Regional Policy Coherence Analysis

to scale up action and achievements of the Great Green Wall Initiative

CGIAR | ClimBeR: Building Systemic Resilience Against Climate Variability and Extremes

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

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CGIAR ClimBeR: Building Systemic Resilience Against Climate Variability and Extremes

Knowledge series

Contents

Acronyms

AAA	Initiative for the Adaptation of African Agriculture
AfDB	African Development Bank
AFR100	African Forest Landscape Restoration Initiative
ANR	assisted natural regeneration
AU	African Union
AUDA-NEPAD	African Union Development Agency - NEPAD
CAADP	Comprehensive Africa Agriculture Development Programme
CEN-SAD	Conference of Heads of State and Government of the States of the Community of Sahel-Saharan States
CBD	Convention on Biological Diversity
CNIS/GDT	National Strategic Investment Framework for Sustainable Land Management (Senegal)
COMESA	Common Market for Eastern and Southern Africa
CRGE	Climate Resilient and Green Economy Strategy
DPIP	Decennial Priority Investment Plan
EC	European Commission
ECOWAP	ECOWAS Common Agricultural Policy
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organisation of the United Nations
FMNR	farmer managed natural regeneration
GGW	Great Green Wall
GHG	greenhouse gas
GHRS	Global Harmonized Regional Strategy
GTP	Growth and Transformation Plan
IGAD	Intergovernmental Authority on Development
IFAD	International Fund for Agriculture Development
IPCC	Intergovernmental Panel on Climate Change
LDN	land degradation neutrality
LOASP	Agro-Sylvo-Pastoral Orientation Law
M&E	monitoring and evaluation
MEA	multilateral environmental agreement
Mha	million hectares
MRV	monitoring, reporting and verification
NAIP	National Agricultural Investment Plan
NDC	nationally determined contribution
NEPAD	New Partnership for Africa's Development
NGO	non-governmental organisation
NPCA	NEPAD Planning and Coordinating Agency
PA-GGW	Pan-African Agency of the Great Green Wall
PRSP	Poverty Reduction Strategy Papers
PPP	public private partnership
REC	Regional Economic Community
SDGs	Sustainable Development Goals
SFMFA	Sustainable Forest Management Framework for Africa
SLM	sustainable land management
SME	small and medium enterprise
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

The Great Green Wall initiative is a pan-African flagship programme of the African Union that seeks to tackle the triple challenges of desertification, climate change and loss of biodiversity. It aims to restore 100 million hectares of currently degraded land stretching across 8 000 km of Africa from west to east, sequester 250 million tons of carbon, and create 10 million green jobs by 2030 across the Sahel region (UNCCD, 2020; GGW website).

Preliminary results from the most recent Great Green Wall assessment report showed that only 4–20% of the initial land restoration target was reached by 2020 (UNCCD, 2022). The Great Green Wall is well into its second decade and the current round of the initiative (2021–2030) is therefore intended to **significantly scale up interventions** (Mansourian and Berrahmouni, 2021).

In supporting the enhanced impact and effectiveness of the Great Green Wall (GGW) initiative, **this report provides an overview of the existing strategies, investment plans and approaches guiding the 11 member states of the GGW as well as the key existing continental and regional policy processes related to land restoration and sustainable land management**.

It further provides an overview of the existing **policy framework to scale land restoration efforts** in four selected GGW member countries, namely Ethiopia, Mali, Senegal, and Sudan. The report highlights the regional dynamics that constitute the **main bottlenecks for the implementation of the GGW in the Sahel** and offers cross-cutting recommendations to address those bottlenecks and scale up land restoration and GGW implementation.

Existing policy environment

The Great Green Wall emerged as a policy response to the challenges experienced in the Sahel. It is currently one of the most recognized programmes on the continent and one of the largest development programmes in Africa. To ensure a coordinated approach for implementation, the Great Green Wall adopted a **Global Harmonized Regional Strategy in 2012**, which is the blueprint for the initiative and identifies cross-cutting actions required to address a wide range of concerns, including natural resource management, sustainability of rural production systems, the development of rural production and trade infrastructures, diversifying economic activities and wealth creation, and considering gender, youth and wealth issues in development.

In 2023, the Pan-African Agency of the Great Green Wall (PA-GGW) plans to release a new strategy document and a ten-year continental plan to guide the further implementation of the Great Green Wall. PA-GGW developed a **Decennial Priority Investment Plan 2021-2030** to improve the approach and overall framework for mobilizing investment and financing and to facilitate the identification and control of objectives, strategic indicators, added value and impact. The Decennial Priority Investment Plan 2021-2030 priority programme on the restoration and development of land and the protection of biodiversity constitutes the current framing orientation for implementing the restoration agenda in the Sahara and Sahel.

The **Great Green Wall Accelerator**, hosted by the United Nations Convention to Combat Desertification since January 2021, aims to develop a harmonized monitoring and evaluation system for Great Green Wall projects as well as contribute towards the mobilisation of funding to support the acceleration of the Great Green Wall initiative.

At the regional level, institutions like the African Union and the continent's Regional Economic Communities are integral to the process of mainstreaming issues such as land restoration into policies, strategies, and programmes for addressing climate change. Several strategies, agendas, plans and initiatives at the regional level demonstrate **the political will and leadership to drive a regional agenda for land restoration and combatting desertification**. This includes Agenda 2063, the African Union Green Recovery Action Plan 2021-2027, the Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience, the African Forest Landscape Restoration Initiative, the African Resilient Landscapes Initiative, the Sustainable Forest Management Framework for Africa 2020-2030, the African Union Climate Change and Resilient Development Strategy and Action Plan 2022-2032 and the Climate Investment Plan for the Sahel Region 2018-2030. The Great Green Wall is aligned with all these strategic frameworks.

The Great Green Wall initiative is a flagship programme of Agenda 2063 and is cited in the African Union Green Recovery Action Plan 2021-2027 under its Axis 3 "Biodiversity and Nature-Based Solutions" as one of the key initiatives aimed at combatting habitat degradation.

The second phase of the Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience 2021-2025 will focus on **launching and implementing ambitious ecosystem restoration projects and programmes** to make tangible progress towards achieving the commitments and targets made by countries under various initiatives, including the Great Green Wall. The Great Green Wall contributes to and is closely aligned with the African Forest Landscape Restoration Initiative. The Sustainable Forest Management Framework for Africa 2020-2030 highlights the Great Green Wall as a crucial opportunity for sustainable forest management.

Most recently, regional flagship initiatives such as the Great Green Wall have been emphasized in the African Union Climate Change and Resilient Development Strategy and Action Plan 2022-2032. The African Union Climate Change Strategy provides key enabling environment linkages at the regional level between the scaling of land restoration and protecting land-based ecosystems, strengthening climate action and supporting food system transformation under a changing climate. It also highlights that the Comprehensive Africa Agriculture Development Programme and National Agricultural Investment Plans did not sufficiently address adaptation to climate change (AU, 2022). To address this issue, the New Partnership for Africa's Development Planning and Coordinating Agency and the Department of Rural Economy and Agriculture of the African Union Commission have established a framework for the Comprehensive Africa Agriculture Development Programme agenda for adaptation to climate change and are building capacity to support Member States in developing climate-friendly National Agricultural Investment Plans and apply climate-smart agricultural methods.

Policy coherence

Overall, most strategies, agendas, plans, and initiatives are coherent between themselves, and **the level of incoherence is rather at the level of interpretation of these policies and implementation on the ground** (personal communication with Elvis Tangem, 2022). However, there is inherent tension within Agenda 2063, Comprehensive Africa Agriculture Development Programme and some regional economic communities' agricultural and climate change policies between the commitment to **sustainable agricultural practices that preserve the integrity of ecosystems**, on the one hand, and on the other hand, the vision of **modernisation and commercialisation of agriculture** that pushes for adoption of technologies that contribute to soil and environmental degradation and increase greenhouse gas emissions, such as the use of tractors in ploughing and the application of herbicides and chemical fertilizers (ASFA, 2020).

The regional economic communities articulate common principles to be considered in national policy designs, so these same issues may be replicated at national level in the different Great Green Wall member states.

Ethiopia

Looking at the overall policy context and policy coherence for addressing land degradation and targeting land restoration in the four Great Green Wall countries assessed in this report, Ethiopia has launched several national and regional initiatives to address climate change and has institutionalized its climate change response in the form of a **green growth economy** that emphasises increasing agricultural productivity, ending poverty and achieving middle income status. The Climate Resilient and Green Economy Strategy, launched in 2011, anchors the climate change policy framework and has placed emphasis on conservation, land restoration and climate change in the agriculture sector. The launch of the Green Legacy Campaign has demonstrated **political willingness to contribute to ecosystem restoration**. The Growth and Transformation Plan 2016-2020, the 2002 National Food Security Programme and the Agriculture Sector Strategy 2020-2030 all emphasize restoration and the conservation of natural resources. However, the overall conclusion is that **policies related to land degradation, land use, environment and climate change lack coherence and an efficient coordination mechanism** to produce more measurable outcomes.

Mali and Senegal

Overall, Mali and Senegal have a **coherent and integrated vision of addressing environmental concerns** through the mainstreaming of land degradation, restoration, sustainable agro-sylvo-pastoral resource management and climate change in the countries' sectoral policies, strategies, and plans.

In **Mali**, the Strategic Investment Framework for Sustainable Land Management, adopted in 2010, has informed the National Development Strategy 2019-2023, supporting **environmentally sound development** in the country and setting land degradation neutrality targets for the country. Several existing policies and strategies related to the environment are expected to contribute to the achievement of land degradation neutrality in the country by 2030, including the National Investment Programme for the Agricultural Sector 2015-2025.

In **Senegal**, the Emerging Senegal Plan is the central social and economic development framework document. Senegal has clearly defined its priorities in terms of the restoration of degraded lands. Land degradation is dealt with in a **cross-sectoral manner** and there are several legal instruments that contribute to the effective management of the problem, including the country's Nationally Determined Contribution, and the National Forest Policy 2005-2025. Senegal also has a national strategic investment framework for land restoration and management.

Sudan

In Sudan, the Comprehensive National Strategy 2003-2027 provides a framework for sustainable resource use and management. Unfortunately, **land degradation is not strongly prioritised in national and state level development frameworks**. Appropriate and coherent policies for sustainable natural resource management and for addressing existing inequalities in access to land and natural resources are not currently in place. In addition, the Agriculture Strategy and Action Plan supports the expansion of mechanized farming for agricultural development. There is lack of clarity over the semi-mechanized farming sector, with some policy recommendations made by the study "Sustainable Development of the Semi Mechanized Farming Sector in Sudan" prepared for the Government of Sudan and sponsored by the World Bank administered Multi Donor Trust Fund that have not been implemented because of resistance from big landholders.

Key bottlenecks for implementation of the GGW

Based on the four assessed countries as well as the broader regional assessment, some key common bottlenecks have been observed in the Sahara and Sahel region for the implementation of the Great Green Wall, namely:

1. **Political bottlenecks** such as the lack of harmonized mainstreaming of land restoration across sectors and jurisdictions; conflicting policy orientations (e.g., between the promotion of "modernized" agriculture and agroecology); the absence of a specific legal, regulatory, policy or strategic framework for agroforestry in the countries, together with the lack of systematic integration of agroforestry into forestry, agricultural or livestock policies; insecure land tenure and unclear land rights; and bias against pastoralists in existing land policies.

2. **Governance and institutional bottlenecks such as internal dysfunction in the governance and regional coordination of the Great Green Wall initiative**; lack of sufficient capacity in the national GGW agencies or focal points and national governments in terms of technical knowledge, capacity to generate bankable projects and address the complex and demanding requirements set by financial institutions; the lack of a stable institutional infrastructure with a clear mandate to drive implementation of the GGW, together with uncertain and overlapping institutional mandates; the lack of coordination between the GGW and other land restoration activities and programmes; incomplete decentralisation processes limiting the effectiveness of local institutions, including those in charge of land management; and lack of involvement of local populations and non-state stakeholders;

3. **Resources constraints**, especially the slow and insufficient release of funds from donors and difficulties in accessing the various climate funds;

4. **Lack of gender and youth consideration** in natural resource, land and environment policy formulation and implementation;

5. **Physical infrastructure constraints** such as insufficient irrigation systems in moisture-stressed areas;

6. Local dynamics linked to **instability and political unrest**; and,

7. **Weak monitoring and evaluation** due to scarcity of monitoring and evaluation expertise in the region, absence of a common framework and corresponding system to monitor, verify and report on Great Green Wall progress and achievements, as well as insufficient resources for developing long-term measurement, reporting and verification capacities.

Opportunities to improve enabling policy and institutional environment

Restoration success and the achievement of the Great Green Wall ambitions requires enabling policies, good governance, sufficient technical, operational, and financial capacities, incentives for communities to sustain their actions and continuous monitoring and learning (GGW Accelerator, n.d.). Opportunities and recommendations to improve the enabling policy and institutional environment and ensure that the ambitions for the Great Green Wall are realized include:

Promote Great Green Wall institutionalisation at the highest political level and enhance multi-level implementation and governance arrangements across scales while balancing security and development priorities.

Support policy reforms and policy harmonisation efforts, including developing and operationalizing agroforestry policy, addressing security of land and tree tenure, and promoting a decentralized approach to the use and management of natural resources.

Strengthen institutional governance through clarifying the various institutional mandates and setting a clear mandate to drive the implementation of the Great Green Wall; setting up multi-actor, multi-sector coordination mechanisms around the objectives of the Great Green Wall; and increasing the capacity of stakeholders.

Mobilize finance from public and private sources to support the acceleration of land restoration through the Great Green Wall, including leveraging opportunities with multilateral and bilateral stakeholders; and promoting a market-based approach with investment in small and medium-sized farms and strengthening commercially viable tree crop value chains.

Strengthen community participation and decision making, including by youths and women through grounded consultation and co-design with communities; and securing a youth-oriented agenda focused on protecting future generations by involving youths in policy formulation.

Develop monitoring and evaluation learning mechanisms, with the support of the Great Green Wall Accelerator, and

Invest in physical infrastructure (e.g., irrigation systems) in moisture-stressed areas.

1 Introduction

1.1. Emergence and objectives of the GGW initiative

The Great Green Wall (GGW) initiative is overseen by the Pan African Agency of the Great Green Wall (PA-GGW), an African Union agency based in Nouakchott, Mauritania. The GGW initiative is a flagship programme of the African Union (AU) aimed at tackling the triple challenges of desertification, climate change and loss of biodiversity. It aims to:

- **Restore 100 million hectares (Mha) of currently degraded land** stretching across 8 000 km of Africa from west to east;
- **Sequester 250 million tons of carbon**; and,
- **Create 10 million green jobs** by 2030 across the Sahel region (UNCCD, 2020; GGW, n.d.).

The approach of the GGW has evolved from the original intention of building a wall of trees across Africa, towards an **integrated landscape approach to sustainability** that is "a mosaic of different land use and production systems, including sustainable dryland management and restoration, the regeneration of natural vegetation as well as water retention and conservation measures" (UNCCD, 2020).

The initiative's goals include **contributing to halting desertification and land degradation** in the Sahelian zone, **improving the lives and livelihoods** of smallholder farmers and pastoralists in this area, and helping these vulnerable populations to **adapt to and mitigate climate change** (Mbow, 2017).

The **drastic loss of land productivity** in a region where populations are mostly dependent on agriculture and livestock, and thus on the natural resource base, was a strong common motivation across the region to engage in the GGW (Goffner et al., 2019). Strong political will was a central driver of the GGW. The GGW concept was first envisioned in the late 1980's by President Thomas Sankara and his peers, but it is only in 2005 that it became more formalised under the leadership of the former President of Nigeria, Chief Olusegun Obasanjo, with strong support by President Abdoulaye Wade of Senegal (GGW Accelerator, n.d.). The GGW emerged from the Conference of Heads of State and Government of the States of the Community of Sahel-Saharan States (CEN-SAD), held on 1-2 June 2005 in Ouagadougou, Burkina Faso (UNCCD, 2020). The Great Green Wall for the Sahara and Sahel was subsequently launched by the AU in 2007, with 11 founding country members (Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, and Sudan) (Goffner et al., 2019; Mansourian and Berrahmouni, 2021).

International alignment

The GGW is in line with the array of multilateral environmental agreements (MEAs) and multi-stakeholder initiatives by public, private and civil society actors that promote restoration at the international level (Sewell and al., 2020). These goals are found across a spectrum of conventions with different environmental and sustainability ambitions, including the three Rio Conventions addressing climate change, biodiversity and desertification (the United Nations Framework Convention on Climate Change - UNFCCC, the Convention on Biological Diversity - CBD, and the United Nations Convention to Combat Desertification - UNCCD), as well as the Ramsar Convention on Wetlands, the Sendai Framework for Disaster Risk Reduction, and the UN Forum on Forests (Sewell and al., 2020). In particular, the UNCCD aims at achieving land degradation neutrality (LDN) by 2030 through combatting desertification, restoring degraded land and soil (including land affected by desertification, drought, and flooding), and striving to achieve a land degradation-neutral world.

The GGW initiative is also in line with the Bonn Challenge, which aims to restore 150 Mha of the world's deforested and degraded lands by 2020, a goal which has been expanded by the New York Declaration on Forests to 350 Mha, to be achieved by 2030. Links to restoration are also found within the Sustainable Development Goals (SDGs), particularly SDG 15 on the protection, restoration, and sustainable use of ecosystems, SDG 1 ("no poverty"), SDG 2 ("zero hunger"), SDG 8 ("decent work and economic growth"), and SDG 12 ("responsible consumption and production") (Sewell and al., 2020). The GGW also has a strong climate action component (SDG 13), with the different sustainable land management (SLM) activities not only increasing countries' resilience and adaptive capacities to extreme climate events, but also contributing to climate change mitigation through their carbon sequestration potential (Sewell and al., 2020).

