and mitigate (when impossible to avoid) potential conflict. This ESMF also details the programme's approach to engaging with vulnerable communities and use of Free Prior Informed Consent in relevant project areas. The complementary Gender Analysis and Action Plan (Annex 8) provides guidance, activities, and targets for the programme (particularly under Component 1 and Component 2) so that women are equitably accounted for in the restoration efforts and NTFP benefits.

158. The above risks are assessed to vary from low to moderate because there are no practical measures that ensure complete avoidance. However, when necessary measures are in place and effectively implemented, the likelihood of these consequences happening is likely to be reduced to a manageable level. Mitigation measures are detailed in the next section (4.3).

159. **Key environmental risks, impacts, and mitigation measures:** The programme is expected to have largely positive environmental impacts, including improved climate resilience, soil fertility/soil health, increased soil water retention and groundwater recharge, and natural resources management. Cumulative environmental impacts are also assessed to be largely positive. Potential negative environmental impacts are expected to be minor, limited in time/scale, and reversible, as they relate to (i) provision of seeds/seedlings/outputs to farmers to support the landscape restoration activities; (ii) potential indirect increase of pesticide use due to increased production; (iii) increased water consumption due to increased production; and (iv) overlap of project restoration activities with national parks. These risks are managed through overall project design (e.g. training under Components 1 and 2 which will ensure understanding of restoration principles and agroecology/integrated pest management/etc.), limitations to the types of activities held in existing parks (e.g. restoration activities only), and the development and implementation of Environmental and Social Management Plans (ESMP) for project sites. The ESMPs will also take into account the territorial and environmental knowledge of the affected ethnic minorities/vulnerable populations.

160. Inherent environmental risks include the presence of unexploded ordinances (UXOs) and/or Improvised Explosive Devices (IEDs) in some areas across the Sahel. This ESMF provides the screening tools to be used at project sites to ensure that these risks are sufficiently addressed. For UXOs, in particular, sites with UXOs/IEDs will either be avoided completely (as part of the negative list), or, if deemed a critical location for restoration activities, will involve identification and removal (if any) by experts as part of site clearance prior to commencing any activities on the programme sites. As with the social risks and impacts, mitigation measures for the environmental risks and impacts are detailed within the next section (4.3).

4.3 Proposed mitigation measures

161. Table 10 lists the potential inherent and project-induced risks based on the programme area and activities, including proposed mitigation measures, reference tools, and means of monitoring/person(s) responsible.

Table 13 Mitigation measures for E&S risks and impacts (inherent and project-Induced)

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
COMPONENT 1							
Output 1.1: Local community groups organized, trained and knowledgeable in land restoration activities and monitoring	<u>Activity 1.1.1</u> : Identify potential sites for restoration and to inform resource base for value chain priorities based on analysis of climate data, GIS maps and potential for impact with local authorities and community	<ul style="list-style-type: none"> - Negative prefecture verdict - Targeted area may be affected by (violent) conflict - Exclusion of certain groups in the community - Targeted area identified may be part of a protected area - Targeted area identified may be private land 	Low impact, low likelihood	<ul style="list-style-type: none"> - Consultation with prefecture to ensure they agree with the selection process - The programme will avoid regions where there is (violent) conflict and displacement due to safety reasons and intervene in areas where the security situation allows the programme to be implemented on the ground. In countries where there has been recent political upheaval, FAO strictly follows high-level UN guidance, including: (i) respecting UN-imposed sanctions; (ii) following UN instructions re interruption of the implementation of “non-critical” activities..³⁶ 	<ul style="list-style-type: none"> - Regional Environmental & Social Safeguards Specialist - National Social Safeguards Specialist with the Land Tenure Team/Specialist’s support 	During initial phase of the programme activities, when activity 1.1.1 is being prepared	<ul style="list-style-type: none"> - Environmental & Social Management Framework (ESMF) & related Environmental and Social Management Plans (ESMPs) - Stakeholder Engagement Plan (SEP)

³⁶ Currently, none of the 8 SURAGGWA countries are subject to any UN sanctions. The only country with a “UN criticality programme” is Niger, but nearly all emergency, resilience and rural development activities are considered high-priority by the UN, and activities that would be temporarily suspended account for less than 10% of the country’s budget for the SURAGGWA programme, i.e. less than 1% of the overall project budget.

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
				<p>-Exclusion list for some protected areas and/or ESMP for areas like national parks depending on their classification, recognizing that the activities will ultimately help improve the biodiversity and land/soil quality. Specifically, the programme would not operate inside protected areas but may operate in their proximity in some cases. Interaction with protected areas will be exclusively positive; for example, restoration of sand dunes to prevent siltation of protected Ramsar wetland sites.</p> <p>-Consultation with owners and users of private lands, with support of the Land Tenure Team</p>			
	<p><u>Activity 1.1.2:</u> Identify and mobilize communities for participatory selection of the specific sites, ensuring inclusion of women.</p>	<p>-Duplication/Overlap with existing community management committees, resulting in no/low participation.</p> <p>-Community Management Committees are unsustainable / do not continue after the programme (exit strategy risk)</p> <p>- Low representation and responsibilities of woman in the community management committees</p>	<p>Low impact, High likelihood</p>	<p>-Building on the programme's SEP, hold iterative consultations to determine formation of the restoration teams and management committees, building where possible on what's already existing</p> <p>-Ensure capacity building under this activity also involves encouragement of gender equity and involvement of vulnerable groups</p>	<p>-Social Safeguards Specialist</p> <p>-Project implementers (in collaboration with the Social Safeguards Specialist)</p>	<p>At the start of the programme/roll out of activity 1.1.2 in each of the countries/sub-project areas.</p>	<p>-SEP</p> <p>-ESMF/ESMP</p> <p>-Gender Action Plan (GAP)</p>

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
	<u>Activity 1.1.3</u> : Train programme's restoration teams and community management organizations	<ul style="list-style-type: none"> - Mismatch of trainings with project intervention area - Overburdening woman with tasks - Inequality in gender distribution of the activities 	Moderate impact, Low likelihood	<ul style="list-style-type: none"> -Regional Environmental & Social Safeguards Specialist to ensure that the proposed trainings align with the agroecological zone (soil type, climate, etc.), in consultation with the programme team preparing and conducting the trainings -Sensitization of programme implementation teams on the FAO/GCF requirements on safeguards, particularly the gender action plan -Consultations, in line with the SEP, to ensure women agree to the activities being suggested 	-Regional Environmental & Social Safeguards Specialist	Throughout the programme	ESMF/ESMPs
Output 1.2. Native seed supply systems strengthened to ensure the availability of genetically appropriate seeds that provide increased	<u>Activity 1.2.1</u> : Identify and train community technicians on good quality and quantities of restoration seeds and native seed supply	- Exclusion of marginalized and/or vulnerable persons	Moderate impact, Low likelihood	-Sensitization of the trainers on the FAO/GCF requirements on safeguards, particularly the gender action plan and ethnic minority framework	-Regional E&S Specialist and National Social Safeguards Specialists	At the programme inception/just prior to the rollout of activity 1.2.1	-ESMF (including the Ethnic Minority Framework) -GAP
	<u>Activity 1.2.2</u> : Identify, organize and train community members involved in seed and seedling production for land restoration activities	- Exclusion of marginalized and/or vulnerable persons	Moderate impact, Low likelihood	-Sensitization of the programme implementers on the FAO/GCF requirements on safeguards, particularly the gender action plan and ethnic minority framework	-Regional E&S Specialist and National Social Safeguards Specialists	At the programme inception/just prior to the rollout of activity 1.2.2	-ESMF (including the Ethnic Minority Framework) -GAP -SEP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
climate resilience.	<u>Activity 1.2.3:</u> Establish, equip and operate community nurseries for seedling production and dissemination	<ul style="list-style-type: none"> - Unsustainable water availability and access - Improper horticultural techniques for plant management and seedlings - Insufficient/unsustainable management – both technical and financial – with limited technical capacity 	-Moderate impact, Low likelihood	<ul style="list-style-type: none"> - Careful targeting and alignment of activities and suggested seedlings with the programme areas, particularly given water availability (based on water availability information from the baseline data for that area) - Financial risks are not part of the E&S risk assessment, however issues with technical capacity which can affect the environment-related management will be addressed via the capacity building included in the programme design 	-Regional Environmental & Social Safeguards Specialist, in collaboration with programme implementation teams	During & just following the establishment of the nurseries in Activity 1.2.3	ESMF/ESMPs
	<u>Activity 1.2.4:</u> Local communities' seed supply of native seeds is integrated into national seed system.	<ul style="list-style-type: none"> - Incorrect selection of climate-adapted seeds and genetic diversity - GMO infiltration - Improper chemical treatment of seeds - Exclusion of actors/stakeholders that are needed in the network 	Moderate impact, Low likelihood.	<ul style="list-style-type: none"> - Careful targeting to ensure the seeds are climate-adapted and selected for the target area, including appropriate genetic diversity - Capacity building on how to reduce risks of GMO infiltration, and on how to properly treat the seeds (pesticides will not be used in the programme) - Sensitization of the programme implementers on the FAO/GCF requirements on safeguards, particularly the gender action plan and ethnic minority framework 	<ul style="list-style-type: none"> - Project team/implementers in collaboration with the Regional Environmental & Social Safeguards Specialist (re: seed selection, GMO infiltration, improper chemical treatment of seeds) - Regional Environmental & Social Safeguards Specialist, with the National Social Safeguards Specialist (re: inclusion of key actors/stakeholders) 	During the establishment of the seed-supply and exchange network, and in the initial years following (yearly refresher trainings on proper treatment of seeds without the use of pesticides, etc.)	<ul style="list-style-type: none"> - ESMF/ESMPs - SEP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
Output 1.3: Targeted highly degraded lands restored through arrangements for rainwater harvesting and enhanced soil permeability and through local communities engaging in planting of seedlings and direct seedingthe programme	<u>Activity 1.3.1:</u> Highly degraded land restoration plans prepared and implemented through mechanized, animal, and manual traction techniques.	- Negative soil alteration due to improper equipment adjustment OR selection (on Delfino plots, Newman, etc.) -Poor selection of the preparation sites, resulting in degradation of plants and forests due to density of the areas -physical injury due to improper use of equipment	Moderate impact, Low likelihood	-Capacity building/training on land preparation prior to commencing the activity to avoid risks of negative soil alteration -Careful selection of the preparation sites based on relevant data -Occupational Health & Safety (OHS) training prior to use of equipment, along with clear instructions and refreshers on safe equipment handling/use	-Regional Environmental & Social safeguards specialist, in close collaboration with the programme implementation team	Throughout the implementation of Activity 1.3.1 (at inception, followed by refresher trainings on an annual basis)	-ESMF/ESMPs
	<u>Activity 1.3.2:</u> Sowing and planting in prepared sites with communities/villages	-mismatching of sowing/planting with the sites, based on location and projected climate changes, seasonality, etc. - Use of genetic materials not supported/approved by the programme -involvement of children for age-inappropriate tasks	Moderate impact, Moderate likelihood	-Careful selection of the plants to be used for the sites based on relevant data -Close monitoring & evaluation to ensure only genetic materials under the programme are supported -Training on age-appropriate work for the communities prior to commencement, and agreement on a children's safe-space near the prepared site so that mother's with young children have a safe space for them to rest/play while the age-ready family members are involved with activities	-Programme implementation team, in close collaboration with the Regional E&S Specialist -M&E Specialist, with support of the Regional E&S Specialist -National Social Safeguards Specialist, with support from the Regional E&S Specialist, and in close collaboration with the programmeimplementation teams.	Throughout the duration of Activity 1.3.2	-ESMF/ESMPs -Gender Analysis/GAP
	<u>Activity 1.3.3:</u> Training of community members in monitoring & maintenance	-Exclusion of vulnerable persons/castes	Moderate impact, Low likelihood	-Sensitization of the trainers/project implementers on the FAO/GCF requirements on safeguards, particularly the gender action plan and ethnic minority framework	-National Social Safeguards Specialist, with support from the Regional Environmental & Social safeguards specialist as needed, and in close collaboration with the programme implementation team	-Prior to commencement of the trainings (for the training of trainers); and -during the trainings	-ESMF (with the Ethnic Minority Framework) -SEP -GAP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
Output 1.4: Targeted moderately degraded lands planted with a range of species to restore and enrich the landscapes of agro-forestry, agro-ecology and silvo-pastoral systems, biomes and protected forest ecosystems.	<u>Activity 1.4.1:</u> Sub-national moderately degraded land restoration plans prepared and implemented	-Costed plans aren't approved by higher authorities -Deliberations act required for the land restoration aren't granted -Exclusion of women, vulnerable persons/etc.	Moderate impact, Moderate likelihood	-Risks on approval and grants can be reduced through proper stakeholder consultations -Sensitization of the trainers/project implementers on the FAO/GCF requirements on safeguards, particularly the gender action plan and ethnic minority framework	-National Social Safeguards Specialist and the Land Tenure Team/Specialist, with support from the Regional Environmental & Social safeguards specialist as needed	-During the rollout of Activity 1.4.1	-SEP -GAP -ESMF (with the Ethnic Minority Framework)
		- Negative soil alteration due to improper equipment adjustment OR selection (on Delfino plots, Newman, etc.) -Poor selection of the preparation sites, resulting in degradation of plants and forests due to density of the areas -physical injury due to improper use of equipment	Moderate impact, Low likelihood	-Capacity building/training on land preparation prior to commencing the activity to avoid risks of negative soil alteration -Careful selection of the preparation sites based on relevant data -Occupational Health & Safety (OHS) training prior to use of equipment, along with clear instructions and refreshers on safe equipment handling/use	-Regional Environmental & Social safeguards specialist, in close collaboration with the programme implementation team	Throughout the implementation of Activity 1.4.2 (at inception, followed by refresher trainings on an annual basis)	-ESMF/ESMPs
Output 1.5. Rural community capacities strengthened for sustainable management and restoration, and verification of restoration results.	<u>Activity 1.5.1:</u> Village technicians trained and equipped in managing restoration areas and verifying restoration results, in a participatory manner	-Data collection/monitoring and reporting system does not integrate or differentiate for gender, youth, ethnic minorities and/or vulnerable persons	Moderate impact, Low likelihood	-Social Safeguards Specialist and/or Land Tenure Specialist, in collaboration with the M&E Specialist, to support the design of the data collection/monitoring and reporting system -Training to sensitize the programme implementation teams on FAO/GCF safeguards and inclusion requirements	-Social Safeguards Specialist and Land Tenure Team/Specialist, in collaboration with the M&E Specialist and programme implementation teams	During the rollout of Activity 1.5.1	-Gender Analysis & GAP -SEP -ESMF & related ESMPs
COMPONENT 2							