Initial implementation phase

Since 2012, **more than 50 SLM and ecosystem restoration projects have been initiated under the GGW**, involving a broad range of actors at national and regional scales, and ranging in focus from forestry and agriculture to water and soil conservation measures (UNCCD, 2022). However, preliminary results from the most recent GGW assessment report showcased that, depending on geographical scope, **only 4–20% of the initial land restoration target was reached by 2020** (UNCCD, 2022). To reach a total area of 100 Mha by 2030, it is necessary to significantly increase the pace of land restoration to 8.5 Mha annually (to date an average of 1.8 Mha has been restored annually).

Many lessons have been learned in the initial implementation phase of the GGW. The GGW initiative is well into its second decade of implementation and has evolved into an African-led pioneer initiative, which receives strong support from the international community as a flagship programme to combat land degradation, desertification, drought, climate change, biodiversity loss, poverty, and food insecurity.

The next round of the initiative (2021–2030) is intended to significantly **scale up interventions**, with targets to 2030 including:

- Improve food security for 20 million people;
- Support the millions of people living in communities across the Sahel; and,
- Provide 10 million smallholder farmers access to agricultural technologies that support resilience to climate change (GGW Accelerator, n.d.).

1.2. Objectives of the regional policy coherence analysis

To scale up action and impact of the GGW initiative, this report explores the various policy processes related to land restoration and sustainable land management aligned with the goals of climate change mitigation and adaptation across continental, regional and national levels and highlights the common policy challenges that have so far prevented the full implementation and scaling of the GGW.

The core idea of policy coherence is to ensure that policies are aligned so that efforts in one policy area do not undermine efforts in another area, and even reinforce those efforts where possible (Parsons and Hawkes, 2019). In the country studies for Ethiopia, Mali, Senegal and Sudan, policy coherence was assessed to ensure that development policies and policies in other 'sectors' (i.e., areas of public policy addressed by a specific ministry) are **mutually supportive** rather than conflicting. This is the concept of **horizontal coherence** between the policies of different sectors. Furthermore, the report explores how the regional policy and enabling environment is coherent and supportive of the national level (**vertical coherence**) and whether it creates synergies towards achieving the agreed objectives.

The findings of this report are based on several knowledge sources:

- a desktop literature review of the existing strategies and investment plans for the GGW as well as continental and regional policies related to land restoration and sustainable land management, agriculture, environment, climate change and gender and social inclusion;
- a review of the country policy framework analyses for Ethiopia, Mali, Senegal and Sudan for addressing land degradation and targeting land restoration;
- interviews with key regional stakeholders (e.g. from the AU, PA-GGW and NGOs); and
- presentations and exchanges during virtual regional events held on 25 October 2022 and 24 November 2022 on barriers and solutions for accelerating impact in the GGW.

The regional policy coherence analysis report is structured as follows:

- **Section 2** provides an overview and broad analysis of the existing strategies, investment plans and approaches guiding the 11 member states of the GGW;
- **Section 3** explores the policy documents of the AU and the Regional Economic Communities (RECs) that have a bearing on land restoration, agriculture, environment, climate change, as well as youth and gender, with a view to establishing their implications for promoting the GGW. It also provides some key insights in terms of policy coherence analysis at the regional level and implications for land restoration and addressing desertification in the Sahara and Sahel;
- **Section 4** provides an overview of the existing policy framework to scale land restoration efforts in four selected countries (Senegal, Mali, Ethiopia, and Sudan) and provides an overall policy context and policy coherence analysis for addressing land degradation and targeting land restoration in these countries. It also describes the extent to which land degradation and restoration interventions are addressed within national policy in Mali and Senegal specifically;
- **Section 5** emphasizes the regional dynamics that constitute the main bottlenecks for the implementation of the GGW in the Sahel; and
- **Section 6** suggests cross-cutting and regional recommendations to address those bottlenecks to scaling up land restoration and GGW implementation.

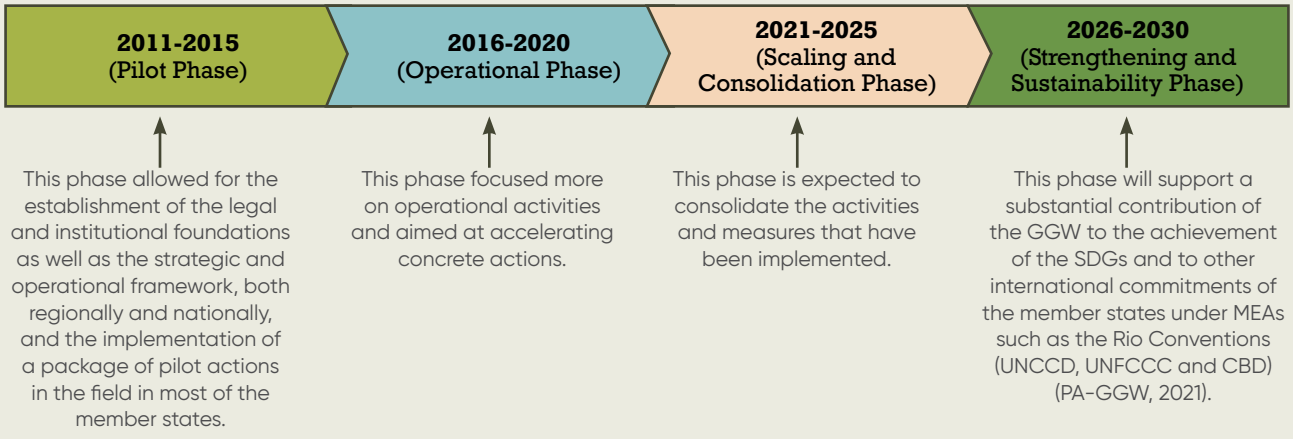
2 Mapping and analysis of the existing GGW strategies, investment plans and approaches

To ensure a coordinated approach for implementation, the GGW adopted a Global Harmonized Regional Strategy (GHRS) in 2012 to serve as a blueprint for the initiative, structured into five-year planning steps.

The GHRS includes elements regarding the foundation of the GGW concept, the genesis of the GGW initiative, the 2030 vision, the conceptual and operational approaches that inform the initiative, as well as the initiative's objectives, expected results and overall strategic indicators. The GHRS identifies cross-cutting actions required to address a wide range of concerns, including natural resource management, sustainability of rural production systems (agriculture, livestock breeding, forestry, water, etc.), as well as the development of rural production and trade infrastructures, diversifying economic activities and wealth creation, and integrating gender, youth and wealth issues in development (PA-GGW, 2021).

The GHRS developed a sequential approach with successive phases, as illustrated below.

The GGW emerged as a policy response to the challenges experienced in the Sahel. It is currently one of the most recognized programmes on the continent and one of the largest development programmes in Africa. The fact that policy leaders conceived the GGW and then supported implementation of the initiative by translating policy framing into actionable projects is rare enough to be emphasized (Personal communication with Elvis Tangem, Coordinator for the GGW at the AU Commission, December 2022). The GGW remains a cornerstone programme of Agenda 2063 and therefore constitutes a framework for all activities related to SLM in the drylands of the continent. The GWW initiative has received excellent buy-in from both primary and secondary beneficiaries, from international, regional and local development partners, and through implementation of the programmes on



the ground (Personal communication with Elvis Tangem, Coordinator for the GGW at the AU Commission, December 2022).

In 2023, the PA-GGW plans to release a new strategy document and a ten-year continental plan to implement the GGW that will provide guidance to the member states and will take into account key existing documents including the GGW Accelerator Strategy, the national action plans from the member states, the report on the "Status of Implementation of the GGW: A decade on" from UNCCD, the Decennial Priority Investment Plan 2021-2030 (DPIP), the Land Degradation Neutrality Strategy, Agenda 2063, the SDGs and strategic documents on climate security (Personal communication with Elvis Tangem, Coordinator for the GGW at the AU Commission, December 2022). This new strategy is also critical for the regional level in a context where more and more countries are expressing interest in joining the GGW (Personal communication with Elvis Tangem, Coordinator for the GGW at the AU Commission, December 2022).

One of the major constraints to achieving the objectives of the first decade of implementation was the **mobilisation and planning of the financial needs** associated with the various programmes of the GGW (PA-GGW, 2021). As part of the new decade 2021-2030, to promote a better flow of financing and investments to cover the needs of GGW and associated projects, the PA-GGW developed the DPIP. The DPIP is a regional framework for technical and financial planning and implementation to support priority actions of GGW programmes and associated projects for the next ten years. It is designed to **better identify and improve the approach and overall framework for mobilizing investment and financing** and to facilitate the identification and control of objectives, strategic indicators, added value and impact in each of the two programming cycles 2021-2025 and 2026-2030 (PA-GGW, 2021). It reflects the 2030 ambition of the GGW and is in line with the timeframe for action on emergencies, in terms of sustainable management and development of land and water resources, conservation/protection of biodiversity, climate action and green growth and resilient economic development and security. It is based on the consolidation, strengthening, and scaling up of achievements and promising actions, as well as alignment with the priorities, objectives and indicators of the member states, while integrating the prospective post-COVID-19 orientations and the prioritisation of emergencies (PA-GGW, 2021).

Table 1: *Major portfolios of the DPIP and priority programmes (PA-GGW, 2021)*

Portfolio	Priority Programmes (PP)
A. Sustainable Management and Development of Land, Water Resources and Biodiversity	• **PP.01** Restoration and development of land and protection of biodiversity • **PP.02** Mobilisation and integrated management of water resources and watershed development
B. Climate Actions and Green Economy	• **PP.03** Adaptation and resilience to climate change and green growth • **PP.04** Green growth and development of renewable energies • **PP.05** Vulnerability management to climate risks
C. Resilient Economic Development and Security	• **PP.06** Development and enhancement of promising local opportunities • **PP.07** Food and nutritional security • **PP.08** Promotion of productive green jobs • **PP.09** Improving access to basic household needs and social services
D. Strengthening of Scientific and Technical Capacities	• **PP.10** Consultation frameworks. Dialogue and conflict prevention • and securing property in the terroirs. • **PP.11** Research, development and enhancement of local knowledge • **PP.12** Support for research, training and development • **PP.13** Mobility and scientific and technical networks • **PP.14** Knowledge and innovation management • **PP.15** Strengthening logistical, scientific and technical capacities • **PP.16** Terroirs development and resilience support centres
E. Information, Marketing, and Advocacy	• **PP.17** Monitoring, evaluation and information knowledge • **PP.18** Communication, marketing and advocacy

In the first axis of the DPIP 2021-2030 "Sustainable Management and Development of Land, Water Resources and Biodiversity", the first priority programme is on **restoration and development of land and protection of biodiversity** (PA-GGW, 2021). It constitutes the framing orientation for implementing the restoration agenda in the Sahara and Sahel and demonstrates the strong political will and leadership to drive a regional agenda for land restoration and addressing desertification by the GGW member countries (Personal communication with Adamou Bouhari, Programme Officer Global Environment Facility, December 2022).

In January 2021, during the One Planet Summit for Biodiversity, under the leadership of Mr. Emmanuel Macron, President of the French Republic, the creation of the **Great Green Wall Accelerator** was announced. The GGW Accelerator aims to strengthen, accelerate, and improve the implementation of the GGW to scale up rehabilitation and restoration activities over the coming decade by creating a structured approach and mobilizing finance (GGW Accelerator, n.d.). The GGW Accelerator will enhance the mobilisation of a $10 billion funding envelope, supporting the acceleration of the GGW through the mobilisation of multiple national and international financial institutions, including the Green Climate Fund, the Global Environment Facility, the World Bank, the African development Bank (AfDB), the International Fund for Agricultural Development, the European Commission, bilateral donors, UN entities, the private sector as well as RECs, to invest in and support countries in implementing the GGW activities in the GGW areas of interventions (GGW Accelerator, n.d.).

The GGW Accelerator is based on five pillars:

1. **Investment in small and medium-sized farms** and strengthening of value chains, local markets, exports;
2. **Land restoration** and sustainable management of ecosystems;
3. **Climate-resilient infrastructures** and access to renewable energy;
4. Favourable economic and institutional framework for effective governance, sustainability, stability, and security; and,
5. **Capacity building** (GGW Accelerator, n.d.).

These five mutually enforcing pillars shall significantly contribute to livelihood enhancement, poverty alleviation, increased food security and ecosystem sustainability across the GGW member countries. A GGW Accelerator unit was created and is hosted by the UNCCD. After an interim period of three years, it is planned that the hosting of the GGW Accelerator will be transferred permanently to the PA-GGW (GGW Accelerator, n.d.). To ensure coherence between the DPIP and the GGW Accelerator, the five axes of the DPIP are also attached to the GGW Accelerator.

3 Mapping and analysis of the **continental and regional GGW and climate-related policy processes**

This section reviews the policy documents of the AU and the RECs that have a bearing on land restoration, agriculture, environment, climate change, as well as youth and gender, with a view to establishing their implications for promoting the GGW.

At the regional level in Africa, the AU and the RECs are integral to the process of mainstreaming issues such as land restoration into policies, strategies, and programmes for addressing climate change. The AU is the starting point for the review of regional policies and strategies for land restoration, climate change, agriculture and environment in Africa, as it is through the AU that African leaders agree on common approaches to addressing the critical challenges African countries face in their quest to improve the livelihoods of their citizens and transform their national economies (ASFA, 2020). Once a policy agenda is agreed at the AU level, the RECs then provide support to their Member States to translate these imperatives into their national policies for effective implementation. The RECs also provide a framework for the development of policies and strategies in the different subregions, either to adapt what is agreed at the AU to the specific circumstances of the subregion, or to address priorities and challenges unique to the subregions.

There are eight RECs in Africa, but we focus on the RECs encompassing some of the GGW member countries, including:

- **The Common Market for Eastern and Southern Africa (COMESA)** including GGW member countries Ethiopia, Sudan, Djibouti, and Eritrea.
- **The Intergovernmental Authority on Development (IGAD)** including GGW member countries Djibouti, Eritrea Ethiopia, Kenya, Somalia, South Sudan, and Sudan.
- **The Economic Community of West African States (ECOWAS)** including GGW member countries Burkina Faso, Mali, Niger, Nigeria, and Senegal.

The review focuses on a sample of key policies that are of direct relevance to this analysis.

3.1. African Union policies

The key AU policies linked to land restoration, SLM and climate change include:

- Constitutive Act of the Africa Union,
- Agenda 2063: The Africa We Want (2013-2063),
- Africa Water Vision (2025), and
- AU Green Recovery Action Plan 2021-2027.

The Constitutive Act of the Africa Union (AU, 2000)

Although the Constitutive Act of the AU does not specify climate change as an area of common interest to AU Member States, it is of direct relevance on account of its implications for food, agricultural and animal resources, livestock production and forestry; water resources and irrigation; and environmental protection, humanitarian action and disaster response and relief, which are three of the areas of common interest identified for the organisation's Member States (ASFA, 2020). Addressing climate change is critical to the achievement of the AU's agenda for sustainable rural development, which is overseen by the Specialized Technical Committee on Rural Economy and Agricultural Matters with the support of the Department of Rural Economy and Agriculture (DREA) of the AU Commission (ASFA, 2020).

Agenda 2063: The Africa We Want (2013-2063)

This is the AU's 50-year strategic framework, which envisions a "prosperous Africa based on inclusive growth and sustainable development" underpinned by productive agriculture, healthy ecosystems, well-preserved environment, and resilience to climate change (AU, 2013). Implementation of the GGW as a framework against desertification and land degradation is a flagship programme of Agenda 2063.

Agenda 2063 emphasises that the achievement of climate-resilient economies and communities is an integral part of the continental development vision and commits the region to play its part in supporting global climate action. It calls for modernisation of agriculture for increased production and productivity (Goal 5) as well as environmentally sustainable and climate resilient economies and communities (Goal 7). Goal 5 calls for the doubling of agricultural total factor productivity, with at least 10% of agricultural GDP produced by commercial farmers and at least 10% of small-scale farmers graduating into small-scale commercial farming and within those graduating, at least 30% should be women (AU, 2013; ASFA, 2020). Goal 7 calls for at least 30% of agricultural land to be placed under sustainable land management practice, at least 17% of terrestrial and inland water and 10% of coastal and marine areas to be preserved, genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives including other socio-economically as well as cultural valuables species to be maintained, and for the increase in levels of water productivity from rain-fed agriculture and irrigation by 60% (against the 2013 baseline), with at least 30% of farmers, pastoralist and fisher folks practicing climate-resilient production systems (AU, 2013; ASFA, 2020).

The Africa Water Vision 2025

The Africa Water Vision 2025 calls for Africa to ensure that water in the future is sustainable and adequate in quantity and quality to meet competing demands in the long term (UN-Water/Africa, 2000). The Water Vision for Africa sets the vision of an Africa "where there is an equitable and sustainable use and management of water resources for poverty alleviation, socioeconomic development, regional cooperation, and the environment" (UN-Water/Africa, 2000).

The AU Green Recovery Action Plan 2021-2027

The AU Green Recovery Action Plan was developed to strengthen collaboration on the AU's objectives for the continent's sustainable and green recovery from COVID-19 by focusing on areas of joint priority:

1. Climate finance, including increasing flows, efficiency, and impact of funding;
2. Supporting renewable energy, energy efficiency and national Just Transition programmes;
3. Nature-based solutions and focus on biodiversity through work on sustainable land management, forestry, oceans, and ecotourism;

4. Resilient agriculture, by focusing on inclusive economic development and green jobs; and,
5. Green and resilient cities, including a focus on water (flooding and water resources) and enhancing information, communication, and technology (AU, 2021).

Under the Action Plan's Axis 3 "Biodiversity and Nature-Based Solutions", some of the key interventions include: enhancing and supporting the implementation of a number of initiatives aimed at combatting habitat degradation, including the AU Sustainable Forest Management Framework; the African Strategy on Combatting Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa; the Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience; enhancing the commitment to providing adequate resources to address the drivers of desertification, land degradation and drought; and supporting existing programmes such as the GGW and the African Forest Landscape Restoration Initiative (AFR100) sub-regional action programmes to combat desertification (AU, 2021). Under Axis 4 "Climate Resilient Agriculture", the Action Plan calls for a coordinated approach to making agriculture and broader rural communities more resilient through strategic investment in resilience, with a focus on smallholder farming. Some of the key interventions aim to strengthen land governance and land markets through land tenure regularisation and building land administration systems; scale up financing for climate change adaptation in agriculture; mainstream adaptation and resilience in Comprehensive Africa Agriculture Development Programme (CAADP) processes and promote the Adaptation of African Agriculture (AAA) initiative; and engage in investment and policy commitments to strengthen public support to climate resilient and sustainable agriculture (AU, 2021).

3.2. AU initiatives and action plans on land restoration and addressing desertification

The Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience (2018) is the main action agenda driving land restoration in the region. Other key initiatives and projects on land restoration, although not policies and/or strategies per se, include AFR100 and the Regreening Africa project.

In terms of addressing desertification, a Strategic Framework for Drought Risk Management and Enhancing Resilience in Africa (DRAPA) was adopted in 2018, as well as a programme of action for the implementation of the Sendai Framework on Disaster Risk Reduction in Africa 2015-2030. They are described in more details in the following paragraphs.

The Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience (2018) proposes policy measures, strategic actions, cooperation mechanisms and on-the-ground actions to advance land and ecosystem restoration in Africa. It builds on and aims to upscale existing land and ecosystem restoration initiatives in Africa and to reinforce action towards achieving the commitments made under various regional and global processes and initiatives, among them the GGW (CBD, 2018). Box 1 highlights the priorities for the agriculture and the environmental sectors.

Box 1. *Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience priorities for the agriculture and the environmental sectors (CBD, 2018)*

Priorities from the Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience for the **agriculture sector**

- Develop and implement integrated agroforestry strategies and appropriate rural extension services considering landscape restoration principles, including agrobiodiversity.
- Adopt ecosystem-based adaptation and climate-resilient agricultural practices to leverage sustainable production in the agriculture and livestock sectors.
- Integrate biodiversity research and monitoring and avail provisions for incentivizing organic farming in agriculture strategies and plans.
- Support/promote restoration of degraded land for agriculture and livestock where there is the potential, relevant off-farm initiatives to strengthen the capacity of local communities and small to medium sized enterprises (SMEs), and boost creation of green jobs to reduce the need for agricultural land expansion.
- Use available technologies to minimise the impact on biodiversity in agricultural systems.
- Facilitate the conservation and sustainable use of local species and related reproductive material (such as seeds) to increase the resilience of local ecosystems.

Priorities from the Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience for the **environment sector**

- Develop national programmes for promoting integration of biodiversity and ecosystem services in other sectors (e.g., agriculture, energy, infrastructure development, tourism, livestock, fisheries, forestry, trade, etc.) with clear objectives and tools for the short term, medium term, and long term, and with clear mechanisms for monitoring, evaluation and adaptive management to enable successful implementation.
- Apply existing practical guidelines for integration of biodiversity into other sectors (agriculture, energy, infrastructure development, tourism, fisheries, forestry, livestock, etc.) and adapt them to specific context to support implementation and to strengthen public education and awareness.
- Put in place measures to control activities affecting wetlands functionality and integrity and implement restoration measures to ensure that they continue to play their vital roles as water reservoirs, flood barriers and short-term holding areas for excess rainwater.
- Carry out appropriate actions to maintain or enhance provision of ecosystem services and functionality in degraded ecosystems such as mountains, wetlands, drylands, rangelands, and forests, marine and coastal ecosystems.
- Develop and implement national invasive species strategies as appropriate.
- Promote the ecosystem approach for holistic consideration of ecosystem functionality and multi-stakeholder needs and engagement.

During the second phase of the Action Agenda (2021-2025) the focus will be on launching and implementing a series of ambitious ecosystem restoration projects and programmes in all African countries so as to make tangible progress towards achieving the commitments and targets made by countries and under various initiatives, including the GGW. This phase will also involve further efforts on awareness-raising, capacity-building support, technical and scientific cooperation, and facilitation of access to relevant technologies and innovative solutions to enable stakeholders at various levels to effectively contribute to the achievement of restoration targets (CBD, 2018). **AFR100** is a country-led effort to bring 100 Mha of land in Africa into restoration by 2030. The GGW contributes to AFR100. AFR100 aims to accelerate restoration to enhance food security, increase climate change resilience and mitigation, and combat rural poverty (AFR100, 2019).

In addition, the **Regreening Africa project** aims to reverse land degradation among 500 000 households on 1 Mha by 2022 in eight countries in sub-Saharan Africa (Ethiopia, Ghana, Kenya, Mali, Niger, Rwanda, Senegal and Somalia) which is also closely aligned with the ambitions of the GGW (Regreening project, n.d.).
Also of relevance is the **African Society for Ecological Restoration** (SER-Africa), which was established in May 2021 as the African chapter for the Society for Ecological Restoration. SER-Africa will serve to further the work of the global Society for Ecological Restoration community: advancing the science, practice, and policy of ecological restoration to sustain biodiversity, improve resilience in a changing climate, and re-establish an ecologically healthy relationship between nature and culture in Africa (SER, 2020).

Building on the **African Landscapes Action Plan (ALAP)**, developed in 2014, a coalition of 140 landscape leaders convened at the African Landscapes Dialogue in Arusha, Tanzania in November 2019. This gathering recommended the following actions to advance sustainable landscapes in Africa:

1. **Strengthen landscape partnerships and governance**;
2. **Adapt land use planning and property rights to strengthen landscape action** (through for instance addressing land use conflicts between user groups within communities by establishing mechanisms for clarifying access rights, reporting conflicts and seeking restitution for damages; and working towards secure land and resource tenure for individuals in the communities, including farmers and livestock keepers, with rights for women, youth and marginalized populations);
3. **Mainstream biodiversity conservation and climate-smart agriculture** through integrated landscape management;
4. **Mobilize business and finance** in support of sustainable landscapes; and
5. **Advance national policy** for sustainable landscapes (African Landscapes Dialogue, n.d.).

The **African Resilient Landscapes Initiative (ARLI)** is implemented through forest and ecosystem restoration, biodiversity conservation, climate smart agriculture, and rangeland management. Under ARLI, the World Bank Group and World Resources Institute support the mobilisation of financial and technical resources from multiple sources to design and implement country-specific strategies. ARLI mobilises African countries and partners to leverage sectorial interventions and collectively ensure the integrity, resilience, restoration, and sustainable management of landscapes across regions.

To address desertification in the region, the **Strategic Framework for Drought Risk Management and Enhancing Resilience in Africa (2018)** aims to sharpen the focus on drought and its impacts and to enhance resilience across all segments of society (Tadesse, 2018). New measures that allow anticipating and coping with drought by focusing on long-term drought resilience in addition to short-term response are needed to keep up with the evolving climate conditions. Strategically, Africa needs to ensure food security for an ever-increasing population while reducing its drought vulnerability and protecting the environment. African countries should also strengthen their efforts to tackle crosscutting and multidisciplinary global challenges that include climate change, energy, food, agriculture and nutrition, global health, and water. This strategic framework is designed to build an effective drought risk management approach and support enhanced resilience at continental, regional, national, or local and community levels (Tadesse, 2018).

The framework has six main elements, which are aligned with the priorities of African regional networks, such as the IGAD Drought Disaster Resilience and Sustainability Initiative, national action programmes to combat desertification,

and the global disaster risk reduction frameworks, for example, the Sendai Framework. The elements include:

- Drought policy and governance for drought risk management;
- Drought monitoring and early warning;
- Drought vulnerability and impact assessment;
- Drought mitigation, preparedness, and response;
- Knowledge management and drought awareness; and,
- Reducing underlying factors of drought risk and cross-cutting issues, such as capacity development and reducing gender and income inequality (Tadesse, 2018).

The **Programme of Action for the Implementation of the Sendai Framework on Disaster Risk Reduction in Africa 2015-2030** is the strategic plan for the implementation of the Sendai Framework in Africa. It is intended to provide guidance and direction for actions by all at the continental, regional, national and sub-national/ local levels in Africa to prevent and reduce the risk of disasters for resilience in line with the Sendai Framework (AU, 2017). The Programme of Actions aims to guide multi-hazard reduction and management of disaster risk in development processes at all levels as well as within and across all sectors in Africa, in line with the Sendai Framework. It seeks to strengthen disaster risk reduction in Africa and its integration into policies of the African Union, RECs, and Member States in line with the Sendai Framework (AU, 2022).

3.3. AU and REC policies on agriculture

The adoption of the Declaration on Agriculture and Food Security in Africa, 2003 (Maputo Declaration), the launching of CAADP in the same year, and the adoption of the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods 2015-2025 (Malabo Declaration) were key to the renewed focus on agriculture as the basis for development and economic transformation. The most significant policy advance in agriculture was the commitment to allocate at least 10% of national budgetary resources for agriculture and rural development, which was articulated in the Maputo Declaration and reaffirmed in the Malabo Declaration.

The **Maputo Declaration** signals the renewed commitment by African leaders to the revitalisation of the agricultural sector to enhance food security, security of livelihoods and economic development. The Maputo Declaration emphasises the importance of removing constraints to agricultural production and marketing through investments in soil fertility, water management, infrastructure development and control of pests and diseases (AU, 2003). The commitment to allocate at least 10% of national budgetary resources for implementation of policies on agriculture and rural development further demonstrated the resolve to turn a new leaf in African agriculture. The Maputo Declaration called for "special policies and strategies targeted at small scale and traditional farmers in rural areas" thereby reaffirming the critical role of traditional farmers and farming approaches to agricultural production and productivity in Africa (ASFA, 2020).

CAADP, adopted in 2003 by the Heads of State and Government of the African Union, constitutes the reference framework for continental agricultural policy and is the main mechanism African states have agreed on "for mobilisation of resources for investment in agricultural growth and rural development" (FAO, n.d.; ASFA, 2020). Its overall goal is to boost investment to stimulate growth in the agricultural sector and help African countries reach a higher path of economic growth through agriculture-led development, which eliminates hunger, reduces poverty and food insecurity, and enables expansion of exports. Spearheaded by the African Union Development Agency – New Partnership for Africa's Development (AUDA-NEPAD), 47 African countries have signed the CAADP Compact, resulting in an increase of public agricultural expenditures by more than 7% per year (ASFA, 2020). CAADP interventions are organized around extending the area under sustainable land management and reliable water control systems; increasing food supply,

reducing hunger, and improving responses to food emergency crises; and improving agriculture research, technology dissemination and adoption. Land and water management are key to climate change adaptation. The development of National Agricultural Investment Plans (NAIPs) is at the core of CAADP implementation (FAO, n.d.).

The **Malabo Declaration** provides the direction for Africa's agricultural transformation within the framework of CAADP, as a vehicle to contribute to the achievement of the objectives of the First Ten-year Implementation Plan of Agenda 2063 (AU, 2014a). It reaffirms and builds on commitments of the Maputo Declaration with the benefit of experience gained in ten years of implementing CAADP (ASFA, 2020). The Declaration comprises eight commitments, including a commitment to ending hunger in Africa by 2025 and a commitment to enhancing the resilience of livelihoods and production systems to climate variability and other related risks. It refers to "farm, pastoral and fisher households" as targets of resilience building (ASFA, 2020).

At the REC level, focusing on those that include GGW member countries, the **Agricultural Policy of West African States (ECOWAP)** was adopted in 2005 and has the overall objective of contributing in a sustainable manner to the meeting of the population's food needs, supporting economic and social development and reducing poverty in Member States, as well as addressing inequalities between territories, zones, and countries (ECOWAS Commission, 2005). It contains a specific objective on "reducing food dependence and achieving food sovereignty" (ECOWAS Commission, 2005).

ECOWAP recognizes that climate change poses a critical challenge to increasing agricultural productivity in West Africa while protecting the natural resources base (ECOWAS Commission, 2005).

The **COMESA Agricultural Policy** is in line with CAADP and aims to achieve the twin objectives of sustainable food security and enhanced regional integration. It includes a commitment to promote sustainable agricultural practices through technologies that include soil conservation measures and the optimal use of fertilizers (ASFA, 2020).

IGAD supported its Member States in the development and adoption of the **IGAD-CAADP Compact**, identifying action areas for the acceleration of agriculture-led economic growth of the region that require a regional approach, especially in transboundary areas. A Regional Agricultural Investment Plan was developed to support the implementation of the Regional Compact. The vision of the Regional Agricultural Investment Plan is "to contribute to IGAD's vision through restoration of sustainable agricultural growth, food security and rural development in the region". Its objectives include intensifying sustainable production systems and supporting the capacity development of actors along value chains. Among the strategic interventions for the investment priority area on increasing food production and reducing hunger is "increased use of high technology inputs, especially improved seeds, fertilizers and other agrochemicals (herbicides, etc.)" (ASFA, 2020).

3.4. AU policies in the environmental sector

The Sustainable Forest Management Framework for Africa 2020-2030 (SFMFA)

The framework serves to guide African stakeholders in the forestry sector in their efforts to eliminate deforestation and forest degradation by 2063 (AU, n.d.). It provides priority areas for investments and partnerships in the forest sector. In line with Agenda 2063, the vision of the SFMFA is that, by 2063, Africa will have zero deforestation and forest degradation and its forests will be protected, sustainably managed, and restored through collaborative, cross-sectoral and transformative efforts to ensure the prosperity, food security and resilience of its people.

The SFMFA has been developed to guide AU Member States and enhance coordination efforts of RECs on forest-related priorities in the continent. The specific objectives of the SFMFA are to:

- Provide **strategic guidance** to Member States and RECs on sustainable forest management;
- Facilitate **Africa-wide monitoring and reporting** on sustainable forest management;
- Facilitate **harmonisation of policies and legal frameworks** across Africa;
- Serve as a basis for **coordinating knowledge management**, exchange of best practices and information; and,
- Facilitate **establishment of partnerships and investments** in SFM.

The SFMFA highlights the GGW as an important opportunity for sustainable forest management (AU, n.d.).

The African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa

The overall objective of the Strategy is to prevent and reduce, with the view of eliminating, the illegal exploitation and illegal trade in wild fauna and flora in Africa through the domestication and implementation of an Africa-wide strategic framework (AU, 2015).

The Strategy is built around the following seven objectives:

1. **Increase the level of political commitment to prevent, combat and eradicate illegal exploitation and illegal trade** in wild fauna and flora, and to recognise illegal trade in wild fauna and flora as a serious crime;
2. **Improve governance**, integrity and enhance regional, inter-regional cooperation;
3. Enhance engagement with consumer states to **reduce demand, supply, and transit of illegal products** of wild fauna and flora;
4. **Promote the participatory approach with economic development and community livelihoods** through sustainable use of wild fauna and flora;
5. Reduce, and prevent and eliminate the economic, security and stability impact of **wildlife crime**;
6. **Increase capacity**, information, advocacy and public awareness; and,
7. Increase the **capacity of source and transit states in detecting illegal wild fauna and flora products** including in the exit and transit points (AU, 2015).

ECOWAS Environmental Policy

At the level of the RECs, the ECOWAS Environmental Policy of 2008 is the foundational document that informs interventions to promote sustainable management of the environment and natural resources in the sub-region (ECOWAS Commission, 2008). Article 3 of the Supplementary Act relating to the Policy stipulates that it "shall concern all activities relating to the management of natural resources [...], preservation of ecosystem and biological diversity, prevention and management of technological risks, the climate, pollutions and other environmental risks". The overall objective of the Policy is to **reverse environmental degradation and depletion of natural resources, ameliorate the quality of the living environment, and conserve biological diversity** to ensure a healthy and productive environment and improve the well-being of the ecosystem and the population of the region (ECOWAS Commission, 2008).

IGAD interventions

IGAD interventions on environment and natural resource management are guided by its **Environment and Natural Resources Strategy**, which seeks to assist and complement the efforts of the Member States in environment and natural resources management. IGAD supports its Member States in harmonizing their environmental governance frameworks; generating reliable, timely and readily available environmental and natural resources data and information; building capacity for environment and natural resources management; and undertaking research on new, appropriate, and affordable technologies (ASFA, 2020). In addition, the **IGAD Drought Disaster Resilience and Sustainability Initiative** was established to promote sustainable management of water resources, pasture, land and environment; sustainable ecosystem rehabilitation, biodiversity conservation and management; research and human capital development in ecological restoration, ecosystem management, environment, and natural resources; promotion of dry land production and productivity; enhancing agricultural production and productivity; and research in indigenous knowledge and technology for climate risk management (ASFA, 2020).

3.5 AU and REC policies for addressing climate change

African Heads of State and Government issued a Declaration on Climate Change and Development in 2007 that recognizes the risks that climate change poses to the future well-being of African populations, ecosystems and socio-economic progress, the vulnerability of economic and production systems to climate change and climate variability, and the continent's low mitigation and response capacities (AU, 2007). Through the Declaration, African leaders commit to:

- **integrate climate change strategies** into national and sub-regional development policies, programmes and activities;
- **undertake targeted awareness raising amongst policy and decision makers as well as civil society** with the view to ensuring that climate change considerations are taken into account in all sustainable development initiatives; and to
- **develop and/or strengthen research and development in climate change in Africa** to increase the continent's resilience and adaptation capacities (AU, 2022; ASFA, 2020).