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
Output 2.1: Climate resilient and low carbon production and processing practices in selected NTFP value chains adopted by Producer Organizations and MSMEs	Activity 2.1.1: Train and provide TA to POs and MSMEs in selected NTFP value chains for enhanced organizational and managerial capacities (registration, structuring according to OHADA, training on management, administration etc.)	- Gender balance and inclusion - Capacity building isn't tailored to the specific context - The trainees leave with high turnover	Moderate impact, Low likelihood	-Training to sensitize the programme implementation teams on FAO/GCF safeguards and inclusion requirements -Capacity building should be tailored to target sites, as much as possible. -Risks on turnover aren't addressed through E&S risks, however knowledge transfer and management throughout the programme is encouraged to reduce risk of lost information/skills	-Social Safeguards Specialist, with support as needed from the Regional E&S Specialist	During the rollout of Activity 2.1.1	-Gender Analysis & GAP -SEP -ESMF & related ESMPs
		- Lack of buy-in by the facilitators- Lack of inclusion and responsibilities - Sensitivity to data sharing - Geopolitical issues (national OR international)	Moderate impact, Low likelihood	-All these risks can be mitigated through close consultation with the relevant stakeholders/actor, and planning based on those consultations	-Social Safeguards Specialist, with support as needed from the Regional E&S Specialist	During establishment of the platform and in the initial stages of implementation	-SEP -GAP -
	Activity 2.1.2: Train and coach local POs and MSMEs in sustainable production and collection practices to enhance NTFP quality and availability	- Poorly quality of training/tailoring of training - Conflicts between groups who receive training - Low uptake of the practices trained due to a lack/absence of value-added for the products - Gender balance and inclusion -Unsustainable increase of NTFPs collection related to processing losses or mis-processing	Moderate impact, Low likelihood	-Capacity building of implementation team/trainers to ensure quality, as well as on aspects of inclusion -Careful targeting and tailoring of the training for relevance to the implementation site and for consideration of value-added opportunities -Close consultation with the relevant stakeholders/actors and training that responds to differentiated needs/capacity levels	-Social Safeguards Specialist, with support as needed from the Regional E&S Specialist -Programme implementation team	During the trainings of Activity 2.1.3	-SEP (including the GRM) -GAP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
	<u>Activity 2.1.3:</u> Train and coach POs and MSMEs to improve the processing practices (including packaging and labelling) of the selected products	<ul style="list-style-type: none"> - Poorly quality of training/tailoring of training - Conflicts between groups who receive training - Low uptake of the practices trained due to a lack/absence of added value on the products - Gender balance and inclusion - High Co2 emissions / consumption of energy for processing - Occupational health & safety (OHS) issues during processing - Wasteful packaging - Inappropriate involvement of children during processing 	Moderate impact, Low likelihood	<ul style="list-style-type: none"> -Capacity building of implementation team/trainers to ensure quality, as well as on aspects of inclusion, age-appropriate work, and OHS -Careful targeting and tailoring of the training for relevance to the implementation site, consideration of value-added opportunities, and sustainable practices (packaging, energy use) -Close consultation with the relevant stakeholders/actors and training that responds to differentiated needs/capacity levels 	<ul style="list-style-type: none"> -Social Safeguards Specialist, with support as needed from the Regional E&S Specialist, and in close collaboration with the programme implementation team -Programme implementation team 	During the trainings of Activity 2.1.4	<ul style="list-style-type: none"> -SEP (including the GRM) -GAP -ESMF/ESMPs
<u>Output 2.2:</u> Increased access to markets for smallholder NTFP actors (including micro- and small enterprises)	<u>Activity 2.2.1:</u> Identify NTFPs with market and sustainable production potential that can be integrated in land restoration efforts funded under Component 1	<ul style="list-style-type: none"> - Lack of overlap with the resources management plan from component 1 - Time poverty of women - Exclusion/discrimination (see above comp-1) in the process 	Low impact, low likelihood	<ul style="list-style-type: none"> -Programme design accounts for integration across components, and this can be further strengthened through consultation and engagement with the communities so that efforts are complementary to what already exists and/or is planned -Close consultation and stakeholder engagement as per the SEP and GAP to avoid risks of exclusion/discrimination, and to ensure sensitivity to time poverty limitations of women 	<ul style="list-style-type: none"> -National Social Safeguards Specialist -Programme Implementation Team 	<ul style="list-style-type: none"> -During rollout of the assessment and at the start of the monitoring period -As needed throughout the programme lifecycle 	<ul style="list-style-type: none"> -SEP -GAP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
	<u>Activity 2.2.2:</u> Support to marketing and branding of the NTFP (promotional activities, nutritional value pamphlets of NTFP, organization of trade fairs, TV show, etc.)	<ul style="list-style-type: none"> - False marketing claims - Issues in accessibility for local populations to NTFPs products/by-products - Stress on the resources because of the high demand created 	Moderate impact, Low likelihood.	<ul style="list-style-type: none"> -E&S risks do not account for false marketing claims, however this risk can be reduced by stressing importance of accurate marketing/branding during the provision of support -For issues of accessibility and/or resources stress due to demand, development and promotion of the NTFPs should be discussed with the producers and local communities so that tradeoffs are clear, and considerations can be made for ensuring continued access for local communities as needed 	<ul style="list-style-type: none"> -Regional E&S Safeguards Specialist -National Social Safeguards Specialist -Programme Implementation Team 	-During provision of support for marketing and branding	<ul style="list-style-type: none"> -SEP -GAP
	<u>Activity 2.2.3:</u> Support Producer Organizations (PO) and Micro- Small and Medium Enterprises (MSMEs) in business plan development and management	<ul style="list-style-type: none"> - Inaccurate business plans - Poor gender balance and inclusion 	Moderate impact, low likelihood	<ul style="list-style-type: none"> -E&S risks do not address accuracy of the business plans, though one way to reduce this risk would be to utilize a standardized programme like RuralInvest -As per the Gender Action Plan, inclusion of women in the trainings and tailored support 	<ul style="list-style-type: none"> -National Social Safeguards Specialist -Programme implementation team 	-Throughout the trainings and preparation of business plans under Activities 2.2.4 and 2.2.5	<ul style="list-style-type: none"> -GAP -SEP
	<u>Activity 2.2.4:</u> Enhance access to national, regional and international markets for NTFP, including through the setting up of norms and standards to improve the marketing of the NTFP	<ul style="list-style-type: none"> - Issues in accessibility for local populations to NTFPs products/by-products - Stress on the resources because of the high demand created 	Moderate impact, moderate likelihood	<ul style="list-style-type: none"> -Development/increased production and processing in NTFPs should be discussed with the producers and local communities so that tradeoffs are clear, and considerations can be made for ensuring continued access for local communities as needed 	<ul style="list-style-type: none"> -Programme Implementation Team -National Social Safeguards Specialist 	-Throughout development of the NTFP along the value chain	<ul style="list-style-type: none"> -SEP -GAP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
	<u>Activity 2.2.5:</u> Identify, train and equip POs and MSMEs with emission-lowering technologies and equipment to enhance NTFP processing	the programme- Increased energy consumption if processing efforts are increased (even if the emissions are lowered)	Low impact, Low likelihood	-Consider, in the identification of emissions-lowering technologies and equipment, the applicability to vulnerable persons/smallholders within the programme area -If equipment/technologies are selected, ensure sensitization also to energy use implications (consider trade-offs)	-Regional Environmental & Social Safeguards Specialist -National Social Safeguards Specialist - Programme Implementation Team	-During the selection and dissemination of technologies/during trainings on the technologies	-SEP -GAP -ESMF/ESMPs
<u>Output 2.3</u> Suitable credit and insurance products designed for smallholder NTFP value chain actors (PO, cooperatives, MSMEs) and increased stakeholder capacity for using these financial products in their NTFP value chain activities	<u>Activity 2.3.1:</u> Train and sensitize value chain actors on financial institutions' offerings, financial literacy and financial record keeping	-failure to include women/those most vulnerable	Moderate impact, low likelihood	-ensure women's involvement in trainings, aligned with the Gender Action Plan	-Programme Implementation Team -National Social Safeguards Specialist	-Throughout the training	-GAP -SEP
	<u>Activity 2.3.2:</u> Technical assistance provided to develop five new financial products (of which at least one insurance product) tailored to agriculture and NTFP value chains with financial institutions, including those collaborating with iGREENFIN.	-financial products developed are not available for women/vulnerable populations due to poor consideration of gender and inclusion during the development	Moderate impact, low likelihood	-ensure women's involvement/consultation during development of the financial products	-Programme Implementation Team -National Social Safeguards Specialist	-During development of the financial products	-GAP -SEP
	<u>Activity 2.3.3:</u> Train staff (loan officers and others) from financial institutions, including those collaborating with iGREENFIN, on how to assess agricultural and NTFP value chain risks and climate-related risks (national and regional level)	-value-chain and climate change assessment training does not adequately incorporate gender-specific risks	Low impact, low likelihood	-Assessments must be gender-sensitive, with the support of the safeguards specialist to better understand how to integrate	-National Social Safeguards Specialist	-During development of the training sessions	-GAP -SEP
	<u>Activity 2.3.4:</u> Facilitate linkages between last-mile providers of finance (producer organizations, village savings groups, microfinance networks) and financial institutions, including those participating in iGREENFIN.	N/A	N/A	N/A	N/A	N/A	N/A

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
	<u>Activity 2.3.5:</u> Pilot access to credit through digital financial solutions in at least one country and facilitate scale up, if successful	-conflict over who is eligible for participation in the pilot -exclusion of women/vulnerable persons	Low impact, moderate likelihood	-Clear selection criteria -Stakeholder consultation	-Programme Implementation Team -National Social Safeguards Specialist	-Prior to the commencement of the pilot, and during the first few months of start-up	SEP GAP
	<u>Activity 2.3.6:</u> Improve knowledge management and exchanges to increase adoption of best practices across local financial institutions	N/A	N/A	N/A	N/A	N/A	N/A
COMPONENT 3							
Output 3.1: GGW Land restoration monitoring system at national and regional level upgraded and functional <i>*Activities carried out at the regional level for the benefit of all SURAGGWA/ Great Green Wall initiative (GGWi) countries</i>	<u>Activity 3.1.1</u> Development, testing and deployment of National GGW land restoration monitoring tools and system* / <u>Activity 3.1.2</u> Transfer knowledge and skills for the use of the GGW Land restoration monitoring system by national and regional authorities * / <u>Activity 3.1.3</u> Development and deployment of regional multi-stakeholder Monitoring platform * / <u>Activity 3.1.4:</u> Building the capacity of NAGGW and PAGGW to establish databases of ongoing restoration projects and programmes contributing to national and regional GGW results_*	-exclusion of women/vulnerable persons	Low impact, low likelihood	-ensure that all activities/ technologies/ consultations account for women and vulnerable persons/groups (including ethnic minorities)	-Programme Implementation Team -National Social Safeguards Specialist, in collaboration with the M&E Specialist for anything pertaining to monitoring	-Throughout the programme implementation	-GAP -SEP
	<u>Activity 3.1.5</u> Prepare regulatory national frameworks for the monitoring of all GGW labelled interventions in all GGWi countries	-exclusion of women/vulnerable persons	Low impact, low likelihood	-ensure that all regulatory frameworks account for women and vulnerable persons/groups (including ethnic minorities)	-Programme Implementation Team -National Social Safeguards Specialist, in collaboration with the M&E Specialist for anything pertaining to monitoring	-Throughout the programme implementation	-GAP -SEP

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
	<u>Activity 3.1.6</u> Develop operational partnerships between the GGWi and scientific and technical institutions in the region (such as universities, research institutes, CSEs, Aghrymet, ACMAD) on issues of ecological monitoring and adaptation to climate change	N/A	N/A	N/A	N/A	N/A	N/A
	<u>Activity 3.1.7</u> Strengthen the capacities of national stakeholders in the use of the tools developed by FAO (Collect Earth and Africa Deal database), and the methodology for assessing the carbon balance developed by the Ecological Monitoring Centre (EMC), the Sahara and Sahel Observatory (OSS) and CILSS.	-exclusion of women/vulnerable persons	Low impact, low likelihood	-ensure inclusion of women and/or vulnerable persons/groups (including ethnic minorities) in the capacity strengthening efforts	-Programme Implementation Team -National Social Safeguards Specialist	-Throughout the programme implementation	-GAP -SEP
<u>Output 3.2:</u> National and Regional GGW institutions' planning and coordination capacities strengthened	<u>Activity 3.2.1</u> Establish National GGW Coalitions to promote coherent coordination and planning at country-level	-exclusion of women/vulnerable persons	Moderate impact, low likelihood	-ensure that analysis and subsequent GGW strategies account for women and vulnerable persons/groups (including ethnic minorities)	-Programme Implementation Team -National Social Safeguards Specialist	-Throughout the programme implementation	-GAP -SEP
	<u>Activity 3.2.2</u> Prepare and issue planning and regulatory frameworks for the coordination of all GGW aligned interventions (projects, programmes, activities etc.)	-exclusion of women/vulnerable persons	Low impact, low likelihood	-ensure that the outlook report and regulatory frameworks account for women and vulnerable persons/groups (including ethnic minorities), where relevant	-Programme Implementation Team -National Social Safeguards Specialist	-Throughout the programme implementation	-GAP -SEP
<u>Output 3.3:</u> National and regional climate change institutional capacities/frame works strengthened to integrate land restoration investments in climate change adaptation and mitigation programmes	<u>Activity 3.3.1</u> Strengthen public- and private sector understanding of and capacity to engage with carbon markets for climate change adaptation and mitigation through land restoration / <u>Activity 3.3.2</u> Pilot the establishment of domestic carbon accounting framework that integrates agriculture and forestry in Nigeria, and identify additional countries for potential replication.	N/A	N/A	N/A	N/A	N/A	N/A

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
Output 3.4 GGW knowledge management and communication capacities strengthened for mobilizing increased support to climate-resilient land restoration	Activity 3.4.1 Develop innovative and robust methods for evaluating/demonstrating resilience benefits of climate change investments in land restoration and NTFP value chains in GGW	-exclusion of women/vulnerable persons	Low impact, low likelihood	-ensure that all communications/KM and knowledge exchange/highlights of lessons-learned account for women and vulnerable persons/groups (including ethnic minorities)	-Programme Implementation Team -National Social Safeguards Specialist	-Throughout the programme implementation	-GAP -SEP
	Activity 3.4.2. Communication, visibility and dissemination of knowledge. Activity 3.4.3 Train communication specialists from GGW's national structures to implement their communication plan and develop tools adapted to different target groups, particularly women and youth. / Activity 3.4.4 Develop, in relation to the different target groups identified, adapted supports and modes of information, such as: the use of social networks (Facebook, Twitter, etc.) and teleconferences, the organization of meetings; workshops, the production of films, leaflets, brochures, etc.).	-exclusion of women/vulnerable persons	low impact, low likelihood	-ensure that all communications and also highlights of GGW achievements account for women and vulnerable persons/groups (including ethnic minorities)	-Programme Implementation Team -National Social Safeguards Specialist	-Throughout the programme implementation	-GAP -SEP
ADDITIONAL RISKS							
CROSS-CUTTING RISKS		-potential conflict as the value of restored lands increase	Moderate impact, moderate likelihood	-proactive consultation and support relating to land tenure, benefits sharing, and access to land	-National Social Safeguards Specialist, in collaboration with the Programme Implementation Team (and potentially the FAO Land Tenure Team, as per below)	-Throughout the programme implementation	-SEP -ESMF/ESMPs

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
		-SEAH risks (dependent upon country)	*to be assessed separately for each country based on SEAH screening	<ul style="list-style-type: none"> - Zero tolerance of SEAH and mainstreaming of SEAH risk mitigation -Country-level GAPs to have note on handling of SEAH in that country-context -SEAH screening (based on the GCF SEAH screening guidance) to be conducted for each sub-project (including site-specific set of interventions in a given geographical area) ESMP -SEAH sensitization training (refer to SEP for more details) -Clauses within contracts re: SEAH (and safeguards) compliance and requirements - The programme's Grievance Redress Mechanism reinforced to deal effectively with SEAH and GBV incidents - Tailored mitigation measures to be reflected in relevant safeguards document at sub-project level 	<ul style="list-style-type: none"> -National Social Safeguards Specialist, in collaboration with the Country Implementation Unit - Detailed monitoring and implementation arrangement will be specified in the country level GAPs. 	-Throughout the programme implementation	<ul style="list-style-type: none"> -SEP -ESMF/site-specific ESMPs -Gender Assessment -Country level GAPs

Component	Project Activities	Potential Risks / impacts	Risk level (impact x likelihood) (H/M/L)	Proposed Mitigation Measures	Monitoring Arrangements / Persons Responsible	Timeline	Reference Tools
		-management and/or conflict concerns relating to the land tenure arrangements	Moderate impact, moderate likelihood	-proactive consultation and support relating to land tenure concerns, integrating VGGT principles -the process for engagement will build on best practices used by the FAO Land Tenure team and related projects in the region, facilitating national and local stakeholder processes to ensure a responsible governance of tenure and engaging both groups with statutory and customary (formal/informal) tenure and land-use rights	-National Social Safeguards Specialist, in collaboration with the programmeProgramme Implementation Team and specifically the technical assistance from the FAO Land Tenure Team	-Throughout the programmeprog ramme implementation, but predominantly during the first two years	-Programme Funding Proposal (Programme Document) -SEP -ESMF/ESMPs

5. Procedures for review, clearance, and implementation of sub-project e&s instruments

5.1 Objective and approach

162. Since detailed target locations will be identified during implementation, this ESMF was prepared to apply to all sub-projects and investment activities. The main objective of the ESMF process is to ensure that the sub-projects and activities financed by the programme will not create adverse impacts on the local environment and communities, and the residual and/or unavoidable impacts are mitigated in line with national requirements and FAO and GCF safeguards standards.