Following this declaration, the Climate for Development in Africa Programme (ClimDev Africa) was established in 2008 to create a foundation for Africa's response to climate change. Its purpose is to explore actions required in overcoming climate information gaps, and support analyses leading to adequate policies and decision making at all levels (ClimDev-Africa, n.d.).

African Union Climate Change and Resilient Development Strategy and Action Plan 2022-2032

Most recently, the African Union Climate Change and Resilient Development Strategy and Action Plan 2022-2032 has been developed to support harmonized and coordinated actions to respond to the impacts of climate change, as well as to plan for the continent's low-emission, climate-resilient future (AU, 2022). The Strategy defines the main parameters and priorities to build African resilient capacities for adapting to climate change and exploiting the benefits of the mitigation potential of the continent. It seeks to ensure that institutions, strategies and decisions for climate-risk management and climate-resilient development are identified, implemented, and sustained as an integrated part of achieving sustainable development as framed by the AU's Agenda 2063 and the UN Agenda 2030 for Sustainable Development.

This Strategy supports the commitments made by African countries under the 2015 UNFCCC Paris Agreement and is guided by the existing national climate efforts and aspirations of the AU's 55 Member States, as expressed through Nationally Determined Contributions (NDCs) and long-term, climate-resilient development and decarbonisation visions contained in national Long-Term Strategies (2050) (AU, 2022).

The Strategy is well aligned with other global, regional policies, frameworks, and strategies discussed in this report as well as with existing regional policies that govern key sectoral and thematic aspects of the region's climate response. It also seeks to complement and support the climate strategies and green growth plans of Africa's RECs. The goal of this Strategy is to provide a continental framework for collective action and enhanced cooperation in addressing climate change issues that improves livelihoods and well-being, promotes adaptation capacity, and achieves low-emission, sustainable economic growth (AU, 2022).

Specific objectives include:

1. **Strengthening the adaptive capacity of affected communities** and managing the risks related to climate change;
2. **Pursuing equitable and transformative low-emission, climate-resilient development pathways**;
3. **Enhancing Africa's capacity to mobilise resources** and improve access to and development of technology for ambitious climate action; and,
4. **Enhancing inclusion, alignment, cooperation, and ownership** of climate strategies, policies, programmes, and plans across all spheres of government and stakeholder groupings (AU, 2022).

The Strategy has various guiding principles, which include conserving and restoring ecosystems, given their role in both mitigation and adaptation, while simultaneously producing multiple socioeconomic co-benefits. The Strategy highlights the need for domestic

Box 2. *Strategic interventions axis for the African Union Climate Change and Resilient Development Strategy and Action Plan 2022-2032 (AU, 2022)*

Strategic Intervention Axis 1:
Strengthening Governance and Policy

- Enhanced climate policy, multi-scalar governance, and institutional coordination
- Coordinated regional climate action
- Anticipatory governance and proactive, long-term planning
- Increase uptake of climate information services
- Improved climate literacy and awareness
- Governance solutions to address the climate-conflict nexus

Strategic Intervention Axis 2:
Adopting Pathways Towards Transformative Climate-Resilient Development

- Food systems under a changing climate
- Protecting land-based ecosystems
- Enhancing climate-resilient and low-carbon energy and infrastructural systems
- Promoting low-carbon, resilient mobility, and transport systems
- Inclusive, low-emission and resource-efficient industrialisation
- Building low-carbon, resilient urban areas
- Enhancing resilient water systems
- Building a climate-resilient African blue economy
- Digital transformation

Strategic Intervention Axis 3:
Enhancing Means of Implementation towards Climate-Resilient Development

- Enhanced finance flows and resource mobilisation
- Safety mechanisms to reduce loss and damage
- Equitable technology transfer and development
- Inclusive participation, especially of gender and youth
- Capacity development

Strategic Intervention Axis 4:
Leveraging Regional Flagship Initiatives Infrastructure

- Trade
- Climate Information Services for adaptation and resilience
- Climate-resilient agriculture
- Enhancing access to renewable energy
- Climate change risk management
- A climate-resilient African blue economy
- Accelerating adaptation and building resilience in Africa
- Building on climate change capacity building programmes
- Capacity needs and gaps for climate research

analysis of the national legal landscape and the need to craft suitable climate laws that adequately consider national climate priorities, institutional requirements, and the relevant legal culture. Among suggested actions, the Strategy emphasizes the importance of "mainstreaming climate change considerations (including gender, youth and indigenous knowledge considerations) and updated NDC policy actions across sectoral policies, including national development plans, and policies related to water, agriculture, health, energy, human settlements, environment, transport and infrastructure, utilizing an open and transparent engagement process with stakeholders" (AU, 2022). The Strategy promotes strengthening coordination among the AU and its structures, as well as with key regional partners, in supporting Member States to achieve climate action. The Strategic Intervention Axis 4 of the Strategy focuses on leveraging regional flagship initiatives such as the GGW (AU, 2022).

Adaptation of African Agriculture

The Initative for the Adaptation of African Agriculture (AAA) aims to reduce the vulnerability of African agriculture to climate change. Its objective is to place the adaptation of African agriculture at the heart of climate debates and negotiations, and to attract a significant part of climate financing (AAA, n.d.).

In terms of proposed solutions, the AAA aims to contribute to the **deployment of specific agricultural projects to improve soil management, agricultural water control, climate risk management and capacity building and financing solutions**. The initiative is an important response not only to climate change but also to food insecurity (AAA, n.d.). The AAA responds to the call of the Paris Agreement by assisting African countries in operationalizing their NDCs.

The AAA has been endorsed by the AU as a major tool for channelling climate finance and for implementing projects to enable African agriculture to cope with climate change. The Second AAA Ministerial Conference, held in November 2019 in the Kingdom of Morocco, reiterated its support for the AAA to coordinate Africa's efforts to adapt agriculture to climate change and to achieve food security. The AAA is currently supported by 38 African countries and a strong coalition of international partners from the finance, agricultural development, scientific research, and private sectors. To date, the AAA has supported seven African countries (Morocco, Côte d'Ivoire, Mali, Cameroon, Ghana, Burkina Faso, and Republic of Congo) to develop **climate-smart investment plans** in partnership with the World Bank and the NDC Partnership (AU, 2022).

ECOWAS Climate Strategy

At the level of the RECs, the ECOWAS Climate Strategy defines its goal as **supporting Member States to tackle the challenge of climate change, particularly by achieving their commitments under the Paris Agreement**. It identifies six main objectives:

- ensure compatibility with the Paris Agreement;
- develop capacity to manage climate risks;
- encourage an institutional and organisational "paradigm shift" regarding climate change;
- build capacities to implement climate policy;
- strengthen cooperation among Member States; and
- promote new approaches to mobilizing finance (ECOWAS Commission, 2022).

Under this framework, ECOWAS aims to take action in three areas: reducing its own carbon footprint to act as an example of what institutions can achieve; integrating mitigation and adaptation goals into regional policies and sectoral targets; and strengthening political dialogue among Member States in order to raise their ambitions on mitigating emissions (ECOWAS Commission, 2022).

The ECOWAS Climate Strategy has been criticised because it was expected to develop a more aggressive and ambitious sub-regional climate mitigation commitment for reducing GHGs, particularly from agriculture, forestry and land use, and promoting significant renewable energy technology development and deployment (Jeffang, 2022). According to Jeffang (2022), the Strategy does not specifically address the problems caused by climate change in the region and rather focuses on bureaucratic issues such as partnership and competence building.

COMESA Strategy on Climate Change

The COMESA Strategy on Climate Change 2020-2030 defines the main parameters for an effective climate change response in the COMESA region that builds resilient adaptive capacities and unlocks the benefits of the mitigation potential of the region (COMESA, 2020). The COMESA Climate Change Initiative was launched in 2008 to facilitate effective engagement of its Member States in UNFCCC negotiations and support the development of a regional position on climate change, among other objectives (ASFA, 2020).

Between 2010 and 2016, COMESA collaborated with the EAC and SADC in implementing the Tripartite Climate Change Programme, which sought to enable Member States of the three RECs to increase investments in climate-resilient and carbon-efficient agriculture, with linkages to forestry, land use and energy (ASFA, 2020).

Climate Investment Plan for the Sahel Region

The Climate Investment Plan for the Sahel Region (PIC-RS 2018-2030) was adopted in 2019 with the objectives to:

- **Strengthen environmental action** to mitigate GHG emissions and adaption and resilience to climate change;
- **Improve the availability of water resources for human consumption** and the development of economic activities;
- **Ensure the sustainability of agricultural and pastoral production systems** facing the effects of climate change;
- Promote **sustainable** production, transmission and energy consumption options;
- **Strengthen information, awareness and advocacy capacities** on climate change;
- **Strengthen institutional capacities and improve environmental governance** (Commission Climat pour la Région du Sahel, 2018).

Box 3. *Axes and programmes of the PIC-RS 2018-2030 (Commission Climat pour la Région du Sahel, 2018)*

Axis 1 (a1): **Restoration and rehabilitation of degraded lands and ecosystems**

- P1: Support to national and regional land restoration programmes
- P2: Integrated management of sensitive ecosystems of importance for building resilience
- P3: Support for the recovery of natural ecosystems important for carbon sequestration
- P4: Promotion of reforestation plans in the context of carbon sequestration

Axis 2 (a2): **Integrated water resources management**

- P5: Support to the reinforcement of the water domain knowledge
- P6: Observation and monitoring of surface and groundwater resources
- P7: Preservation and management of water resources
- P8: Urban and village water supply
- P9: Pastoral and agricultural water resources
- P10: Cooperation for water resources sharing and management

Axis 3 (a3): **Sustainable management of agricultural and pastoral systems**

- P11: Promotion of low-carbon agricultural production systems
- P12: Promotion of low-carbon livestock production systems
- P13: Promotion of sustainable agricultural and livestock production intensification models
- P14: Restoration of agricultural and pastoral lands
- P15: Agricultural and pastoral risk management
- P16: Energy efficiency
- P17: Improvement of the energy mix
- P18: Improving energy access

Axis 5 (a5): **Development of a communication and advocacy strategy on climate change**

- P19: Development of a regional climate change communication strategy
- P20: Implementation of advocacy

Axis 6 (a6): **Capacity building**

- P21: Institutional capacity building
- P22: Capacity building of actors
- P23: Strengthening coordination at national and regional levels

3.6. AU and REC policies addressing gender and social inclusion

There are several continental gender policies and strategies. The most recent policies include the AU Strategy on Gender Equality and Women's Empowerment (GEWE) 2018-2028 and the following three AfDB documents: the AfDB Gender Policy (2001), Investing in Gender Equality for Africa's Transformation 2014-2018 and Empowering African Women: An Agenda for Action (2015).

The African Union Climate Change and Resilient Development Strategy and Action Plan 2022-2032 acknowledges the existence of societal challenges, including gender inequality, and the need for partnerships that embrace inclusive and sustainable approaches for socio-economic empowerment. It emphasizes the need to establish an enabling environment that institutionalizes gender participation in decision-making processes, dedicated climate change education and special funds for financing youth climate change action (AU, 2022). The Strategy argues that the important role that youth are already playing as active change agents should be recognized and supported, instead of positioning youth exclusively as future participants or beneficiaries. The just transition debate also serves as an important opportunity to engage youth to ensure that the benefits of a transition to a green, low-emission economy are shared widely, while also supporting those who stand to lose economically. The Strategy emphasizes inclusive participation in climate action, especially of gender and youth, through:

- **Improving gender and youth participation** in policy co-design, co-development processes, co-implementation, and monitoring and evaluation (M&E).
- **Empowering and engaging young people in climate adaptation planning** and implementation through inclusive and participatory approaches.
- **Enhancing education and sensitisation** on gender and youth responsive approaches.
- **Increase financial and technical support** for youth and gender organisations (AU, 2022).

3.7. Implications for land restoration and addressing desertification in the Sahara and Sahel region

Degree of political will and leadership to drive a regional agenda for land restoration and addressing desertification

Several strategies, agendas, plans and initiatives at the regional level demonstrate the political will to drive a regional agenda for land restoration and addressing desertification. This includes Agenda 2063, the AU Green Recovery Action Plan 2021-2027, the Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience, AFR100, ARLI, the SFMFA, the AU Climate Change and Resilient Development Strategy and Action Plan (2022-2032) and the PIC-RS 2018-2030. The GGW is aligned with all these strategic frameworks. The SFMFA highlights the GGW as a crucial opportunity for sustainable forest management. Most recently, regional flagship initiatives such as the GGW are emphasized in the AU Climate Change and Resilient Development Strategy and Action Plan (2022-2032).

The AU Climate Change and Resilient Development Strategy and Action Plan highlights that the **CAADP and NAIPs do not sufficiently address adaptation to climate change** (AU, 2022). To address this issue, the NEPAD-AUDA Planning and Coordinating Agency (NPCA) and the Department of Rural Economy and Agriculture of the AU Commission have established a framework for the CAADP agenda for adaptation to climate change and are **building capacity to support Member States in developing climate-friendly NAIPs** and apply climate-smart agricultural methods. Subsequently, more than 15 African countries have included adaptation to climate change in their NAIPs and are implementing climate-smart measures.

The Strategy provides key enabling environment linkages at the regional level between **scaling land restoration** and **protecting land-based ecosystems, climate action and food system transformation** under a changing climate. Within its Strategic Intervention Axis 2 "Adopting Pathways Towards Transformative Climate-Resilient Development", the Strategy envisions several priority interventions for food systems under a changing climate. It aims at enhancing the resilience of food systems against climate effects, while emphasising nutritional outcomes and integrated planning, also emphasizing production towards agro-ecological transition to reduce GHG intensity (including methane and other gases), and the reduction of dependencies on external inputs (AU, 2022). Such efforts would require supporting research, extension and implementation of public sector and market-based instruments toward agroecological, regenerative, nature-based, and indigenous approaches for integrated farming and pastoral systems or resilient landscapes (practices to increase agrobiodiversity, conserve land and water, cycle nutrients, reduce waste and enhance productivity) (AU, 2022).

The Strategy also recommends conducting a systematic review of existing policies, strategies, and incentive mechanisms that support/inhibit transitions to sustainable food systems and to develop synergies across sectoral planning and investments in infrastructure and related investments (AU, 2022). It also aims at aligning food system visions and targets with other national strategies and commitments (for example, NDCs, UNCCD net-zero land degradation targets, AFR100 and CBD biodiversity frameworks, SDGs, and national development plans) (AU, 2022).

The Strategy further advocates for coordinating and augmenting investments by channelling flows toward sustainable food systems from philanthropy, private sector direct investment, and multi-lateral donors. Most importantly, it recommends analysing subsidy and investment programmes to ensure that direct payment schemes for food system actors are aimed toward sustainable food systems transformation (AU, 2022). The Strategy further highlights several priority actions for protecting land-based ecosystems and carbon sinks, including building technical capacity for implementing and investing in regenerative and biodiversity-positive agricultural systems across the region, the removal of perverse incentives that lead to destructive activities (e.g., fossil fuel subsidies) and encouraging nature-positive activities/ecosystem-based approaches. The Strategy seeks to catalyse continent-wide actions on commitments (such as AFR100) to scale restoration and promote agroforestry systems with local and climate-resilient species (AU, 2022).

Policy coherence at a regional level

Overall, most strategies, agendas, plans, and initiatives are coherent between themselves, and the **incoherence is rather at the level of interpretation of these policies and implementation on the ground** (personal communication with Elvis Tangem, 2022). However, there is inherent tension within Agenda 2063, CAADP and some RECs' agricultural and climate change policies (e.g., in COMESA, ECOWAS and IGAD) between the commitment to sustainable agricultural practices that preserve the integrity of ecosystems, on the one hand, and on the other hand, the vision of modernisation and commercialisation of agriculture that pushes for adoption of technologies that contribute to soil and environmental degradation and increase greenhouse gas (GHG) emissions, such as the use of tractors in ploughing and the application of herbicides and chemical fertilizers (ASFA, 2020).

Agenda 2063 envisages a future in which Africa is a major player in the global agro-food economy, having made the transition to a low carbon economy through climate smart agriculture. However, the priority for agriculture is to radically transform, modernize and commercialize the sector for increased production and productivity and value addition to enable the continent to feed itself and become a net food exporter, while the priority for climate change is to reduce vulnerability using mainly adaptive measures (ASFA, 2020).

It seems that **even though these policies recognize that traditional systems of production and natural resource management are sustainable, they also envision a highly modernized and industrialized future** for African agriculture as the only way to meet the food security demands of a growing population and enhance economic development (ASFA, 2020).

These contradictory objectives are also reflected agriculture and climate change policies in COMESA, ECOWAS and IGAD. The RECs articulate common principles to be considered in national policy designs, so these same issues may be replicated at national level in the different GGW member states.

4 Policy framework analysis for **addressing land degradation and targeting land restoration** in Ethiopia, Mali, Senegal, and Sudan

This section provides an overview of the current policy framework in place across four Sahel countries (Ethiopia, Mali, Senegal, and Sudan) for scaling land restoration and contributing to the ambitions of the GGW initiative. It explores the national long-term development strategies and relevant regulations and policies that govern land restoration, environment, agriculture and food systems, climate change, land, and gender.

The assessment evaluates the robustness of the current policy framework and the degree of alignment with the objectives of the GGW. It further highlights the overall policy context and coherence for addressing land degradation and targeting land restoration in the four countries and describes the extent to which land degradation and restoration interventions are addressed within national policy in Mali and Senegal specifically. The findings in this section for Ethiopia, Mali, Senegal and Sudan are based on national assessments conducted as part of the ClimBeR initiative (see AGRI-BILCHA Plc, 2022; Mentz and Karambiri, 2022; Mentz et al., 2022; and Ganawa 2022.

4.1. National long-term development strategies

Promoting a strong agricultural sector while ensuring the protection, sustainable use, and improvement of environmental resources is important for the four selected Sahel countries, as reflected in their constitutions and/or broader long-term vision plans and strategies. Mali and Senegal have strategies specifically addressing sustainable development, while Ethiopia focusses on climate resilience and green economy. Agriculture remains at the centre of the economic and social development of the four countries.

Ethiopia

Ethiopia's commitment to environmental management and sustainable development is reflected in the country's Constitution. The **1994 Constitution of Ethiopia**, under Articles 44 and 92, states that all citizens shall have the right to live in a clean and healthy environment, and the government and citizens shall have

a duty to protect the environment. It further indicates that the design and implementation of programmes and projects shall not damage or destroy the environment. The Constitution also incorporates several other provisions relevant for the protection, sustainable use, and improvement of the environmental resources of the country. The incorporation of these provisions into the supreme law of the country elevated environmental concerns to the level of fundamental human rights. The **Climate Resilient and Green Economy Strategy** (CRGE), adopted in 2011, anchors the policy framework in response to climate change. The CRGE was initiated in recognition of the vulnerability of the country to climate change impacts and the compelling need for greening Ethiopia's economy. The policy recognizes that Ethiopia's economy is largely dependent on weather-sensitive agriculture and hence highly vulnerable to climate change impacts.

Mali

Mali's development vision is captured in the **Mali Vision 2025** (1999), which seeks to support sustained economic growth together with concern for the protection and preservation of natural resources and the improvement of the people's living environment. An additional key document is the **Strategic Framework for Economic Recovery and Sustainable Development 2019-2023**, which contributes to achieving the SDGs 2030 and is articulated around five strategic axes. The third strategic axis focusses on inclusive growth and structural transformation of the economy and aims to create an environment conducive to the diversification of the economy and strong and inclusive growth, while promoting a sustainable, modern, and competitive agricultural sector. The fourth strategic axis focusses on building resilience to climate change, with an emphasis on environmental protection and strengthening the country's resilience to the effects of climate change.

Senegal

After the elaboration of the Poverty Reduction Strategy Papers (PRSP I and II) through the Accelerated Growth Strategy, the Economic and Social Policy Document and the National Economic and Social Development Strategy, Senegal has framed its development vision through the **Plan for an Emerging Senegal**. The vision of this plan is "an emerging Senegal in 2035 with a society based on solidarity and the rule of law". The plan places agriculture at the centre of the country's economic and social development. The National Strategy for Sustainable Development (2015) integrates the dimensions of the Plan for an Emerging Senegal and Act III of decentralisation (2013) (which is the basis for decentralized, participatory and empowerment of actors at the grassroots level in development), as well as the SDGs. The National Strategy for Sustainable Development is accompanied by a National Programme of Actions for Sustainable Development, which seeks to promote the green economy through a variety of priority actions, including the creation and implementation of a Climate and Development Fund. This Climate and Development Fund will serve to promote the creation of green jobs and will be linked to the country's Strategy and Action Plan on Climate Change, the Biological Diversity Conservation Action Plan and the Action Plan to Combat Desertification.

Sudan

In Sudan, the **2005 Interim Constitution** includes provisions that relate directly to land and natural resource management. Article 187 of the Constitution established an independent National Land Commission with representation of the different levels of government administration in Sudan. The 2005 Interim Constitution was suspended by the Transitional Military Council on 11 April 2019. A new constitutional declaration was drafted by the Transitional Military Council and the Forces for Freedom and Change and signed on the 4 August 2019. Sudan's **Constitutional Charter** (2019) recognizes issues of land and tribal lands (Article 68.g) and the compensation and restoration of property (Article 68.k). It further obliges state agencies to work within the transitional period to return properties belonging to organisations and individuals that were confiscated due to war in accordance with the law (Article 67.i). The Comprehensive National Strategies (1992-2002 and 2003-2027) support sustainable resource use and management. In this context in harmony, these strategies are in line with the objective of the GGW.

4.2. Land restoration, land degradation neutrality targets, landscape level policies

From a historical perspective, the national land restoration policy, legal and regulatory frameworks emanate from the three international conventions of the Rio Conference that the four countries have ratified (UNFCCC, CBD and UNCCD addressing climate change, biodiversity and desertification respectively). Specifically, the implementation of the UNCCD in Mali has enabled the creation of several institutional frameworks supporting the establishment of appropriate structures and technical capacity for land restoration. All member countries have elaborated National Action Plans to develop clear steps for the implementation of national GGW objectives.

Ethiopia

Ethiopia has committed to achieving LDN by 2030 and set nine LDN national voluntary targets to achieve a land degradation neutral environment throughout the country. Under the scope of the GGW, Ethiopia has developed a **GGW Short- and Medium-term Strategy 2012** with the following objectives:

1. Conserve, restore and enhance biodiversity and soils;
2. Diversify production systems;
3. Meet domestic demand and the promotion of generating income activities; and,
4. Improve/install the basic social infrastructure.

A **GGW Long-term Strategy** was also adopted in 2012, with the following objectives:

- Improve the capacity of carbon sequestration in vegetation cover and soils;
- Reverse migration flows to the restored areas; and,
- Improve the living conditions of local communities.

The Ethiopian GGW strategy aligns well with the country's aim of transitioning towards the CRGE with zero net GHG emissions and corresponding plans for large scale afforestation and reforestation. To mitigate ongoing erosion and soil nutrient loss in the productive agricultural highlands of the country, the Government of Ethiopia initiated a **Sustainable Land Management Programme** (SLMP) in 2008. The first iteration of the SLMP, referred to as SLMP-I (2008-2013) was a 5-year national initiative that sought to alleviate rural poverty, vulnerability, and land degradation through restoring, sustaining, and enhancing the productive capacity, protective functions and biodiversity of Ethiopia's natural ecosystem resources and sustainable land management practices (FAO/FDRE, 2012). Programme interventions involved conservation and improvement of vegetation cover through agroforestry, enhancing soil fertility and carbon stock in agricultural soils, micro-irrigation, rehabilitating degraded lands and popularising the cultivation of high value crops to enhance the income generating capacity of communities and, hence, reduce pressure on natural resources.

SLMP-II (2014-2019) focused on water and soil conservation measures in the forestry and agriculture sectors, with the Ministry of Agriculture assuming an overall coordination and implementation role. The SLMP I and II programmes have helped to restore productive capacity and build resilient livelihoods in 135 major watersheds in Ethiopia's highlands and contributed to afforestation or reforestation of more than 80 000 ha. However, they had very little relevance to the arid and semi-arid pastoral areas of the Afar and Somali regions that fall under the GGW geographic sphere. The Government of Ethiopia has also launched the Green Legacy Campaign, rooted in a vision of building a green and climate resilient Ethiopia and with the aim of contributing to the objectives of the UN Decade on Ecosystem Restoration 2021-2030.

Mali

To reverse land degradation, Mali has committed to achieving LDN by 2030 through the restoration of 10 Mha of degraded land and the prevention of further land degradation. The Mali LDN targets provide the basis for strengthening the adaptive capacity of ecosystems and vulnerable populations. Mali's National Drought Plan 2021-2025 aims to provide the country with effective institutional and legal tools to better manage natural hazards to reduce the country's vulnerability to drought through an integrated system for the detection and management of drought, while ensuring gender equity. Mali's Strategy and Action Plan for the Implementation of the Great Green Wall (2012) also aims at strengthening agricultural, forestry, pastoral, fisheries, and wildlife production to increase resilience to recurrent episodes of famine and food insecurity. The Strategy revolves around five strategic axes:

1. **Strengthening stakeholders' institutional, technical and financial capacities to cope with the impact of climate change** on sustainable land management, particularly at the local level;
2. **Research, communication/ knowledge management**, capitalisation and dissemination of successful experiences;
3. **The protection, rehabilitation and sustainable use of land** according to national priorities and in accordance with international environmental conventions;
4. **Development of support/investment activities** including credits, subsidies, promotion of income-generating activities; and,
5. **The coordination, monitoring/evaluation and management** of the GGW programme.

For the implementation of the UNCCD, a national action programme was adopted in 1998. However, the national action programme has proven ineffective to reach the UNCCD goals due to a lack of vision, reference data and indicators. To address these weaknesses, the government initiated the Sustainable Land Management (SLM) Action Plan and Strategic Investment Framework for Sustainable Land Management (CSI-GDT) in 2010, which follows a multisectoral approach to achieve its vision: "By 2025, Mali's strong political commitment has enabled the reversal of the continuous trends of land degradation, the improvement of people's living environment, and poverty reduction, thus making Mali a model country in terms of SLM". The SLM Action Plan seeks to scale up good SLM practices to combat land degradation and biodiversity loss and adapt to climate change, while also strengthening technical and financial institutional capacities to mainstream SLM into the country's development policies. The CSI-GDT has informed the national development strategy (Strategic Framework for Economic Recovery and Sustainable Development 2019-2023), specifically the strategic objective 3 and 4 that guide the groundwork for environmental development in the country.

Senegal

Senegal envisions sustained annual restoration of 480 263 ha in order to achieve LDN by 2035. A national LDN committee was set up to oversee the LDN target identification and implementation strategy. Various policy frameworks are expected to contribute to LDN, including the measures and strategies of the **Plan for an Emerging Senegal** and the **National Strategic Investment Framework for Sustainable Land Management** (CNIS/GDT), which aims to reconcile economic and social development through a series of programmes for the implementation of agro-sylvo-pastoral activities under the supervision of the Ministers of Agriculture and the Environment. The CNIS/GDT is now the benchmark for investments into SLM interventions. Its vision is that by 2026, the political, legal, institutional, technical, and financial environment will support the country to **sustainably reverse land degradation in all ecosystems** for sustainable growth and wellbeing.

The CNIS/GDT aims to scale up SLM activities through five national programmes:

- Integrated management of water resources;
- Restoration and soil improvement;
- Waste management and pastures;
- Recovery and valorisation of saline lands;
- Forestry development through forest community forest management and dissemination of forest management plans.

Senegal's NDC (2020) also sets clear land restoration targets. Senegal also has a national action programme to fight against desertification (PAN/LCD) (1998), which sets priorities for addressing desertification in the country. Many of the challenges identified in this document remain prevalent.

Sudan

Sudan also has an LDN national working group, established by ministerial decree on 4 June 2017, which fosters policy coherence with the main agricultural, forestry, environmental, and land use policies and the three Rio conventions (UNCCD, UNFCCC and CBD). Sudan has developed its **national action plan to combat desertification** (2002 updated 2018), but this document has faced implementation challenges. New challenges have also been introduced by the independence of the Republic of South Sudan, which raised concerns about the ongoing relevance of the strategy.

The **National Desertification Control Council** was established in 2009 but became operational only in 2016. It is the competent authority to oversee the national programme to combat desertification, implement the UNCCD, develop a national programme of action to combat desertification through the adoption of a strategy that ensures participation of local communities, institutions and development actors, and provide an enabling environment for implementation of the national programme. A National Action Plan for GGW (2015) was developed under the scope of the GGW initiative. However, many stakeholders in Sudan feel that land degradation issue are not adequately prioritised in national and state level development frameworks (personal communications).

4.3. Environmental policies

Ethiopia

In Ethiopia, the **Forest Development, Conservation and Utilisation Proclamation No. 1065/2018** amended the 2005 Forest Policy to build a stronger forestry sector. This Proclamation addresses the development, conservation, and sustainable utilisation of forest resources in Ethiopia. It concerns both private and public forests. It defines the powers and duties of the Ministry of Environment, Forest and Climate Change, as well as any regional governmental executive organ that is responsible for the implementation of forest development, conservation, and utilisation. This proclamation emphasizes **economic forestry** to meet public demand in forest products and foster the contribution of forests to enhancing the economy through appropriately conserving and developing forest resources. It establishes that communities and associations can have forest ownership rights (McLain et al., 2019).

Mali

In Mali, the **Environmental Protection National Policy** (PNAE, 1998) aims to mainstream sustainable natural resources and environmental management into any decision that affects the design, planning and implementation of development policies and programmes. Among its seven strategic priority areas are the prevention of further resource degradation, the promotion of land restoration and recovery of degraded sites, strengthening national capacity for environmental protection, and the establishment of a system for the control, monitoring and surveillance of the environment.

The **National Strategy and Action Plan for Biological Diversity 2015-2020** aims to ensure the conservation and sustainable use of biodiversity resources for the benefit of present and future generations. It calls for the mapping of agricultural lands, protected areas, and important ecosystems as well as pastoral lands for sustainable and equitable management and the application of the ecosystem approach in agriculture, forestry and aquaculture in the development of areas with high biodiversity. The Strategy encourages local people, including women, to improve the resilience of their livelihoods by designing and implementing remedial measures in degraded areas through afforestation and agroforestry. The **National Forest Policy** (1995) and its **Action Plan 2018-2022** seeks to improve the resilience of livelihoods in the face of threats and crises affecting agriculture, nutrition, and food security through biodiversity conservation and the restoration of ecosystems. It calls for actions to combat desertification and climate change. For the management of trees in the agricultural domain, the National Forest Policy recognizes land holders' rights regarding the management of trees. Rural people have all decision-making powers concerning the exploitation (felling or pruning) and conservation (assisted natural regeneration, planting, pruning, etc.) of trees, including protected species. Mali's Law 10-028 (2010) regulating the management of national natural resources determines the fundamental principles relating to the management of national forest resources. It defines the conditions for the conservation, protection, exploitation, transport, marketing, development, and sustainable use of national forest resources. Use rights relate to the forest canopy, fruits and products from the natural forest, grazing and the course of domestic animals. Mali's Law 96-050 (1996) addresses the principles of the constitution and management of local authorities' domain and specifies local authorities' responsibilities in decentralised natural resources management. For instance, it determines that the pastoral domain of local authorities includes grazing areas; fallow land more than 10 years old; pastoral routes; and water points.

Senegal

In Senegal, the **National Environmental Action Plan** (PNAE), adopted in 1997, is the benchmark document for environmental management. The PNAE aims to reconcile the increase in cultivable land essential for the development of agriculture with the sustainable governance of natural resources and the environment. The Plan focuses on seven major areas:

- Combatting poverty;
- Population policy and environmental management;
- Women, youth, and the environment;
- Health and environment (fight against pollution to combat diseases linked to water and the use of pesticides in the agricultural sector);

- Environmental information, education, and communication;
- Decentralized environmental management and financing of local initiatives; and,
- Environmental cooperation at sub-regional and regional levels.

The **2016-2021 Sectoral Letter for Environment and Natural Resources** has the overall objective of "combatting environmental degradation, promoting the principles of sustainable development and reducing the vulnerability of populations to climate change". This has enabled environmental actors to set out a vision that, by 2025, "environmental management and green governance are the foundation of an emerging Senegal, for inclusive and sustainable socio-economic development". The overall objective is divided into two specific objectives: 1) Reduce environmental degradation, the adverse effects of climate change and the loss of biodiversity; 2) Integrate the principles of sustainable development into public policies, the management of the living environment, the promotion of livelihoods, the resilience of vulnerable groups and modes of production and consumption.

The **National Forest Policy 2005-2025** (PFS) translates Senegal's commitment to integrate the forestry sector into national planning for sustainable rural development and is structured around five strategic axes, which include planning and rational management of natural resources and development of urban and private forestry. The PFS emphasizes the intensification and improvement of land production by introducing local fertilizing species into agrarian systems, the development of technologies for the organic enrichment of the soil (composting, organic manure, fragmented twigs, assisted regeneration), and producing seedlings in individual, village, and community nurseries. The PFS also pursues the resilience of agricultural ecosystems and the fight against desertification through SLM practices in Senegal's groundnut basin.

The **Forest Code**, 2018 and its application decree (Forest Code Application Decree, 2019) define the methods for managing forest resources. It supports decentralized forest management by offering the possibility for decentralized authorities to secure a management concession for a state forest free of charge for local development according to a management plan elaborated by the Forest Service. The law also recognizes the private ownership of forest plantations created by individuals, but without granting them ownership of the land, which is still held by the state (as per the National Domain Law 1964). In addition, the code calls for rational forest plantations management and reforestation.

Sudan

In Sudan, several important changes in forests policy have occurred, including the reorganisation of the administrative set-up of the forestry sector that culminated in the establishment of the semi-independent parastatal Forests' National Corporation in 1989. The **Forest Policy** (1986, revised 2006) then encouraged rural people and farmers to introduce forestry on their lands and on community land, while also encouraging forest conservation and community and private sector participation in forestry development and management. A subsequent revision of the Forest Policy, in 2015, emphasized the importance of climate change and the role of the international community and public participation in tree planting and sustainable management of forests. It also recognized the need for research in forest development and emphasized the role of forest extension.

These components of the forest policies and strategies contained in the mandate of the Forests' National Corporation are aligned with the principles of the GGW. These objectives are also in line with the objectives of the Sudan Sustainable Natural Resources Management Project and indicative of the role that sustainable management of the forestry resources can play if it is coordinated and harmonized with other policies. The forest policies were strongly supported by the Comprehensive National Strategies (1992-2002 and 2003-2027). A weakness, however, is that the existing framework for the management and protection of forests and renewable natural resources does not articulate a definition for the term "forest".

The main objective of the **National Water Policy** (2000) is to enhance the development and implementation of effective national water policies and strategies for integrated water resources management. It stresses the need for a balance between agricultural use and water needs for the generation of hydropower. The importance of increasing water capture and storage, particularly rain-fed water, is highlighted as a priority to match the needs of the country's vast land area. The water policy highlights the need for regulation and coordination between the different water users

to avoid fragmentation between government institutions, particularly at the state level. The policy also stresses the importance of supporting capacity building, improved management and environmental protection. Regarding wildlife, the Comprehensive National Strategies concentrate on conservation of habitats, adoption of appropriate economic policies, and enhancement of regional cooperation, and the establishment of more nature reserves and national parks.