163. During implementation, identified activities/sub-projects will be screened for and given a risk classification based on their E&S issues and applicable safeguards standards (ESSs). Based on the screening, any necessary environmental and social assessments (ESA) and/or other E&S instruments will be prepared following the guidelines laid out in this ESMF. The assessments, instruments, and mitigation measures should be proportionate to the nature and scale and the potential risks and impacts of the programme's activities and consistent with the requirements of FAO, the GCF, and national laws/regulations. Safeguards plans prepared for sub-projects may include, but are not limited to, Environmental and Social Management Plans (ESMPs); Gender Action Plans (GAPs), including issues related to sexual exploitation and abuse (SEA); and Ethnic Minority Plans. Terms of Reference (TORs), work plans, and documents that define the scope and outputs of any site-specific safeguards capacity building activities (for example, sensitization activities on land tenure) will be designed so that support provided is consistent with the FAO and GCF safeguards standards. Based on the initial sub-project safeguards screening, any subsequent ESA would: (i) cover the requirements established under the relevant safeguard standard for that sub-project; and (ii) identify the environmental and social risks and impacts including direct, indirect, cumulative, and residual impacts.

5.2 Key Steps

164. The ESMF process is comprised of four steps, as depicted in **Figure 14** and summarized below:

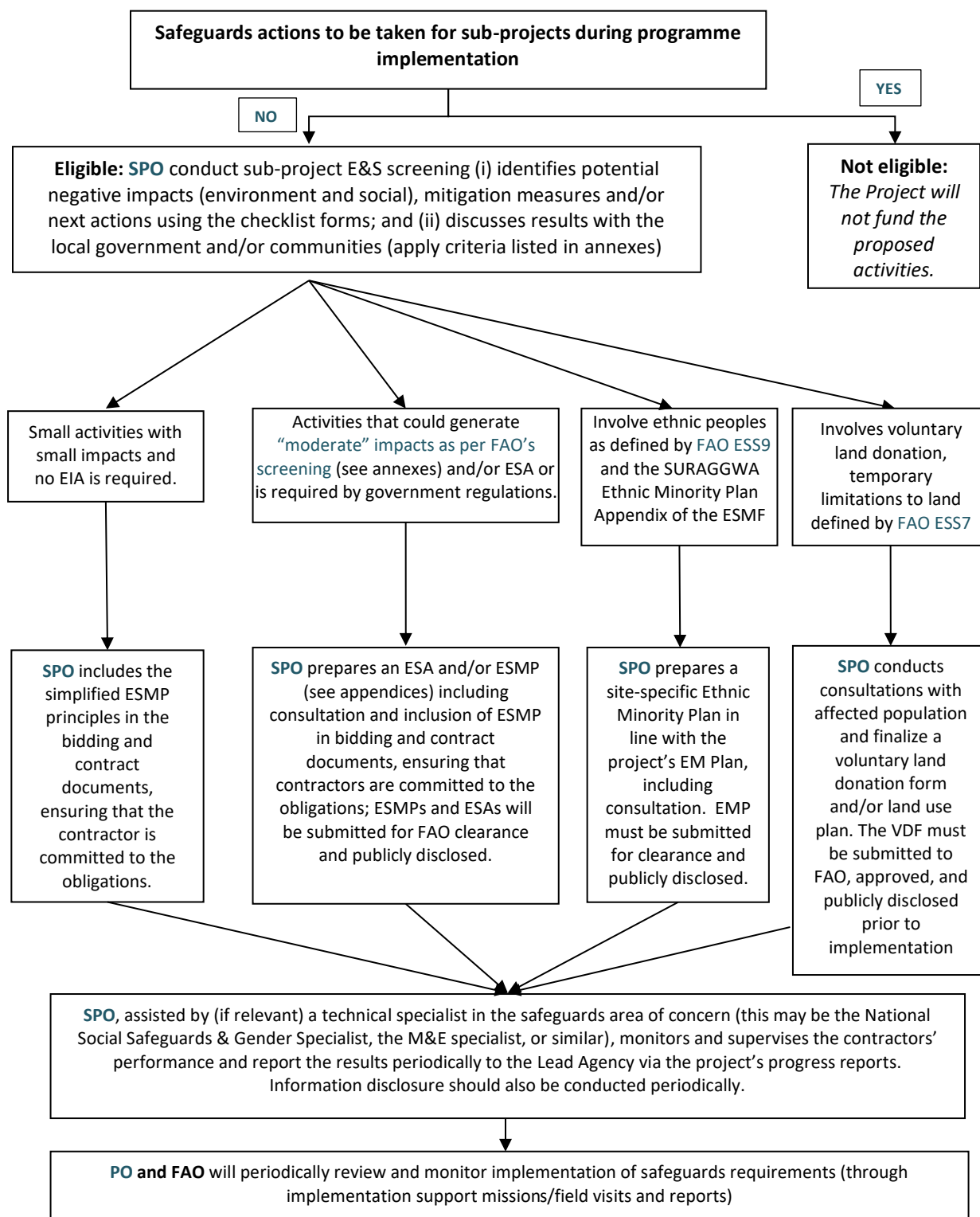
- **STEP 1:** Screening for eligibility and E&S issues including risks and impacts using screening criteria, application of ESSs, and identification of and needs for preparation and implementation of E&S documents/instruments.
- **STEP 2:** Preparation of E&S documents as required, including the development of mitigation measures/activities in the ESMP, GAP, and Ethnic Minority Plans to be incorporated into bidding and contractual documents and subjected to close monitoring of the contractor's performance. ESMPs must clearly identify mitigation measures for potential negative impacts, including: (i) management of contractors; (ii) chance finds; (iii) Environmental Health & Safety Guidelines (EHSG) application; and (iv) Codes of Conduct relating to Prevention of Sexual Harassment, Exploitation, and Abuse, wherever/whenever applicable to the sub-project.

- **STEP 3:** Clearance and disclosure of E&S documents; and
- **STEP 4:** Implementation, monitoring, and reporting.

165. The risk analysis, impact assessment, and preparation of E&S documents for all sub-projects will be carried out during implementation. At this point in time, most activities are low to moderate risk, and high-risk activities are not financeable under the programme. Preparation of a sub-project ESMP occurs when the sub-project activities have been clearly identified and locations are known. During the preparation of the ESMP, due attention will be given to address the issues of land tenure, access to resources and benefits sharing, resource efficiency and pollution prevention, labour and working conditions, community health and safety, ethnic minorities, women, cultural heritage, and stakeholder engagement and information disclosure.

Figure 19 Flowchart for safeguard actions for sub-projects

Legend: “PO” is project owner; “SPO” is sub-project owner



Source: Author’s own elaboration.

166. Key safeguards actions can be highlighted as follows:

- Low-risk activities will include simplified ESMP principles and requirements into bidding documents and consultant contracts, with contractor performance closely monitored by the responsible person(s) of the implementing agencies.
- Moderate-risk activities will require consultations (led by the SPO), and a site-specific ESMP must be included with bidding documents and contracts, with contractor performance closely monitored by the responsible person(s) of the implementing agencies.
- If screening highlights the need for voluntary land donation or temporary disruption to land use, a Voluntary Land Donation form must be prepared and consulted upon (in line with the VGGT principles and FAO ESS7), as well as approved and disclosed prior to sub-project implementation.
- If the ethnic minorities are present in the sub-project, a site-specific EM Plan will be prepared and implemented according to FAO ESS9 and the guidelines can be found in the programme's overarching EM Plan (see Appendix 6 of this ESMF).
- All the major E&S documents of a given sub-project will be submitted for FAO clearance before their respective approval and implementation.

5.3 E&S risk and impact assessment

167. This step (Step 1) aims to confirm the eligibility of sub-project and/or activities to be financed by the programme as well as identify the potential E&S issues and assess potential impacts of the sub-projects/activities including needs for preparation of E&S documents as required by FAO/GCF standards using an E&S screening checklist (please refer to Appendix 8 for the E&S screening conducted for SURAGGWA at the ESMF stage). The agencies responsible for implementing the sub-project/activities will be responsible for undertaking and signing the screening forms. CIUs will each be responsible for screening their own activities. Consultation with FAO safeguards specialists can be made as needed, depending on sub-project complexity.

5.4 Development of E&S documents

168. This step (Step 2) is focused on preparing safeguards documents in relation to the issues identified in Step 1 (risk assessment). Guidelines for the preparation of an ESMP and Ethnic Minority Plan are provided in the appendices. Again, CIUs will be responsible for their own activities and sub-projects, and their corresponding national safeguards specialists will be responsible for the preparation of those E&S documents. Consultation with FAO safeguards specialists for complex sub-projects will be made as needed.

169. It is crucial that the implementing agencies of any sub-projects and activities are also responsible for preparation and approval by responsible government agencies of E&S documents (e.g. ESA, etc.) required by regulations of the country in which the programme is being implemented.

5.5 Review, approval, and disclosure of E&S documents

170. **FAO review and clearance:** Before approval and commencement of sub-project works, the Sub-project Officer (SPO) will submit all key E&S documents to the National Social Safeguards & Gender Specialist for review. The national specialist, in collaboration with the Regional Environmental & Social Safeguards Specialist, will provide review, clearance, and public disclosure. It is suggested that FAO conduct reviews of the first three ESMPs prepared by each CIU (particularly in cases where the programme is directly implemented by the national government), after which, the reviews by FAO may reduce (or increase) frequency as needed based on quality assessment. The approval process described herein may also be reviewed occasionally, particularly once the E&S capacity of the implementation partners has been built with the support of the E&S capacity-building activities. At that point, FAO may choose to review ESMPs selected at random.

171. All E&S documents will be posted on the official websites of relevant government ministries, Great Green Wall Agency, and FAO websites. Hardcopies in the local language(s) will be available at the PMU, CIU, and sub-project sites. The PMO and CIUs must publish a notification of disclosure of information and solicit comments within the month following the disclosure date of key E&S documents. The English version of the ESMPs will be disclosed on the FAO (and potentially GCF) website(s).

172. **Government approval:** Responsible agencies are also required to approve any E&S documents required by national legislation/regulations. Any prepared E&S documents, as well as the approval conditions, will be provided to FAO for information and will be disclosed to the public.

5.6 Implementation, supervision, monitoring, and reporting

173. ESMF implementation, supervision, monitoring, and reporting is an integral part of programme and sub-project implementation. Each E&S staff is responsible for specific activities. FAO ESM-Unit specialists also supervise and monitor the implementation of safeguards activities during FAO project supervision missions. Delegation of responsibilities is as follows:

- ***Gender action plan and ethnic minority plan monitoring:*** The CIU will hire a National Social Safeguards & Gender Specialist and a National Monitoring & Evaluation Specialist to monitor the implementation of EM Plans and GAP within the country, reporting all results to the programme's Lead Regional Environmental & Social Safeguards Specialist and FAO.
- ***E&S monitoring of contractor performance:*** To ensure compliance with the national laws and regulations as well as some specific requirements of the FAO and GCF ESS at sub-project level, CIUs the national safeguards & M&E specialists will be responsible for monitoring and reporting of contractor's compliance to the ESMPs. At the programme level, the PMU Regional Lead Environmental & Social Safeguards Specialist will ensure monitoring of environmental and social performance at sub-project level involvement contractors/implementation partners. The Regional Lead Environmental & Social Safeguards Specialist will report their findings in the programme's E&S monitoring reports for FAO and GCF (this will be done on a six-monthly basis, or as agreed with FAO and GCF in accordance with the legal agreement). The CIU will be responsible for monitoring and evaluating implementation of the Stakeholder Engagement Plan, including responses to grievances and/or complaints of the programme/sub-project affected peoples as well as project workers (see Section IX for the GRM).
- ***E&S monitoring during implementation of activities/operation of infrastructure:*** Specialized training will be provided on risks inherently associated with project activities

that involve any sort of water management, waste management, occupational health and safety, and community health and safety. E&S staff must pay extra attention – proportional to the more substantial risks – to those activities during implementation. To ensure sustainability after project closure, the awareness and capacity of government staff and related implementing agencies must be increased through trainings and during implementation supervision. This will require E&S capacity building led by safeguards staff and in collaboration with other programme staff (including extension staff). CIUs will detail progress in terms of safeguards implementation in the sub-projects' E&S monitoring reports for submission to the Regional Lead Environmental & Social Safeguards Specialist in the PMU. The PMU will then aggregate and submit the information to FAO's ESM-Unit and the GCF.

6. Implementation arrangements

6.1 Responsibility for ESMF implementation

174. In line with the programme's implementation arrangement discussed in Chapter II, the programme/sub-project owners are implementing agencies and therefore responsible for ESMF implementation. The PMU's Regional Lead Environmental & Social Safeguards Specialist will be responsible for ensuring effective application of the ESMF for all activities, however predominant responsibility of implementation will belong to the CIUs' National Social Safeguards & Gender Specialists (one per country, working in collaboration with the National M&E Specialist and, during the first two years, the FAO Land Tenure Team). Support for environmental risk assessment & monitoring will be provided via project staff focused on land restoration and NTFP value chain development, as it will be written into their TORs. Sample Terms of Reference (TORs) for the safeguards specialists can be found in Appendix 4 of this ESMF. The PMU-level responsibility includes overall planning and supervision of E&S activities (including support for hiring of the qualified National Social Safeguards & Gender Specialists within the CIUs) and providing E&S training and technical assistance, including supervision, monitoring, and reporting of E&S implementation to FAO and the GCF every six months. When necessary, the PMU and CIUs will also ensure training and coordination with relevant ministries (e.g. Ministry of Health, in instances where activities involve occupational health and safety) on similar subjects of overlap.