Currently, a new draft policy for wildlife and protected areas is under development with support from the Strengthened Protected Areas System and Integrated Ecosystem Management Project implemented by the Higher Council for Environment and Natural Resources. Sudan also has a National Biodiversity Strategy (2001, revised 2015) and a National Environmental Action Plan (2007).

4.4. Agriculture and food systems policies

Ethiopia

In the past, Ethiopia's approach to agriculture has been guided by the Agricultural Development Led Industrialisation (1993), a long-standing development strategy to reduce poverty and achieve sustainable economic growth. Also important are the three subsequent poverty reduction plans (Sustainable Development and Poverty Reduction Programme 2000/01-2004/05; Plan for Accelerated and Sustainable Development to End Poverty 2006-2010; and the Growth and Transformation Plan 2011-2015). These plans emphasised macro-economic stability, with a major focus on growth, particularly commercialisation of agriculture and enhanced private sector development and investment to achieve the Millennium Development Goals. In particular, the Growth and Transformation Plan 2011-2015 aimed to transform Ethiopia towards an industrialized economy focused on the development of the manufacturing sector and the intensification of smallholder agriculture (MoFED, 2010/11). In 2014, Ethiopia surpassed the CAADP target of 10% national budget allocation to agriculture sector and attained 14% (ATA, 2015). While these strategies and plans emphasized agriculture production and productivity, there was less emphasis or guidance regarding climate change or natural resource management. Priorities started to change after the launch of the CRGE in 2011, with more emphasis given to conservation, land restoration and climate change in the agriculture sector. The second phase of the Growth and Transformation Plan 2016-2020 adopted several strategies and priorities in support of environmental management and climate change that have direct relevance to the GGW initiative. Key among these are the reduction of GHG emissions through enhanced crop and livestock production that improve food security and income of farmers and pastoralists; natural resource development, forestry development (including agroforestry), forest protection and reforestation programmes; expanding power generation from renewable sources of energy; and leapfrogging to modern and energy efficient technologies in transport and other sectors (FDRE 2016). The 2002 National Food Security Programme to improve food availability through domestic production and the 2003 "New Coalition for Food Security in Ethiopia" encouraged the rehabilitation of degraded and drought prone areas. However, Ethiopia's voluntary resettlement programme was also criticized for its contradictory effect in enhancing deforestation and degradation of land in resettlements area (Rahmato, 1999). In 2005, the Food Security Strategy was revised around three main components: the Productive Safety Net Programme, the Household Asset Building Programme and the Complementary Community Investment Programme. The Complementary Community Investment Programme sought to provide cash and in-kind support to populations living in identified food insecure areas, as well as helping to address water shortage, land degradation and soil erosion issues threatening rural livelihoods. In exchange for this support, recipients were encouraged to engage in public work programmes such as afforestation and rehabilitation of degraded lands or soil and water conservation actions. In 2013, the Climate Smart

Initiative directly incorporated climate change considerations in the design and implementation of the Productive Safety Net Programme and the Household Asset Building Programme to enhance adoption of climate smart technologies among beneficiary households, leading to increases in adaptive capacity and hence improved resilience to climate-induced shocks (EEA, 2018). The Horticulture Development Roadmap (2020) outlines the production of specific horticulture commodities that reduces risks of climate change, integrated with agroforestry systems that reduce GHG emissions. The Agriculture Sector Strategy 2020-2030 also recognizes agriculture to be the leading sector in the Ethiopian economy and places emphasis on the conservation and restoration of natural resources.

Mali

In Mali, the Agricultural Orientation Law (LOA) (2006) constitutes the guiding and unifying basis for all the legislative or regulatory provisions affecting the agricultural and peri-agricultural sectors. The LOA also aims to secure land tenure for farmers and to adopt a social protection system for rural producers, adapted to the country's needs and capacities. The Agricultural Development Policy (2013) supports the resilience of small-scale producers and promotes a sustainable, modern and competitive agriculture sector based primarily on family farms and recognized professional agricultural organisations, as well as the development of agricultural enterprises. The objective is to increase the competitiveness of the agricultural sector and limit food dependency, while generating job creation. The operationalisation of the Agricultural Development Policy requires adherence to the ECOWAP/CAADP Pact which led to the formulation of the National Investment Programme for the Agricultural Sector 2015-2025. This investment programme calls for actions aimed at making agriculture, forestry and fisheries more productive and more sustainable through the preservation of biodiversity, water and soil conservation, development and preservation of forests and wildlife reserves. The Plan also aims to make the agricultural, agro-sylvo-pastoral and fishery sectors more competitive and to position these sectors as the engine of economic growth and poverty reduction. To improve the resilience of livelihoods, the investment programme envisages the development of measures to mitigate and

adapt to climate change (such as the promotion of reforestation); the operationalisation of the National Plan for Adaptation to Climate Change; and the fight against desertification (through assisted natural regeneration of degraded forest formations, development of community forests, etc.). In line with its NDC and National Agricultural Strategy, Mali has developed a Climate-smart Agricultural Investment Plan (2019) to increase agricultural productivity, as well as provide support to farmers, herders and fishermen to adapt and build resilience to climate risks and reduce GHG emissions. It aims to provide the technological base for the agricultural system, with real-time monitoring of weather conditions, improved soil information, ecological extension services, restoration of degraded lands and promotion of a range of key climate-smart value chains.

Senegal

In Senegal, the National Food Security and Resilience Strategy 2015-2035 constitutes the guiding framework for interventions in food security and resilience. The vision of this strategy is "to work to ensure that the layers and categories most vulnerable to food and nutritional insecurity have easy and sustainable access to sufficient, healthy and nutritious food with strong capacities for resilience to horizon 2035". Within the framework of Strategic Axis 2 "Strengthening the physical and economic accessibility of vulnerable populations to a diversified, healthy and nutritious diet", one of the priority actions is "to develop and implement a policy of diversification of integrated food production (agricultural, livestock, fishing, agroforestry, agro-food products)".

The Agro-Sylvo-Pastoral Orientation Law 2004-2024 (LOASP) is the long-term vision for the agricultural sector and aims at transforming family farming into an efficient and income-generating sector. It was seen as a significant step forward for the agricultural sector, having substantially improved the dialogue between rural development actors (IFAD 2016). The LOASP not only serves as a reference for the promotion and sustainable development of natural resources but is also the basis for the launch of the National Programme for the Development of Agriculture, the National Programme for the Development of Livestock, the Forestry Action Plan) and the Forestry Policy of Senegal 2005-2025 (PFS). Other relevant policy documents include the Policy Letter for the development of the agricultural sector (2018-2023) with sustainable land management being one of the priority actions identified to increase agricultural productivity; and the Senegalese Agriculture Acceleration Programme (2014) aiming to build a competitive, diversified, and sustainable agriculture.

The State of Senegal has a strong ambition to promote more sustainable modes of production and food systems. For more than four decades, initiatives led by the State and civil society have supported the development of positive field experiments as well as favourable regulatory instruments, plans and programmes. For example, the National Federation for Organic Agriculture (FENAB), the International Association SOL Alternatives Agroécologiques et Solidaires and other structures are implementing actions for an agroecological transition of farming practices.

Pastoral development is regulated by numerous provisions, including the National Plan for Pastoral Development (2016) that highlighted the marginalisation of the pastoral sector compared to others, despite the fact that livestock activities support the livelihoods of 30% of households in rural areas. The National Plan for Pastoral Development provides the operational framework for the implementation of the LOASP, which outlines the long-term vision of agro-sylvo-pastoral development in Senegal. On fishery, the Law No. 98-34 (1998) on the maritime fishing code and its decrees, aims to regulate maritime fishing activities as well as establish the organisation of the Ministry of Fisheries as the executive agency responsible for the management and monitoring of the exploitation of aquatic resources.

Sudan

Sudan has an Agriculture Strategy and Action Plan built on the Sudan National Agricultural Investment Plan 2016-2020 (SUDNAIP) which lays down a roadmap to support the vision of "excellence in adopting e-solutions to transform agriculture for national prosperity capable of rapid and sustainable growth, inclusive of smallholders and with strong linkages to agricultural industrialisation".

Agricultural policy supports horizontal expansion of mechanized farming for crop production to support food security and to supply agricultural exports and local agricultural industries. However,

the expansion of agriculture, where coordination and integration have been lacking, have come at the expense of forest cover and natural resources conservation and management. This has greatly influenced present day forest and range policies and practices and resulted in significant land degradation (Eliding 2004). The agricultural sector lacks a nationally driven and agreed upon long term vision for smallholder producers. The agricultural policy includes statements on sustainable management of natural resources based on integration of land use, but such provisions will need to be clearly integrated so that the agricultural sector accommodates all relevant sub-sectors of forests, rangeland and agriculture-based industries.

The Resilient Livelihoods for Sustainable Agriculture, Food Security and Nutrition Strategy 2015-2019 aims to improve the policy and institutional environment for food and nutrition security and resilience programming through capacity development, enhanced coordination and better-informed decision making and knowledge management systems. The Strategy's Plan of Action promotes interrelated, mutually supporting and sustainable short-, medium- and long-term interventions at all levels (i.e., household, community and institutional) in support of the relief, recovery, and development of Sudan's small-scale agriculture sector, together with action to address the underlying causes of vulnerability in Sudan.

The National Comprehensive Strategy 1992-2002 called for rehabilitation and maintenance of natural ranges of Sudan. Objectives included the consideration of rangeland carrying capacity, improvement of pasture, adoption of suitable grazing systems and protection of rangeland against fires. Regarding animal husbandry, the National Comprehensive Strategy 1992-2002 focused on the expansion of the modernized animal husbandry and improvement of traditional practices, which account for more than 80% of the sector. Targeted changes include improving breeding and animal production systems, the encouragement of private sector investments, the intensification of production and the integration of agriculture and animal production within range and pasture improvement efforts.

A new draft policy (2022) is being developed to address the shortcomings of the National Comprehensive Strategy 1992-2002, including recognition of pastoralist rights on their defined grazing land; conservation and protection of range land resources; the establishment of transboundary resources sharing mechanisms between neighbouring countries and within states; and the adoption of suitable rangeland management techniques to improve traditional grazing systems.

4.5. Climate change policies

Ethiopia

In Ethiopia, the adoption of the CRGE in 2011 was a critical step in addressing the climate change risks facing the country. The key sectors targeted were agriculture, forestry, power, and transport, industry, and buildings. The CRGE has a focus on **improving crop and livestock production practices for food security and farmer income** while reducing emissions, protecting, and re-establishing forests, and expanding electricity generation from renewable sources of energy for domestic and regional markets. REDD+ has been introduced as a major investment instrument to implement forestry activities with significant emission reduction potential. REDD+ is one of the four fast-track programmes for realizing targets set in the CRGE strategy. Ethiopia has made significant progress in establishing a National Forest Monitoring System for the Measurement, and Reporting and Verification (MRV) of REDD+. Some milestones were achieved, including the acceptance of the Forest Reference Level by the UNFCCC, and the completion of the National Forest Inventory. Ethiopia submitted its Nationally Determined Contribution in 2015.

Mali

Mali's 2016 NDC focuses on mitigation and adaptation measures in the forestry, agriculture, livestock, and energy sectors. Climate change mitigation measures focus on three agricultural subsectors, which are irrigated rice cultivation, fertilizer management and livestock farming. Various adaptation measures are also promoted, including **small-scale agricultural development and land conservation; pastoral management; and strengthening the resilience of women producer groups** and vulnerable communities to climate change. Mali's National Policy on Climate Change 2011-2025 seeks to define a framework for sustainable development that integrates the challenges of climate change in all sectors in order to improve the well-being of the country's population. For the agriculture sector, **mitigation and adaptation interventions will revolve around the development of modern and diversified sustainable agriculture** and the promotion of SLM. In the forestry sector, the focus is on the promotion of reforestation for wood energy; conservation of plant and animal diversity; the promotion of income-generating activities; and restoration of degraded ecosystems. Mali's National Climate Change Adaptation Action Plan (2007) aims to promote sustainable development and combat poverty through mitigation of the adverse effects of climate change on the most vulnerable populations.

Senegal

Senegal does not have comprehensive climate change legislation, although it does have some relevant sectoral climate legislation. In term of the policy landscape relating to climate change, several strategic provisions exist in Senegal. The Plan for an Emerging Senegal is the overarching policy framework that guides the country's development agenda, including climate change aspects. The Plan for an Emerging Senegal is implemented through five-year Priority Action Plans (PAPs). The **PAP 2019-2023** emphasizes adaptation to climate change and the development of the oil and gas sector. It includes a GHG emissions limit for 2023 and a reference to the implementation of the NDC. Senegal's NDC (2020) is the key document that sets targets for climate action in Senegal. Furthermore, Senegal developed a **National Adaptation Programme of Action** in 2006 to address challenges related to climate adaptation in national land use and planning for sustainable development. Other provisions include Law No.2010-21 (2010) on renewable energies and Law No. 2010-22 (2010) on biofuel. A **"Green Plan for an Emerging Senegal"** is being developed which will elaborate in greater detail key actions to address environmental and climate change issues.

Sudan

Sudan was one of the first countries to prepare its National Adaptation Plan (NAP) in 2016 and is currently revising this plan. The objective of Sudan's NAP was to provide a generalized assessment of climate change vulnerability of all of Sudan's 18 states in priority vulnerable sectors (i.e., agriculture, water, health, and coastal zones) and to identify viable adaptation strategies, including policies, technologies, and programme interventions. The results of the NAP have been used by each state to prepare its state-level adaptation strategy. The findings and conclusions of the NAP have been reflected in Sudan's updated NDC (2022). The **focus has been on the most vulnerable sectors of agriculture** (e.g., crop production, rangelands, and livestock) which is highly aligned with a focus on agropastoralists and pastoralists. Moreover, the updated NDC also addresses the vulnerability of water resources, coastal zones, and public health. At the policy and planning level, the updated NDC emphasizes the need for **building national capacity for undertaking adaptation planning processes** to minimize the risks posed by climate change to communities, natural resources, and the economy.

4.6 Land policies

Ethiopia

Land is public property in Ethiopia since the 1975 radical land reform. The change in the government in 1991 did not change the land tenure system as land continued to be "public property" where land users are entitled to usufruct right, but permanent land transfers (except through inheritance and donation) and collateralisation are prohibited. Article 40 of Ethiopia's 1995 Constitution vests the right to ownership of rural and urban land exclusively in the state and collectively in the peoples of Ethiopia. The 1997 land administration proclamation (Proclamation No. 89/1997) redefines the scope of individual land use rights and states that such rights can be leased and bequeathed. The land rights themselves cannot be sold or exchanged, but private property improvements to the land can be sold or exchanged when farmers transfer their use-rights to other farmers through fixed rentals or crop-sharing arrangements. The proclamation delegates responsibility for land administration to regional governments (including the assignment of holding rights and the distribution of landholdings), but also provides important general guidelines that regional governments must follow in crafting laws. To protect their rights, the proclamation declares that farmers' landholdings should be registered, and user certificates should be provided to them (ARD, 2004, cited by EEA, 2016). However, there is no uniform land administration system throughout the country. The various regulations issued with land investment proclamations are not consistent and coherent with other investment policies, with the result that some of these proclamations contradicts land use rights, especially in those areas where land is abundant. In 2015, the Ethiopian Agricultural Investment

Land Administration Agency was established for allocating large-scale land to foreign and local investors.

Mali

In Mali, Law No. 2017-001 (2017) on agricultural land tenure applies to all national agricultural land. It defines the agricultural land tenure system, including the rights of states, municipalities and communities, as well as private agricultural land. The law also establishes agricultural land management bodies for land security and conflict mitigation. Any customary agricultural land right holder can request the legal recognition of his rights and the issuance of a certificate of customary land possession. Transference is authorized in compliance with the rangelands' capacities and local arrangements between the different resources' users. The National Plan for Integrated Management of Soil Fertility (2002) aims to support farmers to effectively manage soil fertility and promote sustainable and economically profitable production systems.

Senegal

The land tenure system in Senegal has evolved through three important phases, each of them being characterized by a particular land tenure system during and after colonisation:

- the customary land rights before colonisation, when it was easy for households to access land;
- colonial land tenure, which did not recognize the customs and traditions of the colonized population; and
- land tenure based on law on the national domain (Law No. 64-46) issued after independence.

This law created a national domain that covers 95% of the national lands and vested the exclusive land management and registration rights in the State, as well as in the decentralized authorities. Under this law, people using land in the national domain can continue to occupy and exploit those lands unless the competent decentralized bodies withdraw occupancy rights of those lands due to their undervaluing or for reasons of general interest.

Several tools for SLM are suggested in the National Land Policy (2016), among which are land use planning and allocation plans. These provide a framework for local land managers to better plan, implement and develop land uses at the local scale and integrate pastoralists into the administrative decentralisation process. As it currently stands, the application of the framework is far from effective for several reasons, including the insufficient intervention capacities of zonal commissions; the capacity deficit of the members of these commissions; and a lack of will to apply the relevant regulations (ILRI 2022).

Sudan

In Sudan, Article 187 of the 2005 Interim Constitution established an independent National Land Commission based on the representation of different government administration levels in Sudan. The main functions of the commission included the arbitration of land disputes, the implementation and enforcement of the law in disputed areas, issuing recommendations on land reform policies, the adoption of customary rights and customary land law, and the provision of advice to various levels of government on the coordination of their policies and projects related to land rights.

While the National Land Commission has been established, its structure has still to be fully developed, including its relationship to various land management-related commissions such as Darfur Land Commission.

Sudan's Constitutional Charter (2019) recognizes issues of land and tribal lands (Article 68.g), compensation and restoration of property (Article 68.k) and obliges the state agencies to work within the transitional period to return properties belonging to organisations and individuals that were confiscated due to war in accordance with the law (Article 67.i).

4.7. Gender policies

Mali's National Gender Policy (2009) aims to build a democratic society, accelerate economic growth, reduce poverty, and improve the well-being of the country's population to establish itself as an emerging country. The programme aims to fight against rural poverty through 1) the improvement of rural women's incomes in key sectors (agriculture, livestock, fishing); 2) the expansion of support services to women and 3) the integration of women into value chains, as well as equal access to employment opportunities and productive inputs.

Gender, equity, and social inclusion are mentioned in almost all Mali's key policy documents, with activities centred around improving the access of vulnerable social groups to productive assets to improve their productive capacities and overall living conditions. In the agricultural sector, the LOA (Article 13) mandates the allocation of at least **15% of the state or municipal managed agricultural lands to women and youth groups**. In addition, Article 29 allows socially disadvantaged groups such as migrants, and other land users who have operated on farmland for more than 20 years without any contestation to claim legal ownership of those lands. Since the adoption of the **National Gender Policy**, efforts have been made both at the legislative and institutional levels to improve women' participation into the country's development. Gender is also addressed in the **Strategic Framework for Economic Recovery and Sustainable Development 2019-2023**, specifically the adoption of **gender sensitive trade, finance and labour policies** that create decent jobs.

Senegal established its **National Gender Equality and Equity Strategy 2005-2015 (SNEEG)** with the vision "to make Senegal an emerging country, without discrimination, where men and women will have the same chances of participating in its development and enjoying the benefits of its growth". The SNEEG was articulated around four fundamental levers:

1. **enhancing the social position of women** and strengthening their potential;
2. the **economic promotion of women** in rural and urban areas;
3. **promoting the equitable exercise of the rights and duties of women and men** and strengthening women's access and position in decision-making spheres; and
4. **improving the impact of interventions** in favour of gender equality and equity.

Regarding the role of rural women, the SNEEG works towards inclusive and efficient agricultural and food systems. It highlights women's weak economic power and the growing feminisation of poverty, and thus suggests the following: 1) widen the field of economic intervention of women; 2) get men and other family members to take an active part in household management and to share responsibilities; 3) increase women' investment capacity and equal access to the labour market; and 4) ensure that the differentiated needs of women and men are taken into account at the macro, meso and micro economic levels. The SNEEG 2005-2015 places special emphasis on underprivileged and vulnerable women, in particular women in rural areas, women in the informal sector, women entrepreneurs, girls in and out of school, women heads of households, women workers, young girls and adolescent girls, illiterate women and disabled women.

Senegal has adopted a revised SNEEG for the period 2016-2026 that remains the national reference framework to establish an institutional, socio-cultural, legal, and economic environment favourable to the achievement of gender equality in Senegal in line with the country's development priorities. In the SNEEG 2016-2026, emphasis has been placed on the institutionalisation of gender and the mainstreaming of gender dimensions into development policy planning, budgeting, and implementation. The Strategy recognizes sociocultural factors as one of the root causes of gender inequality and suggests that changes in mentality, attitudes and behaviour for more equality is a long-term goal. Hence, the SNEEG promotes actions such as communication campaigns to promote a socio-cultural environment conducive to the achievement of equality between women and men. Gender equality and equity concerns, often referring specifically to women and youth, are omnipresent in Senegal policy documents (e.g., PNAE, LOASP, and the Senegalese Agriculture Acceleration Programme).

4.8. Overall policy context and policy coherence analysis for addressing land degradation and targeting land restoration

Ethiopia

Ethiopia has launched several national and regional level initiatives to address climate change and has institutionalized climate change in its pursuit of a green growth economy to increase agricultural productivity, end poverty and achieve middle income status. Climate change has been mainstreamed in agriculture and food security policies. The adoption of the **CRGE** in 2011 was a critical step in addressing the climate change risks facing the country and gave more emphasis to conservation, land restoration and climate change in the agriculture sector. **SLMP-I (2008-2013) and SLMP II (2014-2019)** helped to restore productive capacity and build resilient livelihoods in Ethiopia's highlands but had very little relevance to the arid and semi-arid pastoral areas of Afar and Somali regions that fall under the GGW geographic sphere. The launch of the **Green Legacy Campaign** demonstrates political willingness to contribute to the UN Decade on Ecosystem Restoration 2021-2030. The GTP II 2016-2020, the 2002 National Food Security Programme and the Agriculture Sector Strategy 2020-2030 all emphasise restoration and conservation of natural resources. However, the overall conclusion is that the **policy related to land degradation, land use, environment and climate change lacked coherence and an efficient coordination mechanism** to produce more measurable outcome.

Mali

In Mali, national efforts to implement the UNCCD constitute the historical benchmark for SLM policies. For the implementation of the UNCCD, a national action programme was adopted in 1998. However, the national action programme has proven ineffective to reach the UNCCD goals due to **a lack of vision, reference data and indicators**. To address these weaknesses, the government initiated the **Sustainable Land Management (SLM) Action Plan and Strategic Investment Framework for Sustainable Land Management** (CSI-GDT) in 2010. The CSI-GDT has informed the national development strategy (Strategic Framework for Economic Recovery and Sustainable Development 2019-2023), specifically the strategic objective 3 and 4 that guide the groundwork for environmental development in the country.

The CSI-GDT is also meant to support the achievement of LDN targets in the country. LDN is seen as a **multi-benefit objective for poverty reduction, food security, water, forest, and pasture management**, which constitutes the ultimate goal of land restoration efforts. Several existing policies and strategies related to the environment are expected to contribute to the achievement of LDN in the country by 2030: the National Environmental Protection Policy (1998), the National Forest Policy (2017), the National Sanitation Policy (2009), the National

Policy on Climate Change (2011), the National Drought Plan 2021-2025, the National Wetlands Policy (2003), the Strategy for Safeguarding and Integrated Management of River Niger Resources, the Investment Strategy for Sustainable Land Management and the National Disaster Risk Reduction Strategy (2016). The National Forest Policy particularly addresses all facets of sustainable environmental management (forest governance, SLM, biological diversity conservation, sustainable agriculture, climate change, etc.). Fostering synergy between these policies for reaching LDN is seen as an accelerator for the implementation of SDG 15 ("life on land") and SDG 13 ("climate action"). In addition, the NDC is viewed as an important lever for resource mobilisation towards reaching LDN.

Senegal

Senegal has a coherent and integrated vision of addressing environmental concerns through the mainstreaming of land degradation, restoration, sustainable agro-sylvo-pastoral resources management, and climate change into the country's sectoral policies, strategies, and plans. The **Plan for an Emerging Senegal** is the central development framework to which every sectoral policy contributes. Thus, land restoration interventions are informed by the Plan for an Emerging Senegal Strategic Axis 3 on governance, institutions, peace, and security, which promotes social protection and environmental protection, sustainable natural resources management and combatting climate change. Existing sectoral policies and legal and regulatory instruments were revised to better align with the Plan for an Emerging Senegal objectives, including:

- The policy letter for environment and sustainable development (LPD/SEDD).
- The LOASP which emanated from the national domain law and served basis for the development of medium-term operational programmes such as the National Agricultural Development Programme and the National Pastoral Development Plan; the LOASP is the basis for improving living conditions in rural areas (Sow, personal communication, 2022).
- The national land laws (national domain law), and related decrees.
- Sectoral laws (water code, hunting and wildlife code, mining code, forestry code, environmental code) that also contribute to SLM and land restoration (Ndiaye, pers. Com 2022).

In addition, strategic documents related to SLM are elaborated and implemented through: 1) the national action programme to fight against desertification (PAN/LCD) and the CNIS-GDT; 2) the creation of funds to finance SLM such as the National Agricultural and Agrifood Research Fund the National Agrosylvopastoral Development Fund; and 3) the territorialisation of public policies induced by Act III of decentralisation in Senegal. The NDC also commits Senegal to activities and projects that contribute to climate change adaptation through land restoration. These activities are fully consistent with the national strategic investment framework for sustainable land management. The NDC also includes activities with co-benefits in both adaptation and mitigation. In this respect, the NDC is one of the implementation mechanisms of the Green Plan for an Emerging Senegal.

Sudan

In Sudan, the **Comprehensive National Strategies** (1992-2002 and 2003-2027) promote sustainable resource use and management. However, many stakeholders in Sudan feel that land degradation issue are not adequately prioritised in national and state level development frameworks (personal communications). Appropriate and coherent policies for sustainable natural resource management and for addressing existing inequalities in access to land and natural resources have not been adequately developed.

The Agriculture Strategy and Action Plan supports horizontal expansion of mechanized farming for crop production to support food security and to supply agricultural exports and local agricultural industries. There is a lack of clarity over the semi-mechanized farming sector, with some policy recommendations made by the study "Sustainable Development of the Semi-mechanized Farming Sector in Sudan" prepared for the Government of Sudan and sponsored by World Bank-administered Multi Donor Trust Fund that have not been implemented because of resistance from big landholders.

4.9. Extent to which land degradation and restoration interventions are addressed within national policy in Mali and Senegal

In **Mali**, the environmental dimension in development planning as well as the impact of development programmes on ecosystems and people's living environment is a recurring concern. The degradation of land as a productive resource through erosion and deforestation is particularly stressed in sectoral policies related to agriculture, forestry, mining, climate change, and livestock. **Land degradation and deforestation contribute to annual losses of 6% and 5.35% of GDP respectively** (FAO, 2022). Thus, addressing land degradation through LDN is envisioned as a means to achieve the Sustainable Development Goals (i.e., specifically SDG l5, SDG 5 and SDG 3). Such efforts will also support SLM policy coherence, prioritize climate initiatives, and help the country seize new funding opportunities for the implementation of the UNCCD.

In the agricultural sector, the agricultural development policy (PDA) and its implementation and investment plan (PNISA) addresses LDN processes i.e., the identification of LDN targets, supporting land management and planning, the development of natural resources, the preservation of biodiversity and the development of sub-sectors associated with the rural economy. The LOA recognizes the impacts of droughts and climatic hazards on natural resources, as well as territorial inequalities and differentiated exposure to risks. It promotes the participatory rehabilitation of degraded agricultural land through **local development programmes**, the operationalisation of land management schemes and plans, and the scaling of good SLM practices. For example, learning from the UNCCD experience, the CSI-GDT used **landscape approache**s, combined with other mechanisms, to establish reference points on land degradation in Mali and identify the hot spots for land restoration. The GGW national implementation strategy suggests the **integrated management of livelihoods-based sectors to increase populations' resilience to climate change**. However, agroforestry is not sufficiently considered in both pastoralism and agricultural development strategies. Mali's pastoralism development strategy does not mention agroforestry or land restoration practices.

In **Senegal**, land restoration is addressed within national policy. Senegal has clearly defined its priorities in terms of restoration of degraded lands as part of its international commitments. Land degradation is dealt with in a cross-sectoral manner and there are several legal instruments that contribute to the effective management of the problem, including:

- The **NDC**, which is one of the implementation mechanisms of the Green Plan for an Emerging Senegal and whose activities are fully consistent with the national strategic investment framework for SLM.
- The **National Forest Policy 2005-2025**, which emphasizes the intensification and improvement of land production by introducing local fertilizing species into agrarian systems, the development of technologies for the organic enrichment of the soil (composting, organic manure, fragmented twigs, assisted regeneration), as well as producing seedlings in individual, village, and community nurseries. The National Forest Policy also pursue the resilience of agricultural ecosystems and the fight against desertification through SLM practices in the country's groundnut basin.
- The **LOASP**, which is the basis for improving living conditions in rural areas (Sow, personal communication, 2022). Some of the activities defined by this law are related to soil restoration.
- The **Forestry Code** aims to recover denuded lands by reforestation mechanisms and to define the condition of land use. The water codes prescribe water usages and protection of the riverbanks, thereby also contributing to SLM and land restoration (Ndiaye, personal communication, 2022).

The ministries involved in SLM have developed sectoral policy letters that identify the land restoration activities that contribute to the achievement of the Green Plan for an Emerging Senegal. These sectoral policy letters (2020-2024) have been formulated by the Ministries of Agriculture, Environment, Livestock, and others. The other policy instruments that orientate the country's work in this respect include:

- The national strategic investment framework for land restoration and management;
- The 1998 national action programme to combat desertification (PAN/LCD).

5 Bottlenecks for the implementation of the GGW

Implementing the GGW in the Sahel requires an enabling environment, including appropriate and inclusive policies and regulations, sustainable institutions, access to funding and an effective science-policy-practice interface.

While policy frameworks are in place at national level for addressing land degradation and promoting land restoration, the level of alignment and integration between the national food, land, forestry, agriculture, environment, and climate policies of the four Sahel countries assessed in this report varies and various implementation gaps impact their contribution to achieving GGW ambitions and LDN. Based on the first and second cycle of implementation of the GGW (as assessed by Gravesen and Funder, 2022; O'Byrne et al., 2022; World Bank, 2011; World Bank, 2021; UNCCD, 2022) as well as the national policy coherence analyses for the four selected GGW member countries (Ethiopia, Mali, Senegal, and Sudan), several common bottlenecks have been identified that are undermining the implementation of the GGW. They are described in the following sections.

5.1. Political level bottlenecks

Lack of harmonized mainstreaming of land restoration strategy across sectors and jurisdictions

The lack of harmonized mainstreaming of land restoration strategy across different sectoral domains and jurisdictions is commonly observed in all countries.

In **Ethiopia**, the weak integration of climate change into the development planning and budgetary processes across government levels, as well as limited integration of climate change adaptation interventions into land use plans and management of natural resources, are contributing to the lack of coherence and continuity of policy implementation (AGRI-BILCHA Plc., 2022). A lack of coherence and continuity of policy implementation has been emphasized as certain laws that support climate change and the GGW are not consistent with each other, while some interventions lack policies, i.e., there is no land use policy, watershed policy or forest policy (AGRI-BILCHA Plc., 2022). This has not been favourable to mainstreaming land restoration in an integrated way (AGRI-BILCHA Plc., 2022).

In **Mali**, the LDN process attempts to build bridges between the policy arenas that are impacted by land degradation, but national guidance on decentralisation, land use planning, mining operations, forestry, agriculture, pastoral development strategies and land laws maintain these different resources' management in a siloed sectoral vision (Mentz and Karambiri, 2022). For example, assisted natural regeneration (ANR) is key in the country's SLM development strategy but is ignored in the pastoral development strategy, yet pastoralism and livestock management is critical for the survival of the ANR areas.

The environmental protection policy requires environmental and social impact assessment before any environmental intervention. However, this requirement is not effective applied, especially in the mining sector. Currently, gold panning is practiced in unsustainable ways that contribute to land degradation. In **Senegal**, the Forestry Code, the Water Code, and the LOASP should be synergized through a focus on development, taking the drivers of land degradation into account (Mentz et al., 2022).In **Sudan**, there is a lack effective coordination between institutions and a lack of policy coherence related to land restoration (Atta Elmoula 1985; Elsiddig et al. 2007).

Conflicting policy orientations between the promotion of "modernized" agriculture and transition to agroecology

Conflicting policy orientations at national level between the promotion of modernized agriculture (often relying on heavy land clearing, improper use of mechanisation and subsidized chemical fertilizers) and the transition to agroecology echo the tensions this report emphasized at the regional level. For instance, large scale agro-industrial developments still feature prominently in **Mali and Senegal** (despite policy commitments towards supporting an agroecology transition) with a focus on mechanisation, including subsidies targeted at mechanisation and industrial fertilizer use, which is contradictory to the recommended land management practices linked to restoration (Mentz and Karambiri, 2022; Mentz et al., 2022).

In **Mali**, although the public authority intends to promote agricultural diversification, more than 70% of public expenditure is allocated to cotton and rice (Mentz and Karambiri, 2022). While Mali's NDC targets the promotion of organic fertilizer as a substitute for chemical fertilizers to reduce agricultural GHG emissions, the agriculture sector focuses on the subvention of chemical fertilizer and uncontrolled mechanisation that could discourage agroforestry (Mentz and Karambiri, 2022). Likewise, the Agricultural Development Policy envisions the extension of agricultural land to increase staple food production and food security while the LDN policy seeks to reduce agricultural expansion. Agricultural spending is increasingly focused on input subsidies, while funding to support transport and market infrastructure, research and extension services remain low. No systematic public funding is dedicated to support SLM and agroforestry development (Mentz and Karambiri, 2022).

In **Senegal**, the NDC seeks to promote the production and use of organic manure and biogas to reduce GHG emissions in agriculture, reaching 4 500 ha under compost (unconditional on external support) and 14 400 ha under compost (conditional on external support) (Mentz et al., 2022). However, systematic support of these practices is lacking compared to subventions to chemical fertilizers and inputs that could reduce land fertility on the long term (Mentz et al., 2022). Although the Plan for an Emerging Senegal clearly established the requirement for prior environmental and social impact assessments for major projects, in practice large infrastructure projects such as roads and dams still contribute to the degradation of land cover vegetation (Mentz et al., 2022).

Absence of land use plans and unsecure land tenure

Unsecure land tenure and absence of land use plans have been critical factors impeding the adoption and scaling of land restoration practices and contributing to poverty and violence in contemporary Africa.