175. The CIU sub-project owners, with support of the PMU Regional Lead Environmental & Social Specialist, are responsible for: (i) hiring qualified specialists to prepare and finalize E&S documents (ESMPs, EM Plans, GAPs, and the updated SEP, etc.); (ii) securing FAO clearance of E&S documents and approval of the government; and (iii) implementing the ESMPs, SEPs, EM Plans, Gender Action Plan, and any other risk management aspect required (e.g. if a "Livelihoods Plan" chapter is required in the ESMP for instances where livelihoods may be temporarily affected due to land use/access). A qualified national consulting firm may be hired/subcontracted to assist during the implementation of the ESMP, SEP, EM Plan, and Gender Action Plan, if needed. The sub-project owner will also ensure that the (i) final sub-project design has incorporated measures to mitigate potential negative impacts during initial installation/implementation and operations; (ii) final ESMP and Codes of Conduct on workers' behavior and prevention of SEAH are incorporated into bidding and contract documents; and (iii) contractors/implementation agencies are aware and committed to complying with these obligations, with E&S actions built into the contract cost. After approval, the sub-project owner is responsible for ensuring that the ESMP, SEP, EM Plan, and Codes of Conduct on Prevention of SEAH (if applicable) are effectively implemented and monitored.

6.2 Monitoring and reporting arrangements

176. The E&S performance will be included in the sub-project and overall project progress reports. The national safeguards specialists in each of the CIUs and the related National M&E Specialist will monitor and report on the E&S performance of the programme. Sub-project owners will submit E&S performance reports to the National Social Safeguards & Gender Specialist on a monthly basis (unless determined otherwise, given the frequency/nature of the activity in the sub-project). Within the CIU, the National Social Safeguards & Gender Specialist will prepare national-level E&S monitoring reports twice per year for submission to the Regional Lead Environmental & Social Safeguards Specialist. At the PMU level, the Regional Lead Environmental & Social Safeguards Specialist will prepare annual safeguards reports as part of the larger annual project reports for FAO and the GCF, describing the programme's progress and compliance with the FAO/GCF safeguards standards and other requirements.

177. The progress report submitted to the PMU must include sufficient information on sub-project implementation progress and E&S issues related to ESMF implementation. The overall progress report from PMU to be submitted to FAO and the GCF must include adequate information regarding: (i) preparation and disclosure of the E&S instruments for sub-projects in each country of implementation; (ii) implementation progress of the ESMP, including incorporation of the safeguards requirements in the bidding and contractual documents for subcontracted parties/implementation partners; (iii) monitoring and supervision on implementation performance of contractors/implementation partners/CIUs, according to the ESMP, GAP, EM Plan, and Codes of Conduct for the Prevention of SHEA; and (iv) any challenges, solutions, and lessons learned during E&S/ESMF implementation. **Table 11** provides a summary of reporting procedures.

Figure 20 Reporting procedures

	Report Prepared by	Submitted to	Frequency of Reporting
1	Contractor to the Employer	Implementation Agency	Once before activities commence and monthly thereafter (short reports on E&S implementation, depending on the activity)
2	Implementation Agency/Contracted Party	CIUs	Monthly
3	Community Groups (Community Monitoring)	CIUs	When the community has any complaint about the sub-project E&S/ESMF implementation
4	CIUs	PMU	Once every six months, in accordance with any signed legal agreements
5	PMU	FAO and GCF	Annually, in accordance with any signed legal agreements.

Source: Author's own elaboration.

6.3 Incorporation of ESMF into project operational manual

178. The ESMF process and requirements will be incorporated into any guiding Programme Implementation Manual (PIM)/Programme Operational Manual (POM) and the PMU will provide training to ensure that the sub-project owners (CIUs/ Executing Entities) understand them and are able to supervise and monitor the ESMF implementation periodically. The E&S section in the POM will also refer to this ESMF and related safeguards documents, as needed.

7. Capacity building, training, and technical assistance

7.1 Institutional capacity assessment

179. As there are eight countries involved with implementation of SURAGGWA, and involvement of regional agencies like the Great Green Wall Agency, an institutional capacity assessment will be conducted as part of the baseline studies in the first year of implementation. This capacity assessment will determine: (i) institution(s) responsible for environmental management, land tenure, rural development and the governance, activities related to NTFP, water management, gender/social inclusion, sexual harassment/exploitation/abuse, etc.; (ii) existing processes followed for management of E&S risks in each country; (iii) experience of those institutions in addressing internationally accepted environmental and social safeguards and implementation of internationally financed investment projects; and (iv) remaining needs/gaps in capacity.

180. To ensure effective and consistent training on E&S, the training should be provided by the qualified safeguards staff (e.g. FAO ESM-Unit Safeguards Specialists, Regional Lead Environment & Social Safeguards Specialist, National Social Safeguards & Gender Specialists, and/or FAO Land Tenure Specialist(s), as needed). There must also be training to ensure the effective performance of contractors – including provision of adequate services related to health, safety of workers and local communities. Training and capacity building on the application of the FAO/GCF ESS will be required.

7.2 Training and technical assistance

181. Training and capacity building on the FAO/GCF ESS should focus on familiarity with and understanding the concepts of proportionality and adaptive management. It must also cover the implementation of the safeguards documents, particularly as they relate to (i) contractor management and monitoring of E&S issues concerning labour; (ii) community health and safety; (iii) environmental health and safety; (iv) land tenure, management, and grievance redress; and (v) requirements for systematic stakeholder engagement. The targeted training programs focused on E&S risk management could also help strengthening inter-agency coordination and cooperation which is critical for ensuring effective management of all aspects of land restoration and NTFP value chain development/NTFP production along the Great Green Wall. Given the programme structure and the plan to implement a sub-project in each country involved, significant inputs from qualified national consultants will be required, along with on-the-job training on assessing risks and impacts management during preparation and implementation.

182. During implementation of the programme, E&S training and technical assistance will be provided to the implementing agencies both at the programme and sub-project level. During the first two years, the PMU (with support from CIU safeguards staff) will conduct at least one safeguard training workshop per year to the sub-project owners regarding the ESMF process and needs for preparation of safeguard documents (ESMPs, SEP, EM Plans, GAP, etc.). When possible, an FAO ESM-Unit Safeguards Specialist and/or FAO Land Tenure Specialist will participate in these training workshops. Safeguards technical training for any other specific issues and related aspects should

occur at least once per year for the following years. This could be combined with the regular annual trainings held under the programme.

183. Priority for training should include, but is not limited to, the following:

- (i) The ESMF process and guidelines for preparation, implementation, and supervision of E&S instruments designed for SURAGGWA and its sub-projects;
- (ii) Specific training on land tenure, land use/benefits sharing, and management of commons land, with the support of the FAO Land Tenure Team (during the first two years of implementation);
- (iii) Specific training on the Ethnic Minority Plans, SEP, and Gender Action Plan with regard to planning and implementation, including the application of differentiated GRM pathways to more effectively respond to local complaints;
- (iv) Specific training on supervision and monitoring of contractor performance, including forms and reporting processes; basic knowledge on health and safety; good practices for reducing potential impacts on local environment and local peoples; Codes of Conduct on Prevention of SHEA; and communication and GRM procedures and other social issues related to communicable diseases (including covid-19), etc.;
- (v) Specific training on IPM; safe use and disposal of pesticides/herbicides/chemical fertilizers in instances where they may be present in project areas;
- (vi) Specific training on sustainable water management, particularly when utilizing boreholes for water provision in nurseries;
- (vii) Specific training on the use of PPE and best practices (during construction, pesticide application, etc.).

7.3 Technical assistance on E&S capacity building

184. Given the specific needs related to E&S training and limited capacity of some agencies with respect to the FAO FESM and GCF ESS, the Regional Environmental & Social Safeguards Specialist, in collaboration with the National Social Safeguards & Gender Specialists mobilized by the PMU and CIUs will need to provide E&S training, supervision, monitoring, and reporting of the ESMF implementation and ESS compliance to FAO and the GCF. If required by FAO and/or the GCF, the PMU will also mobilize an independent monitoring agency (IMA) for monitoring of EM Plan implementation, voluntary land donation (if applicable), and other E&S consultants to assist in the preparation and/or monitoring of various E&S activities during implementation. CIUs may mobilize E&S consultants (either individual or hired through a firm) to assist in the implementation of ESMF, preparation of E&S documents, and mitigation measures of the sub-projects under their responsibility.

8. ESMF implementation budget

185. The following ESMF implementation costs are covered under the full-time employment of the Regional Environmental & Social Safeguards Specialist (responsible for regional reporting, training, and support) in the PMU, the full-time National Social Safeguards & Gender Specialists in each CIU (responsible for: preparation of E&S documents of sub-projects, including consultation with local authorities and communities; supervision, monitoring, and training workshops on E&S issues; implementation and monitoring of the ESMPs, SEP, and GAP (with the support of the full-time

National Monitoring & Evaluation Specialist); and ensuring implementation partners follow the ESMPs accordingly); and technical advisory support from FAO's Land Tenure Team during the first two years of the programme. The remaining safeguards related activities (training, capacity building, consultations) have been mainstreamed into the programme budget via component activities and/or related staff (e.g. the National Monitoring and Evaluation Specialist in each CIU). Financing of the ESMF implementation budget will come from a blend of government and GCF funds. When needed, qualified national (individual or firm) consultants for capacity building and training on ESMF implementation and the concepts of the FAO FESM and GCF ESS will be provided.

186. Costs related to staffing, implementation, and monitoring of the ESMF, as well as costs more broadly focused on safeguards and built into existing project activities can be found in Table 12.

Table 14 Estimated ESMF implementation cost

Line Item	Estimated cost (USD)	Remarks
National Ecological and M&E Specialist (CIU) (see Project's detailed budget plan: national DT 3.1)	USD 2,088,000 (261,000 USD per CIU for 8 years)	The PMU will be responsible for management of this budget.
National Gender & Social Safeguards Specialist (CIU) (see Program detailed budget plan: national DT 1.1)	USD 2,160,000 (270,000 USD per CIU for 8 years)	
Regional Environmental & Social Safeguards Specialist (PMU) (see Program detailed budget plan: regional DT 1.1)	USD 1,050,000 (120,000 USD per year for 10 years)	
FAO technical assistance for integrating Land Tenure (see Program detailed budget plan: regional DT 1.1)	USD 600,000	
Technical assistance to Analyze existing mechanisms and tools throughout the PAGGW (see Program detailed budget plan: regional DT 3.1)	USD 75,000	

Source: Author's own elaboration.

9. Grievance redress mechanism (GRM)

187. The grievance redress mechanism (GRM) is an integral programme management element that intends to seek feedback from beneficiaries and resolve grievances about project activities and performance. The mechanism for SURAGGWA depends on the country of implementation, as some countries will implement directly and others will involve FAO as the executing entity, however the process of grievance elevation and resolution is the same. Regardless of the EE, the GRM is designed to meet FAO and GCF requirements and, most importantly, draws upon existing, community-specific grievance redress mechanisms preferred by the local beneficiaries. **For the SURAGGWA GRM, please refer to Annex 7: Stakeholder Engagement Plan chapter on the Grievance Redress Mechanism.**

188. **FAO's approach to the GRM:** FAO is committed to ensuring that its programs are implemented in accordance with the Organization's environmental and social obligations. In order to better achieve these goals, and to ensure that beneficiaries of FAO programs have access to an effective and timely mechanism to address their concerns about non-compliance with these obligations, the Organization, in order to supplement measures for receiving, reviewing and acting as appropriate on these concerns at the program management level, has entrusted the Office of the Inspector-General with the mandate to independently review the complaints that cannot be resolved at that level.

189. FAO will facilitate the resolution of concerns of beneficiaries of FAO programs regarding alleged or potential violations of FAO's social and environmental commitments. For this purpose, concerns may be communicated in accordance with the eligibility criteria of the Guidelines for Compliance Reviews Following Complaints Related to the Organization's Environmental and Social Standards^[1], which applies to all FAO programs and projects.

190. Concerns must be addressed at the closest appropriate level, i.e. at the programme management/technical level, and if necessary at the Regional Office level. If a concern or grievance cannot be resolved through consultations and measures at the programme management level, a complaint requesting a Compliance Review may be filed with the Office of the Inspector-General (OIG) in accordance with the Guidelines. Program and project managers will have the responsibility to address concerns brought to the attention of the focal point.

191. The principles to be followed during the complaint resolution process include: impartiality, respect for human rights, including those pertaining to indigenous peoples/ethnic minorities/vulnerable persons, compliance of national norms, and coherence with the norms, equality, transparency, honesty, and mutual respect.

192. **GCF independent redress mechanism:** The GCF has also established an Independent Redress Mechanism (IRM) under its decision GCF/B.16/20. The IRM has two main functions - those related to the reconsideration of funding decisions and those related to complaints from persons adversely affected by projects. It is guided by the principles of fairness, independence, transparency and responsiveness. The IRM contains modalities relevant for FAO as the AE as well as for the GCF.

193. The IRM lead receives the complaint and checks its eligibility. If found eligible, the lead reviews the situation and makes recommendation to FAO and national implementation agencies to take actions to bring the programme into compliance with policies and procedures of the GCF including social and environmental safeguards. The IRM may also recommend remedial plans to be implemented by the GCF, either itself or acting through its secretariat in conjunction with FAO. The IRM also includes the option to recommend the provision of financial redress to the complainants.

194. Complaints or grievances are not only an indicator of Project activities that were insufficiently screened, but also provide a valuable source of feedback and information that can help to improve project delivery. All SURAGGWA funded project stakeholders should therefore be actively encouraged to use the grievance mechanism. In addition to the complaints, all general requests for information should also be systematically recorded and answered. It is recommended the PMU and FAO team keep a log of such requests and periodically upload the provided responses to the related project website.

^[1] Available online at: <http://www.fao.org/3/a-i4439e.pdf>

195. **The GRM is an integral programme management element** that intends to seek feedback from beneficiaries and resolve of complaints on project activities and performance. The GRMs for the programme are based on FAO and GCF requirements and, most importantly, national requirements for solving potential problems between project owners/implementers and local residents/persons affected by the sub-project(s).

196. **Additional note on SEAH-related grievance management and GBV referral pathways:** FAO ensures that the programme personnel and the EEs will be trained on prevention of sexual exploitation, abuse, and harassment to achieve maximum prevention of SEAH and GBV. Sensitization campaigns will be carried out to support and catalyze community-driven support measures against SEAH. The programme's Grievance Redress Mechanism will be reinforced to deal effectively with SEAH and GBV incidents (including the development of a procedure to accompany the GRM on SEAH to ensure survivor-centered mechanisms that are gender-responsive and ensure confidentiality, and sensitive and ethical complaint and grievance handling). Referral pathways for GBV will be established and professionals trained for their operationalization, FAO E&S and Gender specialist in monitoring the process. All SEAH and GBV activities will be inclusive, survivor-centred, and gender-responsive. In case of SEAH/ GBV incidents, the services for survivors will be carefully considered during the implementation.

10. ESMF consultation and disclosure

10.1 Consultation requirements

197. Both FAO and GCF require that consultations be held with the programme affected peoples, local communities, vulnerable persons/ethnic minorities, and other relevant stakeholders. The consultations should provide information on the following aspects: a) purpose of the programme; b) results of the environmental and social assessment; and c) presentation of complementary studies required, in any instances where they apply. This ESMF has been prepared through a detailed consultative process at regional, national, and field levels. Consultation findings may be used for subsequent safeguards documents.

198. Consultation through community outreach during programme implementation is good practice to ensure that the potential adverse impacts and concerns are properly addressed. Consultation with affected populations and ethnic minorities is required when the activities involve ethnic minorities, changes in access to benefits and/or land use, and/or potential impacts on income/livelihood practices.

10.2 Consultation process summary

199. Public consultation is a key component of SURAGGWA and it was pivotal in preparation of the following documents:

- Environmental and Social Management Framework (ESMF);
- Ethnic Minority Plan (see Appendix 6 of this ESMF);
- Gender Assessment & Action Plan (GAP);
- Stakeholder Engagement Plan (SEP); and the
- Full Funding Proposal

200. For brevity, findings are provided in the SEP (Annex 7 of the Full Funding Proposal).

10.3 Initial public consultation results

201. Please refer to the SEP (Annex 7 of the Full Funding Proposal) to avoid duplication.

10.4 Information disclosure

202. FAO and GCF funded projects are required to disclose all safeguards related documents locally in an accessible place and in a form and language understandable to key stakeholders (in this instance, French and/or English, and the local language(s) of the country of implementation) and on the external website of the Great Green Wall Agency, associated national government ministry/ministries, FAO and the GCF prior to appraisal. Given the size of some of the safeguards documents, language translations may focus on the (i) executive summary; (ii) key risks/mitigation measures; and (iii) essential aspects needed for implementation.

Appendix 1. Exclusion list

FAO will not knowingly support, directly or indirectly, projects involved in activities, production, trade, or use of the products, or substances listed below. Additional exclusions may apply in the context of a specific project.

- Harmful or exploitative forms of child labour.
- Harmful or exploitative forms of forced labour.
- Forced evictions without the provision of and access to appropriate forms of legal and other protection.
- Activities that result in the exploitation of and access to outsiders to the lands and territories of Indigenous Peoples in voluntary isolation and in initial contact.
- Destruction of protected areas or other high biodiversity and High Conservation Value areas
- Construction or financing of dams over 15 m in height.
- Activities that are illegal under host country laws, regulations or ratified international conventions and agreements relating to biodiversity protection or cultural heritage.
- Activities or materials deemed illegal under host country laws or regulations or inter international conventions and agreements, such as:
 - products that contain any substances that are banned for use or trade under applicable international treaties and agreements, or meet the criteria of carcinogenicity, mutagenicity, or reproductive toxicity as set forth by relevant international agencies; and
 - wildlife or products regulated under the Convention on International Trade in Endangered Species or Wild Fauna and Flora (CITES).
- Cross-border trade in waste and waste products, unless compliant to the Basel Convention and the underlying regulations.
- Trade related to pornography and/or prostitution.
- Production and distribution of racist and discriminatory media.
- Project's activities for which any of the following products is having a primary role:
 - production, use or trade in radioactive materials³⁷ and unbounded asbestos fibres or asbestos-containing products;
 - blast fishing and large-scale pelagic drift net fishing using nets in excess of 2.5 km in length;
 - production or trade in alcoholic beverages (except beer and wine) and tobacco;
 - production, use, trade or distribution of weapons and munitions; and
 - gambling, casinos or equivalent enterprises.

More specific to the SURAGGWA programme, any sub-project that meets one or more of the following screening criteria will not be approved for financing under the programme:

- Land appropriation.
- Involuntary displacement of people and/or demolition of permanent homes or businesses.
- Use of the programme as an incentive and/or tool to support and/or implement involuntary resettlement of the local population and village consolidation.
- New settlements or expansion of existing settlements.

³⁷ This does not apply to the purchase of equipment, quality control (measurement) equipment and any similar equipment where the radioactive source is trivial and/or adequately shielded.

- Activities that may negatively impact ethnic groups/indigenous populations in the village and/or neighboring villages, or activities that are unacceptable to ethnic groups living in an ethnically homogeneous village or in a village with a mixed ethnic composition.
- Damage or loss of cultural property, including sites of unique archaeological (prehistoric), paleontological, historical, religious, cultural, and natural value.
- Activity that promotes inter-agropastoralist conflict.
- Restriction of access to resources (e.g., restriction of access to agricultural land) that cannot be mitigated and will negatively impact the livelihoods of ethnic groups and disadvantaged populations.
- Activity or infrastructure that alters transhumance corridors.
- Purchase of pesticides, insecticides, herbicides and other hazardous chemicals in excess of the amount needed to effectively treat the infected area.
- Excessive use of synthetic chemical fertilizers.
- Purchase of destructive farm equipment and other environmentally damaging investments.
- Use or overuse of mechanized tillage equipment or machinery that is inappropriate and destructive to the soil.
- Unsustainable exploitation of natural resources.
- Irrigation system of more than 20 hectares or a water withdrawal of more than 1000 m³/day.
- Boreholes are constructed without prior study (state of water resources, capacity of the water table, quantity of water to be extracted per day).
- Excessive use of agricultural water and resale for consumption
- Significant deforestation due to unsustainable practices or overharvesting of NTFPs.
- Significant conversion or degradation of natural habitat or where the conservation and/or environmental benefits do not clearly outweigh the potential losses.
- Introduction of non-native species, unless they are already present in the vicinity or are known not to be invasive in similar environments.
- Introduction of an invasive species or a practice that promotes their proliferation
- Introduction of a GMO species.
- Production of or trade in any product or activity considered illegal by the laws and regulations of SURAGGWA countries or by international conventions and agreements, or subject to international prohibitions.
- Trade in Timber and Reforested Forest Species.
- Labor and working conditions involving harmful, exploitative, involuntary or compulsory forms of labor, forced labor, child labor or significant occupational health and safety issues.
- Business activity that promotes the direct financing of non-state armed groups.
- Trade in any product with companies engaged in environmentally or socially exploitative behavior.
- Sub-activities including any project that will use or encourage the use of hazardous materials or prohibited chemicals.
- Trading in food, cosmetics and other products that are hazardous to human health

Appendix 2. Sub-project screening form

	Social and Environmental screening report – SURAGGWA
<p>It is important to screen each subproject to see if they will create social and environmental risks to the community. Even if there is a plan to lessen the risk to the community and to people within the community, those risks should be listed regardless of planned mitigation and management measures. It is necessary to identify potential inherent risks if mitigation measures are not implemented or fail. This means that risks should be identified as if no mitigation or management measures were to be put in place.</p>	
Section A: General information	
Date of screening:	
Name of sub-project:	
Main project component (to which sub-project relates):	
Name of applicant (implementing agency):	
Proposed sub-project budget:	
Proposed sub-project duration:	
ES Screening Team Leader and Contact Details:	
ES Screening Team Members:	
Program/Site/Activity location	
Sub-project Description. Briefly describe the sub-project activities, particularly as they interact with the environment and social context	
Categorize sub-project activities into high, substantial, moderate, and low risk activities.	

Section B: Exclusion list screening

Can you confirm that none of the activities involved those listed in the Exclusion List (Appendix 1 of the SURAGGWA ESMF)?: **Y / N**

Section C: Potential Environmental/Social risks impacts of activities *(sample to be updated once project activities are final-approved)*

Risk Category <i>(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no, or I don't know are applicable answers)</i>	Yes	No	Don't Know	If these risks ('yes') are present, please refer to:	Comments
General Assessment and Management of Environmental and Social Risks and Impacts					
Is a full Environmental and/or Social Impact Assessment required for the sub-project based on: (i) its risk rating? (e.g. high or substantial risk sub-projects); and/or (ii) national legislation within the SURAGGWA country?				ESMF	
Have there been any complaints from affected populations, local groups or NGOs about the rehabilitated sites and the conditions of the sub-project under which the land restoration took place? <i>If so, will project financing be used to remedy these complaints?</i>				ESMF Stakeholder Engagement Plan (SEP) Grievance Redress Mechanisms (GRM)	
Is there a risk of diversion of sub-project benefits?				SEP GRM Ethnic Minority Plan (Chapter in the ESMF) Gender Analysis & Action Plan (GAP)	
Does the sub-project plan to appropriate or deteriorate an area identified as a transhumance corridor, a grazing area, or pastoral infrastructure?				ESMF Grievance Redress Mechanisms (GRM)	
Is there a risk that sub-project benefits may not reach truly vulnerable populations?				SEP Ethnic Minority Plan (Chapter in the ESMF) GASIP	
Is there a risk of sub-projects being manipulated by different non-state armed groups?				SEP GRM	
Is there a risk that the selection of the activity location or beneficiaries will lead to conflict?				GRM SEP	
Is there a risk that the sub-project will develop unsustainable and destructive restoration techniques?				ESMF	

Risk Category <i>(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no, or I don't know are applicable answers)</i>	Yes	No	Don't Know	If these risks ('yes') are present, please refer to:	Comments
Labour and Working Conditions					
Does the activity include any of the known labour rights / ESS non-compliance risks in the SURAGGWA' countries (child and forced labor)?				ESMF	
Does the funded land restoration work include demolition of housing ? <i>If yes, a rehabilitation site-specific ESMP needs to be prepared</i>				ESMF Ethnic Minority Plan	
Does the highly degraded land restoration implementing agency or subcontractor have any significant outstanding fees, environmental fines or penalties, or other environmental obligations (e.g., pending legal proceedings involving environmental issues, etc.)? <i>If yes, will the financing be used to correct this condition and please explain?</i>				ESMF	
Does the activity, mainly for restoration, include highly intensive labour?				ESMF Occupational Health and Safety Guidelines (OHSG)	
Does the activity involve the use of heavy farm machinery, handling of farm machinery/equipment and could it pose occupational health and safety problems?				ESMF OHSG	
Is there a risk of lack of occupational safety and health for workers at restoration sites?				Develop an Occupational Health and Safety Plan (OHSP) based on the OHSG	
Is there a risk that women will be excluded and/or not included in equitable numbers?				ESMF SEP GAP	
Is the supply of jobs or contracts likely to create conflict or favor one commune over another?				SEP GRM	
Management of Resource Efficiency and Prevention of Environmental Degradation					
Will the activity lead to overexploitation of the resource?				ESMF	

Risk Category (Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no, or I don't know are applicable answers)				If these risks ('yes') are present, please refer to:	Comments
	Yes	No	Don't Know		
Will the activity cause diffuse pollution?				ESMF	
Will the activity result in the generation of dust and noise?				ESMF	
Will the activity result in soil erosion?				ESMF	
Will the subproject result in unsustainable management of available space, NTFPs resources, and other natural resources?				ESMF	
Will the activity disturb any fauna and flora?				ESMF and site-specific ESMP	
Will the activity result in the use of irrigation water with high salinity levels?				ESMF and site-specific ESMP	
Can the sub-project affect the surface or groundwater in quantity or quality? (e.g. discharges, leaking, leaching, boreholes, etc.)				ESMF and site-specific ESMP	
Will the sub-project activities require use of chemicals (e.g. fertilizers, pesticides, etc.), and/or might they prompt others to increase their use of chemicals?				ESMF and site-specific ESMP ESMF GAP GRM	
Does the subproject risk introducing highly invasive NTFP species?				ESMF and site-specific ESMP	
Does the programme risk the disappearance of local endogenous species in favor of other NTFPs?					
Community Health and Safety				ESMF and site-specific ESMP GRM SEP GRM	
Is there a risk of increased GBV/SEA cases due to labour influx?					
Does the activity have the potential to upset community dynamics?					
Will the activity expose community members to physical hazards on the sub-project site?					
Is there a possibility that the activity contaminates wells, potable water sources, and/or water used for agricultural activities?				ESMF and site-specific ESMP	
Can the activity contribute to the spread of disease (e.g. during pandemic situation)?				ESMF and site-specific ESMP	

Risk Category <i>(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no, or I don't know are applicable answers)</i>	Yes	No	Don't Know	If these risks ('yes') are present, please refer to:	Comments
Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement					
Will the proposed activity/sub-project require acquisition of land, e.g.: <ul style="list-style-type: none"> • Encroachment on private property • Relocation of project affected persons • Loss of private lands or assets • Impacts on livelihood incomes This includes displacement of a population, either physically or economically (e.g. relocation for construction purposes, temporary or permanent; activities which may lead to loss of income, assets or means of livelihoods). <i>If yes, a site-specific Resettlement/Livelihood Restoration Action Plan must be prepared</i>				ESMF exclusion list	
Is the sub-project located in a conflict area, or has the potential to cause social problems and exacerbate conflicts, for instance, related to land tenure and access to resources ?				SEP GRM ESMF	
Will the activity lead to disputes over land ownership?				ESMF SEP GRM	
Would the programme potentially discriminate against women and girls based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?				SEP GRM	
Biodiversity Conservation and Sustainable Management of Living Natural Resources					
Will the activity impact sensitive and/or protected areas?				ESMF	
Is there a risk that the sub-project causes ecological disturbances?				ESMF	
Is there a risk that the sub-project will cause (i) changes to landscapes and habitat; (ii) habitat fragmentation; (iii) blockages to migration routes; (iv) increased water consumption; and/or (v) contamination of natural habitats?				ESMF	

Risk Category <i>(Please check each line appropriately. At this stage, questions are answered without considering magnitude of impact – only yes, no, or I don't know are applicable answers)</i>	Yes	No	Don't Know	If these risks ('yes') are present, please refer to:	Comments
Is there a risk that the activity causes loss of precious ecological assets?				ESMF	
Cultural Heritage					
Will the subproject be located in or close to a site of natural or cultural value?				ESMF	
Is the subproject site known to have the potential for the presence of cultural and natural heritage remains?				ESMF	
Stakeholder Engagement and Information Disclosure				ESMF Appendix 5 (Chance Finds Procedures) SEP	
Is there a risk that the activity fails to incorporate measures to allow meaningful, effective and informed consultation of stakeholders, such as community engagement activities?				SEP	
Has there been historical exclusion of disabled persons or other marginalized groups (women, children, ethnic minorities, elderly) in the area?				SEP GRM	
Is there a lack of social baseline data?				ESMF	
Are women likely to participate in decision-making processes regarding the activity?				SEP ESMF	
Is there a risk that exclusion of beneficiaries will lead to grievances?				SEP GRM	
Is there a risk that the activity will have poor access to beneficiaries?				SEP GRM	

Section D: Summary of the screening process

E&S Screening		Results and Recommendation	
Screening Results: Summary of Critical Risks and Impacts Identified	What is the potential risk/impact	Individual Risk/ Impact Rating (Low, Medium, Substantial, High)	Mitigation At the end of the screen process, tabulate the mitigation measures in an ESMP Format (Appendix 3)
	<i>e.g. Increased use of pesticides due to increased production OR control spray methods</i>	<i>e.g. Medium</i>	<i>e.g. Pest management plan, along with training on OHS (e.g. how to use personal protective equipment (PPE), etc.)</i>
Is Additional Assessment Necessary? (<i>Evaluate the Risks/Impacts and reflect on options</i>)	Screening Result		Summary of Screening Result Justification
	1. No further ES Assessment required.		<i>e.g. "low risk sub-project"</i>
	2. No further ES Assessment required but requires simple ESMP.		<i>e.g. "low to medium risk sub-project"</i>
	3. Detailed ESMP. Done internally or by the sub-project implementing agency/partner.		<i>e.g. "medium risk sub-project, without need for ESIA, and implemented directly by the Provincial PMU or an implementation partner"</i>
	4. Detailed ESMP. Contracted to a third party.		<i>e.g. "substantial risk sub-project, without need for ESIA, but with the need for a third party consulting firm in order to avoid conflict of interest"</i>
	5. YES 2. ESIA required. Contracted to a third party.		<i>e.g. "substantial/high risk sub-project"</i>
	Is the activity excluded under the programme (does appear in the exclusion list of the ESMF)?		
	yes		no

Appendix 3. ESMP sample table of contents

An Environmental and Social Management Plan (ESMP) consists of a set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a programme/project to eliminate adverse environmental and social risks and potential impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures.

Site-specific ESMPs will be needed for all Category B (moderate risk) subprojects financed under the programme, especially those involving land tenure and access to benefits/land use. The ESMPs will be prepared by the National Social Safeguards & Gender Specialist with the assistance of Regional Environmental & Social Safeguards Specialist and, where applicable, the M&E Specialist and the FAO Land Tenure Team.

The following is a sample Table of Contents for a site-specific ESMP, which consists of:

1. Project and Subproject Descriptions, including subproject activities;
2. Overview of the Subproject Location;
3. Brief summary of legal framework (Government laws and regulations and FAO & GCF Environmental and Social Standards), including Policy Gap Analysis (with reference to the programme's main ESMF);
4. Environmental and social risks and impacts identified with the involved subproject. Potential subproject impacts should cover direct, indirect impacts. Where relevant, include cumulative impact assessment;
5. Proposed mitigation measures, including the type of impact related to any sub-contractors' Labour Management Procedures, Occupational Health and Safety Procedures, Community Health and Safety Plans, SEA/SH and other plans that may be necessary (cultural heritage, etc.);
6. Grievance Redress Mechanism;
7. Ethnic Minority Plan (EMP) and related considerations (*see Appendix 6 of the ESMF for guidance on preparation of the EMP chapter*)
8. Implementation arrangements (including Monitoring and Evaluation arrangements);
9. Implementation Schedule;
10. Cost Estimates and Budget;
11. Annexes.

A sample table for ESMP Monitoring can be found on the next page.

Sample table for esmp monitoring

ES RISKS AND IMPACTS	PROPOSED MITIGATION MEASURES	LOCATION	COSTS	EXECUTING AGENCY	SUPERVISING / MONITORING AGENCY
DETAILED DESIGN STAGE					
IMPLEMENTATION STAGE					
OPERATIONS AND MAINTENANCE STAGE					

Appendix 4. Sample terms of reference for safeguards specialists

TORs: Regional Environment & Social safeguards specialist

BACKGROUND: [This section must include the programme background, ideally tailored to the PMU]

OBJECTIVE:

The Regional Environment & Social Safeguards Specialist will be responsible for the implementation, monitoring, and reporting of all environment and social safeguards for the programme. This will include, when relevant, implementation of the programme's Grievance Redress Mechanism (GRM), and any items listed in the Environmental and Social Management Framework (ESMF). You will work in close collaboration with the National Social Safeguards & Gender Specialists based in each Country Implementation Unit (CIU), as well as the programme's Regional and National Monitoring & Evaluation specialists. You will report to the lead of the Programme Management Unit (PMU).

RESPONSIBILITIES:

- Train the national social safeguards & gender specialists and relevant project staff across the countries involved with SURAGGWA on how to apply and implement safeguards throughout the programme, including on managing instances of Sexual Exploitation, Abuse, and/or Harassment (SEAH).
- Liaise closely, as needed, with counterparts in the FAO ESM-Unit and/or GCF to ensure all project safeguards are aligned with the latest requirements
- Prepare, implement, and monitor environmental safeguards instruments, including the environmental & climate-risk aspects of ESMPs.
- Support national safeguards specialists and subproject team members in compiling the environmental baseline data for ESMPs at sub-project level based on requirements of the Government, FAO, and GCF
- Identify key issues & ways to manage issues pertaining to the environment, climate, and social context.
- Conduct consultations, in collaboration with the National Social Safeguards & Gender Specialist, with target communities in the programme areas to assess the (i) current environmental and social situation (at local level, this includes peoples' perception of the situation); (ii) environmental, climate, and social-related impacts of sub-projects; and (iii) mitigation measures (including the communities' recommendations/solutions) that can be taken pertaining to any negative impacts.
- Obtain data from, sensitize, and clearly explain to relevant government staff (or civil society organizations/partners, etc.) the data, M&E, and compliance requirements for environmental safeguards & climate risk considerations during programme implementation.
- Manage, along with the National Social Safeguards & Gender Specialists, the programme's Grievance Redress Mechanism – including sensitive cases pertaining to Sexual Harassment, Exploitation, and/or Abuse (SHEA)

MINIMUM REQUIREMENTS:

- Advanced University degree in Environmental Science, Biology, Environmental Engineering, Social Sciences, or any related field.
- Minimum of 5 years of relevant operational experience and proven track record in working land restoration projects, natural resources management, and/or climate projects, including compliance with Environmental and Social standards
- Familiarity with climate science and management of climate risks
- Working knowledge of English and French proficiency (additional knowledge of local languages is an asset).

CORE COMPETENCIES:

- Results Focus
- Teamwork
- Communication
- Building Effective Relationships

- Knowledge Sharing and Continuous Improvement

TECHNICAL/FUNCTIONAL SKILLS:

- Work experience in implementation and management of international safeguards standards pertaining to environment, climate, and land restoration activities.
- Knowledge of issues pertaining to land tenure, pastoralism, management of the commons, non-timber forest products, environmental management, climate, and biodiversity.
- Experience in implementing and managing Grievance Redress Mechanisms, including how to handle sensitive cases of Sexual Harassment, Exploitation, and Abuse (SHEA)
- Knowledge and understanding of international environmental and social safeguards standards and practices

SELECTION CRITERIA:

- Demonstrated capacity to supervise land restoration projects, natural resources management, and/or climate projects, including compliance with Environmental and Social standards
- Demonstrated ability to liaise with multiple agencies and contractors, effectively building an understanding and partnership with other UN bodies, NGOs, government agencies, and contractors as needed
- Ability to plan, organize, implement, and report
- Excellent communication, writing, and presentation skills in French and English
- Teamwork spirit, ability to work under minimum supervision
- Ability to build effective working relationships with national and international colleagues, with different cultural and technical backgrounds
- Proven strong communication, interpersonal and negotiation skills
- Analytical skills and experience.
- Ability to keep sensitive information as confidential.

TORs: NATIONAL SOCIAL SAFEGUARDS & GENDER SPECIALIST

BACKGROUND: [This section must include the programme background, ideally tailored to the specific CIU]

OBJECTIVE:

The National Social Safeguards & Gender Specialist will be responsible for the implementation, monitoring, and reporting of all social and gender-related safeguards for the programme in their given Country Implementation Unit (CIU). This will include, when relevant, implementation of the programme's Grievance Redress Mechanism (GRM), Gender Analysis & Action Plan (GAP), and any items listed in the Environmental and Social Management Framework (ESMF). You will work in close collaboration with the National Monitoring & Evaluation Specialist (based in the CIU), as well as the programme's Lead Regional Environmental & Social Safeguards Specialist based in the Programme Management Unit (PMU). You will report to the lead of the CIU and the SURAGGWA programme's Lead Regional Environmental & Social Safeguards Specialist.

RESPONSIBILITIES:

- Attend safeguards training from the Regional Lead Environmental & Social Safeguards Specialist and, once trained, support the Regional Lead Environmental & Social Safeguards Specialist by providing subsequent training for relevant project staff in your country of implementation on how to apply and implement safeguards throughout the programme, including how to address issues of Sexual Exploitation, Abuse, and/or Harassment (SEAH).
- Prepare, implement, and monitor the Environmental and Social Management Plans (ESMPs), Ethnic Minority Plans (EMPs) and Gender Action Plan(s) (GAP(s)) for subprojects sites in the country, in close collaboration with the National Monitoring & Evaluation Specialist, FAO Land Tenure Team (when applicable), and the Regional Lead Environmental & Social Safeguards Specialist.
- Compile the social baseline data for ESMPs, EMPs, and GAPs at sub-project level with information on demographics, ethnic/religious minorities, overall population, education, health, social protection, language(s), religion, land tenure, and any other areas required based on FAO and GCF guidelines.
- Ensure that environmental impacts and risks are also assessed and covered under the subproject ESMPs, drawing from relevant project staff for support on compiling the environmental data and making the assessment (in collaboration with the Regional Lead Environmental & Social Safeguards Specialist)
- Identify key issues & ways to manage issues pertaining to land tenure, ethnic minorities, gender, and social inclusion.
- Conduct consultations, in collaboration with the Regional Lead Environmental & Social Safeguards Specialist, with target communities in the programme area to assess the (i) current social situation (at local level, this includes peoples' perception of the situation); (ii) social impacts of sub-projects; and (iii) mitigation measures (including the communities' recommendations/solutions) that can be taken pertaining to any negative social impacts.
- Obtain data from, sensitize, and clearly explain to relevant government staff (or civil society organizations/partners, etc.) the data, M&E, and compliance requirements for social safeguards & gender/ethnic minority/social inclusion during programme implementation.
- Manage, along with the Regional Lead Environmental & Social Safeguards Specialist, the programme's Grievance Redress Mechanism – including sensitive cases pertaining to Sexual Harassment, Exploitation, and/or Abuse (SHEA)

MINIMUM REQUIREMENTS:

- Advanced University degree in Social Sciences, Gender Studies, International Development, or any related field to social inclusion/gender and social safeguards.
- Minimum of 5 years of relevant operational experience and proven track record in working land restoration projects, natural resources management, and/or climate projects, including compliance with Environmental and Social standards
- Working knowledge of English and French proficiency (additional knowledge of local languages is an asset).

CORE COMPETENCIES:

- Results Focus
- Teamwork
- Communication
- Building Effective Relationships
- Knowledge Sharing and Continuous Improvement

TECHNICAL/FUNCTIONAL SKILLS:

- Work experience in implementation and management of gender and social inclusion activities, and international social safeguards pertaining to land tenure, land use/access to benefits, natural resources management, and land restoration activities
- Knowledge of issues pertaining to ethnic minorities, gender, youth, and other vulnerable populations.
- Knowledge of issues pertaining to land tenure, pastoralism, management of the commons, non-timber forest products, environmental management, climate, and biodiversity.
- Experience in implementing and managing Grievance Redress Mechanisms, including how to handle sensitive cases of Sexual Harassment, Exploitation, and Abuse (SHEA)
- Knowledge and understanding of international environmental and social safeguards standards and practices

SELECTION CRITERIA:

- Demonstrated capacity supervise land restoration projects, natural resources management, and/or climate projects, including attention to issues of gender and social inclusion and compliance with Environmental and Social standards
- Demonstrated ability to liaise with multiple agencies and contractors, effectively building an understanding and partnership with other UN bodies, NGOs, government agencies, and contractors as needed
- Ability to plan, organize, implement, and report
- Excellent communication, writing, and presentation skills in French and English
- Teamwork spirit, ability to work under minimum supervision
- Ability to build effective working relationships with national and international colleagues, with different cultural and technical backgrounds
- Proven strong communication, interpersonal and negotiation skills
- Analytical skills and experience.
- Ability to keep sensitive information as confidential.

Appendix 5. Chance find procedure

The following “*chance find*” procedures must be included in all third-party contracts (e.g. Letters of Agreement) in instances where the contracted party is assisting with programme implementation.

National CIUs will ensure that the bidding documents and work contracts for include clauses on chance find procedures. Specifically, the clause will stipulate that if the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during programme implementation, the Contractor shall:

- Stop the activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local or provincial authorities take over;
- Notify the National Social Safeguards & Gender Specialist within the CIU who, in turn, will notify the responsible local and provincial authorities immediately (within 24 hours or less) and the Lead Regional Environmental & Social Safeguards Specialist in the PMU;
- Responsible local and/or provincial authorities would oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by government approved archeologists. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible local and provincial and/or national authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Project activities could only resume after permission is given from the responsible local or provincial and/or national authorities concerning safeguard of the heritage.

Note that the reporting of chance finds only occurs when an item/area/etc. of cultural significance is found, and is only carried out insofar as what is detailed above (i.e. reporting the find, reporting how the item/area will be treated moving forward). Reporting begins with the local level implementer (e.g. staff tasked to the implement the programme within a village) notifying the National Social Safeguards & Gender Specialist, after which, the National Social Safeguards & Gender Specialist guides the process according to the instructions above (e.g. notifying the relevant government authorities and the Lead Regional Environmental & Social Safeguards Specialist).

Appendix 6. Ethnic minority planning framework (EMPF)

1. In the absence of knowing exact sub-project locations at the time of design, this appendix serves as an ethnic minority planning framework, outlining background information on ethnic minority groups/Sub-Saharan Historically Underserved Traditional Local Communities (hereafter referred to only as ethnic minorities/ethnic minority groups, for simplicity) across the Sahel and providing guidance on how to develop the Ethnic Minority Plans (EMPs) within the country specific ESMPs, including conduction of Free, Prior, and Informed Consent (FPIC) with those communities across the programme's areas of intervention. This framework is consistent with both the GCF Indigenous Peoples' Policy (and GCF ESS7), as well as FAO ESS9.
2. This EMPF is designed to clarify the principles, organizational arrangements, and criteria to be applied to subprojects and activities during programme implementation in areas where ethnic minorities may be present in or have a collective attachment to the area. This EMPF builds on and clarifies:
 - The types of subprojects likely to be financed under the programme (please refer to ESMF Chapter II for the list, specifically sub-section 2.2);
 - Background information on ethnic minority communities in the Sahel region and SURAGGWA-participating countries;
 - The potential positive and adverse impacts of such projects or subprojects on those ethnic minority communities;
 - A plan for carrying out the assessment for such projects or subprojects (please refer to ESMF Chapter 5 and also Appendices 1 and 2);
 - The framework for ensuring the meaningful consultation tailored to ethnic minority communities and, in the specified circumstances, a framework for ensuring their FPIC;
 - Responsible persons/institutional arrangements, including capacity-building where necessary, for screening project-supported activities, evaluating their effects on ethnic minorities, preparing Ethnic Minority Plans (EMPs) as part of the country specific ESMPs, and addressing any grievances;
 - Monitoring and reporting arrangements, including mechanisms and benchmarks appropriate to the programme; and
 - Disclosure arrangements for ethnic minorities.

I. Ethnic minority groups in the Sahel Region

3. The Sahel region of West Africa is home to a significant number of smaller ethnic communities. The following table serves as an open-ended (and non/exhaustive) summary of ethnic minority groups by country, based on those identified by the (i) International Working Group for Indigenous Affairs (IWGIA); and/or (ii) African Development Bank report on "Development and Indigenous Peoples in Africa" (2016). The groups listed also meet the requirements/IP

descriptions provided by the GCF IPP and FAO ESS9. Characteristics/information pertaining to those groups are listed in the last column, based on those sources.

Table 1: Ethnic Minority Groups by Country (NOT EXHAUSTIVE)

Country	Ethnic minorities ³⁸	Characteristics/Information (<i>from IWGIA and AfDB</i>)
Burkina Faso	<ul style="list-style-type: none"> • Fulani • Peul • Taureg 	<ul style="list-style-type: none"> • The Fulani are listed within the AfDB report, though not by IWGIA. More about the Fulani can be found in the next row (for Chad). They are pastoralists. • Pastoralist Peul are particularly concentrated in the northern regions of Séno, Soum, Baraboulé, Djibo, Liptaako, Yagha and Oudalan. Peul pastoralists are gradually becoming sedentarised in some parts of Burkina Faso. There are, however, still some who remain nomadic, following seasonal migrations and travelling hundreds of kilometres into neighbouring countries, particularly Togo, Benin, Ghana and Ivory Coast.
Chad	<ul style="list-style-type: none"> • Mbororo sub-group of the Fulani ("Mbororo Fulani") • Toubou 	<ul style="list-style-type: none"> • The Mbororo Fulani live primarily from pastoralism and subsistence farming. According to the 1993 census, they number some 250,000 clustered in the dry centre and tropical south where there is pasture for their livestock. It is estimated that they make up some 10% of the Chadian population. Many of the Fulani have emigrated to neighbouring Cameroon, the Central African Republic or Niger. They can be recognized by their way of life, culture, language, and by the discrimination they suffer. The Fulani are often poor, most of them are illiterate and they have no political representation at the national level. • The Toubous are considered one of the oldest groups currently living in the Sahara. Their origin remains a mystery and they have always been an enigma in the eyes of others. Warriors and pastoralists like many other Saharan peoples, these nomads are feared by their neighbours, and owe their reputation to their legendary capacity for adaptation and survival in the particularly arid environment of the Tibesti mountains. They rear camels and cattle and live largely in northern Chad, with the exception of small communities settled in Niger, Libya and Egypt.

³⁸ Based on both the International Working Group for Indigenous Affairs (IWGIA) identified groups, as well as those listed in the African Development Bank's publication "Safeguards and Sustainability Series: Development and Indigenous Peoples in Africa" (2016). URL: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Development_and_Indigenous_Peoples_in_Africa_En_-_v3.pdf

Country	Ethnic minorities ³⁸	Characteristics/Information (from IWGIA and AfDB)
Djibouti <i>*not listed in IWGIA or AfDB</i>	<ul style="list-style-type: none"> Not listed in IWGIA or AfDB 	<ul style="list-style-type: none"> N/A
Mali	<ul style="list-style-type: none"> Amazigh Taureg Moors Songhay Peuls Fulani 	<ul style="list-style-type: none"> The Amazigh are listed within the AfDB report, though without further information. The Tuareg (Tamazight speakers), the Moors (Arabic speakers) and, in riverine areas, the Songhay and Peuls (Fulani) are the main communities that inhabit the vast northern space that accounts for two-thirds of Mali. Their political alliances and their conflicts have shaped the history of a region in which there has been an interdependence between nomadic and settled populations, who have participated in vast economic, cultural and social exchange networks across the Sahara. The Tuareg live in the five administrative regions of northern Mali (Kidal, Timbuktu, Gao, Taoudenit and Menaka), known as Azawad by the autonomy movements. They also have a presence in the border areas of other states (Niger, Algeria, Libya, Burkina Faso). Fulani pastoralists are also present in Mali. For more on the Fulani, please refer to the row about Chad.
Mauritania <i>*not listed in IWGIA or AfDB</i>	<ul style="list-style-type: none"> Not listed in IWGIA or AfDB 	<ul style="list-style-type: none"> N/A
Niger	<ul style="list-style-type: none"> Taureg Fulani Toubou Peul 	<ul style="list-style-type: none"> Niger's ethnic minorities are the Tuareg, Fulani and Toubou, all of them transhumant pastoralists. The Peul are also listed as ethnic groups in the AfDB report, however not by the IWGIA for Niger The Fulani can be further subdivided into the Tolèbé, the Gorgabé, the Djelgobé and the Bororo. They are mostly cattle and sheep herders although some of them have converted to agriculture since losing their livestock during the droughts. The Tuareg raise camels and goats and live in the north (Agadez and Tahoua) and west (Tillabéry) of the country. The Toubou are camel herders who live in the east of the country around Tesker (Zinder), N'guigmi (Diffa) and along the border with Libya (Bilma).

Country	Ethnic minorities ³⁸	Characteristics/Information (from IWGIA and AfDB)
Nigeria <i>*not listed in IWGIA</i>	<ul style="list-style-type: none"> Ogoni 	<ul style="list-style-type: none"> The Ogoni are listed as a small-scale agriculture ethnic minority within the AfDB report, however not indicated by the IWGIA report.
Senegal <i>*not listed in IWGIA or AfDB</i>	<ul style="list-style-type: none"> Peul 	<ul style="list-style-type: none"> Although not listed, field consultations in February 2023 included the nomadic Peul pastoralists within Senegal. For more information on the Peul, please refer to the earlier rows in this table.

II. Legal Status of Ethnic Minorities/Traditionally Underserved Sub-Saharan Communities in West Africa

4. **Indigenous Peoples vs. Ethnic Minorities/Traditionally Underserved Sub-Saharan Communities:** The recognition of Indigenous People in Africa is gradually rising. A few African countries (noticeably central African countries) have so far recognized the existence of Indigenous Peoples, and countries such as Kenya and Namibia are also gradually opening up; however, widespread lack of constitutional recognition persists in all other parts of Africa – including the Sahel region/West Africa. One of the biggest challenge facing indigenous populations is the lack of state recognition. Given the challenges in determining who the Indigenous People are in Africa, African countries have not taken keen interest in constitutionally defining and recognizing indigenous persons. For now, the closest approximation available is information provided by the International Working Group for Indigenous Affairs (IWGIA) and information published by International Financing Institutions like the World Bank and/or Multilateral Development Banks/Regional Development Banks (like the African Development Bank) on ethnic minorities and “Traditionally Underserved Sub-Saharan Communities” (a term used by the World Bank for the purposes of safeguarding social inclusion and minority communities within the region who may be more vulnerable and would otherwise by the United Nations Declaration on the Rights of Indigenous Peoples’ (UNDRIP’s) standards be recognized as indigenous peoples.

III. Potential risks and impacts on ethnic minorities from the programme

5. Due to the nature of the proposed project and its underlying activities, it is not anticipated that the ethnic minority groups described in Section I of this appendix will be exposed to any additional negative impacts or risks arising from the programme beyond those described in the Chapter IV (Subsections 4.2 and 4.3) of this ESMF. For more information on the overall potential negative impacts and risks arising from the programme, see Chapter IV of the ESMF.
6. Ethnic minority groups living in SURAGGWA-participating countries and subsequent areas of implementation may, however, experience particular difficulties in accessing project support. There are several unique factors that may shape their ability to benefit from the programme, including:
- Limited literacy and education levels relative to other segments of the population.

- b. Social, cultural, and/or lifestyle norms that may make it difficult for ethnic minorities to participate in trainings (e.g. transhumance and migratory patterns in relation to the seasons which limit engagement opportunities) when compared to participants from other segments of the population.
 - c. Their remote residences (including shifting settlements in instances of transhumance) often imply limited access to transportation and/or transport infrastructure, which may make it difficult for them to reach training sites.
 - d. The relevance of their income-generating activities to the farming systems and practices promoted by the programme;
 - e. Their (often) more limited incomes and savings, potentially more limited access to financial services, and potential lack of agreed use rights/access to the land being restored under the programme, which may inhibit them from adopting/transitioning to project-promoted practices and livelihood options even if they participate in project trainings; and
 - f. Ethnic minority communities may be at increased risk of exclusion, attack, and/or discrimination, based on reported past accounts as identified in Table 1 of this appendix. Part of the reason for this is due to their nomadic nature, which can bring the communities into conflict with settled communities who are not nomadic pastoralists.
7. The challenges and constraints will be factored into any eventual EMP developed under this project (typically as a chapter within the country specific ESMP), as will results from consultations already undertaken thus far with ethnic minority communities. The responsibility for developing the EMP is with the National Social Safeguards Specialist, with overall guidance from the Regional E&S Specialist, and in collaboration with the Land Tenure Team/Specialist and the National M&E Specialist, as needed. The outline for developing an EMP is provided in Section VI of this appendix.

IV. Guiding principles

8. This EMPF and any subsequent EMPs (which will be a section of the broader ESMPs under the programme) are based on the same guiding principles as the ESMF, with specific emphasis on the following:
9. **Human rights-based approach**, recognizing the centrality of human rights to sustainable development, poverty alleviation and ensuring fair distribution of development opportunities and benefits; supporting the universal respect for, and observance of, human rights and fundamental freedoms for all. All project activities shall respect the rights and responsibilities set forth in the Universal Declaration of Human Rights, the Committee on the Elimination of Discrimination against Women, the Beijing Declaration and Platform for Action and other applicable international instruments relating to human rights, including the ICCPR, the ICESCR, the Indigenous and Tribal Peoples Convention (ILO Convention No.169), the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and the International Convention on the Elimination of All Forms of Racial Discrimination.
10. The programme will uphold the principles of accountability and rule of law, participation and inclusion, and equality and non-discrimination, noting that prohibited grounds of discrimination

include race, ethnicity, gender and gender identity, age, language, disability, sexual orientation, faith, political or other opinion, national or social or geographical origin, birth or other status, including as a member of a minority.

11. **Country ownership**, aligning with national policies and priorities on social inclusion, including any national commitments to international human and women's rights agreements and/or treaties.
12. **Stakeholder engagement and consultation**, ensuring that women, men, and members of marginalized and vulnerable groups and communities shall be provided with an equal and equitable opportunity to be fully and effectively engaged in meaningful consultations and decision-making throughout the programme cycle – including the right to refuse participation if desired and the right to accept with conditions.
13. **Disclosure of information**, standard for all safeguards-related documents, with local language translations available. Disclosed information must be accurate, timely, and relevant/responsive to stakeholders, especially any marginalized individuals and communities.

V. Engagement Process with Ethnic Minorities and Vulnerable Populations

During Project Design:

14. For consultations, including those with ethnic minorities and vulnerable populations, please refer to Annex 7: Stakeholder Engagement Plan (and summary of consultations). The February 2023 consultations in Senegal involved discussions with Peul pastoralists, which are identified as an ethnic community within the region.

During Programme Implementation:

15. Given that Free Prior and Informed Consent (FPIC) can be considered a positive engagement practice, even if countries do not officially recognize indigenous peoples as present, this project will utilize the FPIC process in instances where ethnic minorities/Sub-Saharan Historically Underserved Traditional Local Communities (hereafter referred to only as ethnic minorities, for simplicity) are present, ensuring that minority communities are: (i) engaged with material in their relevant language/dialect(s); (ii) understand that benefits accrued under the programme are shared with all participants and community members; and (iii) given opportunity to confirm their respectively preferred Grievance Redress Mechanisms. As detailed in this Annex and in Chapter IX of this ESMF and the respective chapter of the Stakeholder Engagement Plan, the community specific GRM will likely include additional representation of minority groups to ensure fair and transparent redress.
16. To effectively consult and engage with ethnic minority communities during implementation, the following process will be followed:
 - a. Once project sites have been identified and grouped based on typology of investment (see ESMF section 2.2) or geographical area of intervention, the screening for potential risks – including risks pertaining to ethnic minority groups – will be undertaken. Based

on the screening, capacity building/training and stakeholder engagement information will be tailored to each site.

- b. **Safeguards screenings** will be conducted (as detailed in this ESMF).
- c. **FPIC consultations will commence in instances where ethnic minorities are present.** The National Social Safeguards Specialist in collaboration with the Land Tenure Team/Specialist (if relevant to the sub-project site) will conduct FPIC following the process detailed by FAO in the FPIC Manual for Project Practitioners.³⁹ It is understood that this will involve:
 - i. Consultation and consent **prior** to commencement of any project activities. This involves providing ethnic minorities with the time needed to discuss based on a decision-making timeline identified by the respective communities.
 - ii. Consent must be **free** – i.e., given voluntarily and without coercion, intimidation, or manipulation. It will also be obtained through a process which is sensitive and relevant to the ethnic minority community/communities involved.
 - iii. Provision of **information** to ethnic minority communities in their relevant language, in a clear, consistent, accurate, transparent, and accessible way that is culturally sensitive. Information will also be given on an ongoing basis throughout the programme; thus, it is not a one-time transfer of communication, rather, an ongoing relationship between communities and project implementers/practitioners.
 - iv. **Consent**, which refers to the collective decision made by the ethnic minority community (including women, youth, elderly peoples, and peoples with disabilities) reached through their own customary decision-making processes. The consent must be sought and granted (or withheld) according to the unique formal or informal political-administrative dynamic of each community.
- d. **Ethnic Minority Plans will be developed as a chapter within the country specific ESMFs** for areas with ethnic minorities, incorporating details obtained through the FPIC process and baseline information about those ethnic minorities. The EMPs will include identification and assessment of potential impacts on the communities, along with the mitigation measures and monitoring/reporting plan (this will be integrated with the M&E conducted jointly by the National Social Safeguards Specialist and M&E Specialist). Guidance for developing the EMPs is listed in section V of this appendix.

- 17. To ensure adequate and ongoing consultations, monitoring, and reporting for safeguards – including ethnic minority engagement – the programme already provisions for: (i) annual refresher trainings on safeguards; (ii) quarterly (or biannual, depending on the location) field-visits for consultations with participants/stakeholders to identify changes in status, potential concerns, etc.; and (iii) monitoring and reporting on ESMFs (including EMPs) every six months. The programme-recruited National Safeguards Specialist will be responsible for consultations related to the FPIC process and will provide ongoing engagement and support to the National

³⁹ <http://www.fao.org/3/a-i6190e.pdf>

M&E Specialist for monitoring and reporting insofar as it is related to ethnic minority communities.

VI. Development of Ethnic Minority Plans (within country specific ESMPs)

18. In instances where sub-project safeguards screenings indicate the presence of ethnic minorities, Ethnic Minority Plans must be prepared. The EMPs will be drafted by the National Social Safeguards Specialist, under the overall guidance of the Regional Environmental & Social Safeguards Specialist, and in collaboration with the Land Tenure Team/Specialist and/or M&E Specialist as needed. EMPs must practically explain how ethnic minority inclusion will be ensured in the programme area, as it relates to the ethnic minority/minorities present. To ensure adequate screening, development, and monitoring/reporting of the plans, the National Social Safeguards Specialist is responsible for working together with the relevant project staff to build their capacity in those areas and provide clearance on the relevant documents (prior to submission to the Regional E&S Safeguards Specialist). The following aspects must be detailed in the EMPs:

- **Baseline information.** Summarize relevant baseline information that clearly profiles ethnic minority peoples, including ethnic minority women, their circumstances, and livelihoods, with descriptions and quantifications of the natural resources upon which the ethnic minority communities depend. Include the methodology and references that describe how this baseline information was obtained, preferably from independent and participatory environmental and social risks and impact assessment processes.
- **Key findings and analysis of impacts, risks and opportunities.** Summarize key findings, analysis of impacts, risks and opportunities and recommended possible measures to avert or mitigate adverse impacts, enhance positive impacts, conserve, and manage their natural resource base on a sustainable basis and achieve sustainable community development in line with their plans.
- **Measures to avoid, minimize and mitigate negative impacts and enhance positive impacts and opportunities.** Clearly describe the measures agreed to in the process of information disclosure, consultation, and informed participation to avoid, minimize and mitigate potential adverse effects on ethnic minority communities, and to enhance positive impacts. Include appropriate action times that detail the measures to be taken, the responsibilities and agreed schedules, including for implementation (who, how, where, and when). Whenever feasible, avoidance or preventative measures should be given primacy over mitigatory or compensatory measures.
- **Community-based natural resource management.** Where applicable, focus on the means to ensure the continuation of livelihood activities key to the survival of these communities and their traditional and cultural practices. Such livelihood activities may include grazing, hunting, gathering or artisanal fishing. This part of the EMP clearly details the natural resources upon which ethnic minority communities depend and the geographically distinct areas and habitats in which they are located, will be conserved, managed, and utilized on a sustainable basis.
- **Result of consultations (during the environmental and social risks and impacts assessment process), the FPIC and future engagement plans.** Describe the process of information disclosure, consultation, and informed participation and, where relevant, the FPIC process,

including good faith negotiations and documented agreements with ethnic minority communities, and how issues raised have been addressed. The consultation framework for future engagement should clearly describe the process for ongoing consultations with, and participation by ethnic minority communities (including women and men), in the process of implementing and operating the programme.

- **Benefit sharing plans.** Clearly describe measures to enable ethnic minority communities to take advantage of opportunities brought about by the programme, and to conserve and manage on a sustainable basis the utilization of the unique natural resource base upon which they depend. Such opportunities should be culturally appropriate.
- **Tenure arrangements.** Describe who has rights over the targeted project land, both in State laws and under customary law, and how the legal status of the land will change under the programme and what effect this has on rights-holders.
- **Grievance redress mechanism.** Describe appropriate procedures to address grievances by ethnic minorities arising from programme implementation and operation (this may be the same as the GRM process described in the Stakeholder Engagement Plan, but must be specified within this section of the EMP chapter in the ESMP). When designing the grievance redress mechanism and procedures, the availability of judicial recourse and customary dispute settlement mechanisms among ethnic minorities will be taken into account. Ethnic minority women and men must be informed of their rights and the possibilities of administrative and legal recourse or remedies, and any legal aid available to assist them as part of the process of consultation and informed participation. The grievance mechanism should be readily accessible to ethnic minority peoples, including being able to engage with ethnic minority communities in a language and mode most comfortable to them. The grievance redress mechanism should ensure anonymity; provide for fair, transparent and timely redress of grievances without costs to those who raise grievances; and, if necessary, provide for special accommodations for women, youth and the elderly, and other vulnerable groups within the community, to make their complaints.
- **Costs, budget, timetable, organizational responsibilities.** Include an appropriate summary of the costs of implementation, budget, and responsibility for funding as well as the timing of expenditure and organizational responsibilities in managing and administering project funds and expenditures.
- **Monitoring, evaluation, and reporting.** Describe the monitoring, evaluation, and reporting mechanisms, including responsibilities, frequencies, feedback, and corrective action processes. Monitoring and evaluation mechanisms should include arrangements for ongoing information disclosure, consultation, and informed participation with ethnic minority communities (both women and men) and for the implementation and funding of any corrective actions identified in the evaluation process. Participatory monitoring such as community-based monitoring and information systems should be considered and supported.

VII. Budgetary allocation

19. Budgetary allocations for the development of and monitoring/reporting on EMPs is already included as part of the broader project budget (see ESMF Chapter VIII). The National Social Safeguards Specialist will ensure that EMPs include provisions to minimize any negative

risks/impacts on minority communities whilst also maximizing the extent to these communities benefit from the programme.

Appendix 7. Uxo clearance form

Project Title:

Name of Implementation Partner:

Reconstruction and rehabilitation Projects may present the risks of explosive war remnants (EWR) concealed in and under rubble (both unexploded ordnance - UXO, and deliberately planted explosives). Any repairs or reconstruction financed by FAO will only apply to those areas that have been declared safe of EWRs. Confirmation that Project locations have been cleared of landmines, EWR, IEDs and UXOs will be sought from the relevant authorities and stakeholders. No Project activities will be undertaken without this assurance. The declaration of absence of ERW will be a criterion to allow any FAO-financed works to proceed.

Was there armed fighting in the programme area within the last 20 years?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Has the area been used as ammunition depots, training camp by military or armed forces? Give details:	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Was there any landmine/UXO/EWR accident within the programme area within the last 20 years? Give details:	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Has the programme area been cleared for landmine/UXO/EWR in the past? When?:	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Are there any other elements indicating presence of landmine/UXO/EWR in the area? Give details:	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Mention the source of above information: <input type="checkbox"/> community <input type="checkbox"/> military <input type="checkbox"/> authorities <input type="checkbox"/> NGO <input type="checkbox"/> Documentation: Give details:		
Can the Implementation Partner declare to the best of his knowledge that the area considered as safe of mines before construction works?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Can the Implementation Partner take liability in case of landmine/UXO/EWR accident?	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Does the Implementation Partner request a landmine/UXO/EWR clearance before the programme can start? If yes, give information on the area to be cleared: <ul style="list-style-type: none"> • Current use: • Surface Exact location: (attach map and GPS data)	<input type="checkbox"/> No	<input type="checkbox"/> Yes

Date:

Name (Printed):

Signature:

Appendix 8. FAO screening checklist (completed at ESMF stage)

Please refer to the complementary document by this title.

Appendix 9. Conflict assessment, prevention and management

Introduction

1. Agriculture, natural resources, food security and nutrition can be sources of peace or conflict, crisis or recovery. Particularly in fragile, conflict-and violence affected (FCV) contexts, FAO is dedicated to making sure that our work avoids contributing to divisions, disputes and violent conflict, and does no harm. Where possible, positive contributions to local peace related to the Organization's mandate should be identified and supported.
2. The assessment, prevention and management of potential inter- and intra-community conflict during programme implementation is essential for the successful implementation of SURAGGWA. Therefore, it has been mainstreamed in the full proposal, as follows: section B.1 Climate Context; section B.2 Theory of Change Narrative and Diagram; section B.3, description of conflict prevention and management activities under component 1, land restoration; section D.3 Economic Development (under environmental and social co-benefits); section D.4 Needs of Recipient; section E.2 GCF Impact Level Paradigm Shift Potential; section E.5 Project-specific outcome and output indicators (under co-benefits); section F.1 Risk Factors and Mitigation Measures; section G.1 Environmental and Social Risk assessment' and section G.2 Gender assessment and action plan.
3. In the Environmental and Social Management Framework (ESMF), the issue of inter- and intra-community conflict and the importance of screening and managing project activities in order to prevent/reduce these is also highlighted throughout: in the Executive Summary; under Applicable laws and regulations (3.1); under Application of FAO and GCF Environmental, Social, and Climate Risks Standards/Procedures (3.2), under Environmental and social baseline (4.1), in Assessment of potential risk and impacts (4.2, where it is identified as the key social risk), in Proposed mitigation measures (4.3), and in the Exclusion List and Sub-project Screening Forms (appendices 1 and 2).
4. In the remainder of this appendix, three key issues are discussed: (i) FAO's engagement , guidance and tools that will be used for conflict assessment, prevention and management; (ii) the relevance of the recent conflict assessments carried out in three of the eight SURAGGWA countries; and (iii) the systematic approach that will be used to avoid land use conflicts in the programme areas, based on long-standing implementation experience in 10 Great Green Wall countries in the Sahel.

FAO's engagement, guidance and tools for conflict assessment, prevention and management

5. This engagement has long been expressed in FAO interventions in many countries with FCV contexts, but it was first formalized in the [Corporate Framework to Support Sustainable Peace in the Context of Agenda 2030](#) (English) (French) in 2018. The objective of this Corporate Framework is to guide FAO in carrying out its mandate in its areas of competence and comparative advantage, i.e. food security, nutrition and sustainable agriculture, towards a more deliberate and transformative impact on sustaining peace. Following the adoption of this

Corporate Framework, FAO has developed detailed guidance and tools for conflict assessment and management, as explained below.

6. In the remainder of this appendix, the recent conflict assessments carried out in three of the eight SURAGGWA countries are highlighted, and the systematic approach that will be used to avoid land use conflicts in the programme areas is discussed.
7. In recent years, FAO has developed corporate tools, guidance and training on context analysis, conflict sensitivity and sustaining peace. These guides and tools have been jointly developed with Interpeace, a global peace-building organisation, after extensive field-testing and feedback. These guides include:
 - FAO Guide to Context Analysis: Informing FAO Decision-Making (2019), see <https://www.fao.org/3/ca5968en/ca5968en.pdf>. The *Guide to Context Analysis* is an accessible and practical learning tool for country offices to document and institutionalize their knowledge of fragile and conflict-affected contexts. This Guide provides non-conflict specialists with an accessible and structured methodology to analyze and document a sub-national or national context. The Guide's structure is sufficiently flexible to suit an array of potential audiences or reporting formats including a rapid context analysis for a specific project, an area-based intervention, joint programming with other UN agencies, as well as a standalone strategic analysis to inform management decisions. The Guide can be read both as a standalone instructional aid on context analysis, as well as an essential precursor to FAO's Programme Clinic approach to design conflict-sensitive interventions, see below.
 - Fragile and Conflict Situations (FCS) risk assessment: - FAO Programme Clinic: Designing Conflict-Sensitive Interventions, Facilitation guide, see <https://www.fao.org/3/ca5784en/CA5784EN.pdf> and *Participant's workbook*, see- <https://www.fao.org/3/ca7494en/ca7494en.pdf>. The Programme Clinic is a key step in operationalising conflict-sensitive programming, being a structured participatory analysis designed to identify and integrate "conflict-sensitive" strategies into the design and implementation of FAO interventions. The objective is to minimize the risk of any negative or harmful impacts, as well as maximize any positive contributions towards strengthening and consolidating conditions for sustainable local peace. The Programme Clinic is designed in a way that empowers staff from the decentralised offices to facilitate the process effectively without needing to rely on external expert facilitation. The programme clinic, conflict sensitivity assessments, is generally undertaken in the development or inception phase. Conflict analysis is initiated by country office and decision making is decentralized. Conflict analysis is for strategic decision making, programming entry points, and informed intervention. These are not published, though the approach and recommendations are used by staff (project and M&E) as well as joint and implementing partners.
 - Operationalizing pathways to sustaining peace in the context of Agenda 2030 (2022), see <https://www.fao.org/documents/card/en/c/cc1021en/>. Following broad consultation across the Organization, this document provides operational guidance and inspiration to FAO project and technical staff on how to enhance FAO's contributions to peace. Identifying where FAO can positively contribute to social cohesion and peace must be anchored in robust theories of change. FAO places increasing importance on ensuring that our interventions make a positive contribution to peace – an objective shared across the United Nations system, and increasingly a requirement of our partners and donors. The focus of this how-to guide is to elaborate the

pathways through which the Organization can optimize deliberate contributions to peace, and inform the design, adaptation and impact measurement of its interventions.

8. Some additional resources, including animations, country examples and details on FAO staff expertise, are provided at the end of this appendix.

FAO conflict assessments in the SURAGGWA programme countries

9. In 2021-2022 FAO has completed conflict assessments for 3 of the SURAGGWA countries where there have been most conflicts, as follows:
 - [Burkina Faso – Analysis of conflicts over the exploitation of natural resources](https://www.fao.org/in-action/kore/publications/publications-details/en/c/1437597/), see <https://www.fao.org/in-action/kore/publications/publications-details/en/c/1437597/>
 - [Mali – Analysis of conflicts over natural resources](https://www.fao.org/in-action/kore/publications/publications-details/en/c/1437596/), see <https://www.fao.org/in-action/kore/publications/publications-details/en/c/1437596/>
 - [Le Niger – Analyse des conflits liés à l'exploitation des ressources naturelles \(in French\)](https://www.fao.org/3/cb6845fr/cb6845fr.pdf), see <https://www.fao.org/3/cb6845fr/cb6845fr.pdf>
 - [Burkina Faso, Mali et Niger – Analyse des conflits liés aux ressources naturelles dans les trois pays du Liptako-Gourma \(in French\)](https://www.fao.org/3/cb7446fr/cb7446fr.pdf), see <https://www.fao.org/3/cb7446fr/cb7446fr.pdf>
 - [The Niger – Analysis of conflicts over transhumance in Diffa region](https://www.fao.org/3/cb6957en/cb6957en.pdf), see <https://www.fao.org/3/cb6957en/cb6957en.pdf>
10. While these conflict assessments cover a wider thematic range of interventions than the SURAGGWA programme, they do provide highly relevant information on conflicts over land use and how these can be avoided or managed, which will be taken into account in the choice of sites and implementation modalities, especially for the programme's land restoration activities planned in these countries.

Systematic approach to avoid and reduce conflict due to SURAGGWA programme interventions

11. Over the past decade, FAO has gained significant experience with conflict prevention in land restoration efforts in the Great Green Wall (GGW) zone in many Sahelian countries, especially through the Action Against Desertification (AAD) projects funded by the EU and by the Turkish government, among others. FAO has assisted local communities in a variety of contexts in 10 GGW countries to restore degraded land in more than 1,000 sites and has encountered no major conflicts in applying its participatory approach in these areas.
12. Apart from applying standard safeguard practices, such as avoiding areas with unresolved land tenure issues (and other causes of potential inter- and intra-community conflict, see exclusion list in Appendix 1), the AAD approach emphasizes: (i) Broad-based community consultations to agree on objectives for restoring different types of lands and on species preferences, among others, and; (ii) ensuring that once restoration areas are prioritized, and agreed with the local administration, agreement on the timeline for activity plans and investments and on benefits

sharing arrangements is reached and a local management committee (COGES) is formed to ensure that agreements are implemented in practice. Detailed guidance for how to implement this conflict prevention approach in land restoration efforts is in FAO's 2020 Manual for large scale land restoration, see <https://www.fao.org/platforms/water-scarcity/Knowledge/knowledge-products/detail/a-manual-for-large-scale-restoration-to-support-rural-communities-resilience-in-the-great-green-wall-programme/en>

FAO's additional resources on FCV

Animations

- Conflict-sensitive programming: what is it and why is it important? ([English](#)) ([French](#)) ([Arabic](#))
- Visualizing the P in the Humanitarian-Development-Peace Nexus ([English](#)) ([French](#))

Please click [here](#) to see the entire playlist

Other useful links

- [Conflict Sensitivity: From Contextual Understanding to Conflict Sensitive Practice \(PowerPoint\)](#)
- [FAO's Contribution to Sustaining Peace](#) (brochure)
- [KORE - Knowledge Sharing Platform on Resilience](#)
- **Other country Examples:**
 - South Sudan: [Linking community-based animal health services with natural resource conflict mitigation in the Abyei Administrative Area](#)
 - Somalia: [Strengthening the resilience of rural communities through conflict-sensitive programming: Translating context analysis and conflict-sensitive recommendations into adjustment in project implementation in Lower Shabelle region](#)

FAO has several conflict analyses in the publishing pipeline, which includes Somalia (southern states), Northern Cameroon, Southern Kyrgyzstan, the Karamoja Cluster in Uganda, North Kivu and South Kivu in Democratic Republic of the Congo (DRC) as well as Haiti.

Staff working on conflict and peacebuilding:

Technical support to country offices is provided by:

- Headquarters:
 - Conflict and Peace Unit: Team leader, 2 conflict specialists and three staff working on forced displacement (policy and programming), 6 total.

- Sub-regional offices in Amman, Dakar and Nairobi: Providing technical support and backstopping to country offices within the sub-region.
- Country offices: Several offices (including Burkina Faso, Cameroon, Kyrgyzstan, Somalia, South Sudan) benefiting from dedicated conflict and peace analysts or focal points.
- Conflict & Peace roster: A global roster of conflict and peace specialists has been finalized with a view to being able to deploy vetted technical specialists to country offices on demand.

Staff safety and security in FCS:

The FAO's approach to security is aligned with the UN Security Management System (UNSMS) Security Policy Manual (https://www.un.org/en/pdfs/undss-unsms_policy_ebook.pdf).