The postcolonial legacy of the forest system of most (although not all) of the countries in the region has resulted in a centralized system, whereby the state owns virtually all the land and forests, with **communities often disenfranchised**. In Ethiopia, since the land proclamation of 1975, all forest land areas of 80ha or larger belong to the state and only usufruct rights are granted to communities (AGRI-BILCHA Plc., 2022). Permanent land transfers (except through

inheritance and donation) and collateralisation are prohibited, which created serious problems in soil conservation and collective land improvement measures (AGRI-BILCHA Plc., 2022). The rural land proclamation of 2005 stated that farmers engaged in agriculture will be given a certificate to the rural land indicating the size of the area under production. This however turned out to create a perverse incentive to convert forest as a means of demonstrating use in order to acquire usufruct rights (Lavers, 2018). Periodic land redistribution (or at least the threat of such redistribution, including eviction for public purposes) has occurred several times in Ethiopia, notably in 1992, 1993 and 1997, creating much uncertainty and requiring massive resettlement of people over the years (Mansourian and Berrahmouni, 2021).

In Mali, the Agricultural Orientation Law recognizes **customary rights over agricultural land and proposes simplified procedures for the legal registration of these rights** through the issuing of a customary land ownership or possession certificate (Mentz and Karambiri, 2022). This certificate is delivered by land registry services following the approval by the customary authority, the village land commission, and the municipal authority (Mentz and Karambiri, 2022). However, this process is undermined by the state and land law (Code Domanial et Foncier 2000) which fails to consider agricultural lands or recognize communities' rights over those lands (Mentz and Karambiri, 2022). Under this law, private individuals' lands are considered part of the State's private property (Mentz and Karambiri, 2022).

In Senegal, the land tenure system is characterized by a plurality of norms that results from the coexistence of customary law, widely applied by local communities, and modern land legislation (Mentz et al., 2022). Several tools for sustainable land management are suggested in the National Land Policy (2016), among which are land use planning and allocation plans, which provide a framework for local land managers to better plan, implement and develop land uses at the local scale (Mentz et al., 2022). As it currently stands, the application of the framework is far from effective for several reasons, including the insufficient intervention capacities of zonal commissions; the capacity deficit of the members of these commissions; and a lack of will to apply the relevant regulations (ILRI 2022). Sudan also lacks a clear policy for land administration and natural resource management (Ganawa, 2022).

Following the 1970 Land Act, all unregistered lands were declared government land. In the rainfed agriculture sector for instance, it is not uncommon for land not to be demarcated or registered. In these cases, land rights are governed by local customary law. Under this system, households have strong, exclusive residential rights, seasonally exclusive rights to arable land, and shared rights to grazing land and other common resources (Ganawa, 2022). Existing legal frameworks relating to land are complex, with differences between statutory and customary rights that need to be considered carefully when developing projects through the GGW (Ganawa, 2022). Specifically, it is not clear which of the statutory or customary rights have legal status in terms of who owns and who controls land and how land access can be made, legitimated, or contested. As a result of this, borders between the public land and tribal land are highly blurred, with statutory laws appearing to have no recognition or legitimacy at community level, a situation that has created many disputes between the state and communities (Ganawa, 2022). Forest reserves are also registered government property, even though rights are given to communities to access the forest reserves through collaborative management systems (Ganawa, 2022).

A consequence of unsecure land tenure and absence of land use plans is that **rural land grabbing is prominent**. In Ethiopia, regions in the remote areas in Gambela and Benshangul have witnessed large-scale misappropriation of land transferred to foreign and national investors following the establishment of the Ethiopian Agricultural Investment Land Administration Agency in 2015 (AGRI-BILCHA Plc., 2022). The development of commercial farms has caused significant destruction of natural resources, resulting in impacts on climate change and land degradation (AGRI-BILCHA Plc., 2022). In Mali, the Agricultural Orientation Law encourages agribusiness and large-scale private investment into agriculture. In practice, this policy resulted in uncontrolled rural land grabbing, contributing to deforestation and the degradation of watersheds, as well as protected and classified forests (Mentz and Karambiri, 2022). This monetisation of land without proper safeguards contributes to undermining vulnerable populations' land access, including women, youth, and migrants (Mentz and Karambiri, 2022).

Lack of an agroforestry policy

The absence of a regulatory framework to support the development of agroforestry is a key bottleneck to the success of implementation of the GGW.

In Mali, agroforestry elements are spread throughout different Ministries. Agroforestry is not mentioned in the Agricultural Development Policy (2013) or the National Forest Policy (1995) (Mentz and Karambiri, 2022). The forestry policy was revised in 2018 but remains silent on the trees that farmers leave in their fields (Mentz and Karambiri, 2022). In Senegal, agroforestry is cited as an important axis in the National Strategy for Food Security and Resilience 2015-2035 (Mentz et al., 2022). However, there is neither specific legal, regulatory, policy or strategic framework for agroforestry in the country nor systematic agroforestry integration into forestry (e.g., Senegal's Forestry Policy 2005-2025), or in agricultural or livestock policies (LOASP; National Livestock Development Plan). Consequently, agroforestry and specifically the management of trees in the fields falls under the forestry regime and is therefore regulated by the provisions of the National Forestry Policy 2005-2025 and its legal frameworks for implementation, such as the current forestry code 2018 (Law No. 18-25) (Mentz et al., 2022). The NDC strategic actions (both conditional and unconditional) rely heavily on ANR to reduce GHG emissions in the agricultural sector, but ANR practice still lacks its own policy and regulatory framework. The National Environmental Protection Policy acknowledges the negative impact of climate change but fails to integrate climate-smart practices (for example ANR or other land restoration practices for fodder production) into their interventions (Mentz et al., 2022).

In Sudan and Ethiopia, agroforestry is not addressed in dedicated policy either. Ethiopia's current land tenure system is characterized by fragmentation and small plots, which discourages long-term investment in agroforestry and is poorly aligned with the Forest Development, Conservation and Utilisation Proclamation No. 1065/2018 (AGRI-BILCHA Plc., 2022). However, the recent establishment of the Ethiopian National Watershed and Agroforestry Multi-Stakeholder Platform, which is co-chaired by both the agriculture and the environment sectors, provides a valuable opportunity to facilitate awareness-raising, coordination, and harmonisation across sectors, as well as the creation of an enabling policy environment within which agroforestry can flourish (Bernard et al., 2019).

Unclear distribution of rights over trees on farms and the restored ecosystems and gaps in SLM policy articulations

The absence of an agroforestry development strategy, combined with insecure land tenure and unclear distribution of rights over the restored ecosystems impedes the adoption and scaling of agroforestry and other land restoration practices. Trees on farms, including those grown through ANR, represent an important asset in rural livelihoods and provide numerous ecosystem services to farmers. Yet, these trees lack a specific status that would differentiate them from the trees inside forests, and a clear distribution of rights over them. This gap opens doors to interpretation and sometimes 'inappropriate' enforcement of the forestry law by the forest services, thus nurturing tensions and conflicts with the local stakeholders.

In Mali, trees on farms are governed by forestry regulations, which gives decision making power over trees to the government and imposes permit requirement for tree exploitation, as well as forbidding cutting or pruning of protected trees species (Mentz and Karambiri, 2022). Although the permit for ANR trees is said to be free of charge, farmers still spend resources (time, money) to visit the forest officer and secure their approval from. There is no formal recognition in the forestry legislation that farmers have an exclusive right to the trees resulting from ANR on their fields (Mentz and Karambiri, 2022). In Senegal, the forestry codes recognize farmers' ownership of the trees grown through ANR, but do not specify a legal status for these trees on farm, including those resulting from ANR (Mentz et al., 2022). Therefore, these ANR trees are treated like those inside forests, and are also subject to permit requirements for their exploitation. These procedures and permit requirement limit farmers' incentives to adopt ANR at scale, especially the local tree species, which are for the most part protected (Mentz et al., 2022).

Existing land policies biased against pastoralists and absence of laws protecting rangelands

Another policy deficit common to Ethiopia and Sudan is the **bias against pastoralists** and the **conflicting interests** between traditional rainfed farming, pastoralism and other forest uses resulting from the absence of land use plans and a lack of laws governing land tenure and land use.

In Ethiopia, the federal and regional land policies and laws enacted prior to 2008 attempted to address tenure insecurity only for landholders in the settled agricultural areas and not for pastoral land (AGRI-BILCHA Plc., 2022). The Afar regional state has issued its land policy and legislation while the Somali regional state has started the process. However, while this legislation gives the responsibility of managing pastoral land resources to customary institutions, other legislation confers it on the woreda and kebele administrations (AGRI-BILCHA Plc., 2022). Existing policies in Sudan are also biased against pastoralists (Ganawa, 2022). This bias was institutionalized since 1944, when the Soil Conservation Committee recommended that: "where nomadic pastoralists were in direct competition for land with settled cultivators, it should be the policy that the rights of the cultivator be considered as paramount, because his crops yield a bigger return per unit area" (Galal El-Din El- Tayeb, 1985).

Despite the major role of nomads in the national economy, **the livestock sector has not been given the attention it deserves from the government**, and pastoral development policies are loosely defined by decision makers. There is a tendency to view pastoral development policies as synonymous with livestock development, with the assumption that a trickle-down effect would eventually diffuse economic benefits and improve the living conditions of the pastoralists (Mohamed Salih, 1990). There is no central legislation regulating and clearly protecting rangelands (Ganawa, 2022). Grazing land tenure is governed by local regulations and customary land rights, supervised by tribal leaders. There have been many attempts by the range and pasture administration to develop regulation to support rangelands, but these efforts have been without success (Ganawa, 2022). Many acts have been proposed at the state level but are either not approved by the state parliament or approved but not legally endorsed, even in Darfur where conflicts demonstrate the impact of competition over reduced rangeland (Ganawa, 2022).

The conflicting interests of traditional rainfed farming, pastoralism and forest uses at local, state, and national levels have discouraged appropriate land management and caused negative social and environmental impacts, which has led to land degradation and land fertility loss (Ganawa, 2022). There have also been multiple attempts at resettlement and 'sedentarisation' of the pastoralists, which failed due to a top-down approach that has excluded the pastoralists themselves from planning and decision-making processes, as well as poor understanding of the pastoral sector among planners and decision-makers and the failure to help the pastoralists with other livelihood options (Ganawa, 2022).

5.2. Governance and institutional bottlenecks

Internal dysfunctions in GGW governance and regional coordination

Some internal dysfunctions in the governance and regional coordination of the initiative have been noted, which calls for **transformational changes at the organisational and technical levels of the GGW structures** both regionally and nationally (personal communication with Jean-Marc Garreau, SOS SAHEL, December 2022). Further efforts are also required to improve **harmonisation of interventions** in governance, coordination of operational activities and resource mobilisation, and a stronger and more assertive political leadership for the environmental agenda.

Lack of sufficient capacity in the national GGW agencies or focal points and countries

Political support for the GGW has been expressed differently in each country. Under the political leadership of the AU Commission and the regional coordination of the PA-GGW, each country has established a national agency or coordination unit, developed its national strategy and action plan, and identified intervention areas to meet the objectives of the GGW (Mansourian and Berrahmouni, 2021). Many member states have created **national GGW agencies or focal points** to supervise and coordinate the implementation the initiative, while others have set up coordination units under the ministries responsible for environment or forests (UNCCD, 2020). However, these national GGW agencies or focal points do not have sufficient capacity in terms of technical knowledge, or the capacity to generate bankable projects and programmes and address the complex and demanding requirements set by environmental financial institutions (GGW Accelerator, n.d.).

In Ethiopia, the GGW does not have an independent office as such, a single individual is responsible for coordination, limiting the ability to support coordination and track implementation (AGRI-BILCHA Plc., 2022). **Limited technological, financial, and institutional capacity** at federal, regional and woreda levels to support implementation of climate change adaptation interventions, as well as limited availability and capacity of agricultural extension agents at woreda-level have been emphasized in Ethiopia (AGRI-BILCHA Plc., 2022).

Mansourian and Berrahmouni (2021) also highlight that the forest service in many of the GGW countries is overstretched, with a small number of officers covering huge areas and many of the officers not having received sufficient trainings. Individuals at community level also require significant support to strengthen their capacity in restoration techniques, marketing their products and basic skills like bookkeeping (Mansourian and Berrahmouni, 2021). A **high turnover rate of the governments staff** has also been highlighted as a challenge, notably in Sudan (Ganawa, 2022). In most GGW countries, this resulted in difficulties in establishing the required governance and project structures for attracting financial resources, supporting implementation, and conducting reporting (GGW Accelerator, n.d.). Going beyond traditional grant-based and short-term development interventions has also been very challenging (GGW Accelerator, n.d.).

Lack of stable lead institution and institutional conflicts

The lack of a stable institutional infrastructure with a clear mandate to drive the GGW, as well as uncertain and overlapping institutional mandates, have been mentioned as challenges in all selected countries. In Ethiopia, over the past two decades, it has been noted that climate change was placed under no less than three ministries and several agencies (AGRI-BILCHA Plc., 2022). The **complex and overlapping range of policy interventions to address climate change** in Ethiopia has been further challenged by weak coordination mechanisms for joint planning and continuity among institutions (AGRI-BILCHA Plc., 2022). For instance, the Ethiopian Forestry Development acts as the representative for the forestry sector in international, continental, and regional platforms, without a clear mandate, while the Ministry of Agriculture is driving the forestry and climate change programme across the country, with the Landscapes and Restoration Department annexed to the Ministry of Finance (AGRI-BILCHA Plc., 2022).

In that context, the GGW is currently conceived like any other forestry programme under the Ministry of Agriculture, while initially the national GGW focal person was located at the Land Rehabilitation Branch under the Ministry of Environment, Forests and Climate Change. There is no specific project dealing with the GGW as such, but many projects feeding into the GGW are implemented by various agencies and the Ministry itself. Since the introduction of the CRGE, many climate change projects are under implementation by numerous institutions, including the National Agricultural Research System, the Policy Research Institute, the Forestry Research Institute, the Ministry of Agriculture, the National Meteorological Agency, the National Climate Change Forum, the Climate Change Research Network, the Civic Society Association on Climate Change, and farmer institutions, as well as higher learning agricultural institutions (AGRI-BILCHA Plc., 2022).

The issue is that the projects across these institutions appear largely disconnected from each other, resulting in duplication of effort. The approach lacks continuity, coordination, alignment, and cooperation (AGRI-BILCHA Plc., 2022). Institutional mandates are uncertain and often overlapping and, as a result, it is difficult to assess the impact of climate change policies on the Ethiopian economy. The GGW agenda, its plans, and credible programmes such as sustainable land management need to be mainstreamed into the relevant ministries dealing with environmental matters for a synergistic outcome (AGRI-BILCHA Plc., 2022). This will require high level political leadership and the revamping of GGW Ethiopia so that it has a more functional structure (AGRI-BILCHA Plc., 2022).

In Mali, **challenges in intersectoral coordination** are evident in the implementation of the National Environmental Protection Policy, with potential institutional conflicts and overlaps between national directorates, the specialized agencies of the Ministry of Environment (such as the Environment and Sustainable Development Agency) and the other ministries (Mentz and Karambiri, 2022). Collaboration between focal points for SLM-related initiatives remain weak, as does the monitoring and evaluation mechanisms for major decisions emerging from national and international forums.

This institutional weakness is a broader issue that permeates Mali's institutions (Mentz and Karambiri, 2022). The lack of synergy between departments, institutional instability and insufficient human, material and financial resources in ministerial departments are factors that limit the quality of public interventions in general (World Bank 2021).

In Senegal, elements of land restoration and agroforestry governance are found in multiple ministries (primarily environment, agriculture, livestock/pastoral, and water), as well as more indirect linkages with ministries responsible for energy, mining, economy and finance (Mentz et al., 2022). **The cross-sectoral nature of land restoration and agroforestry makes coordination, implementation and impact evaluation challenging, with risks of institutional compartmentalisation that can limit impacts on the ground.** The 2009-2015 Sectoral Letter for Environment and Natural Resources raised these coordination challenges and urged the Ministry of Environment to improve coordination, both among its own agencies and directorates, and with the other ministries contributing to the environmental sector (Mentz et al., 2022).

In Sudan, the Higher Council for Environment and Natural Resources was established in 1991 to establish effective policies, laws, plans, and institutions related to natural resources and degradation of the environment (Ganawa,

2022). However, with the Prime Minister no longer heading its board of directors and the creation of the Ministry of Environment in 1994, the Higher Council for Environment and Natural Resources was weakened. In the agricultural sector, there is lack of clarity around responsibilities related to agriculture and natural resources, including between the federal Ministry of Agriculture and the states, which have their own ministries of agriculture (Ganawa, 2022). Mechanisms for harmonizing and streamlining policies and strategies across the states are absent, and policies have historically been top-down, and marked by frequent changes and an inadequate enabling environment (Ganawa, 2022).
The Range and Pasture Administration has a history of being transferred from one ministry to another. Lack of a stable organisational position has greatly reduced its administrative and technical effectiveness. Its relationship to different ministries and connections to regulations and laws related to different ministries has been unclear, inhibiting the development of pastoral communities and rangelands (Ganawa, 2022).

Lack of coordination between the GGW and other land restoration activities and programmes

Analyses across all four focus countries reveal **shortcomings in taking advantage of synergies between projects related to land restoration and projects implemented as part of the GGW**. In some instances, the PA-GGW is not aware of donor funded projects linked to SLM and livelihoods being implemented in the GGW area. This lack of coordination results in an inefficient use of time and resources and ultimately tarnishes the effectiveness of interventions (personal communication with Jean-Marc Garreau, SOS SAHEL, December 2022).

The success of the GGW in Ethiopia is heavily dependent on how effectively it is integrated with on-going strategies and the degree of synergy created for actions. The major strategies and programmes that feed into the GGW include, for instance, the Sustainable Land Management Project I (SLMP-I: 2008-2013), the CRGE, the Growth and Transformation Plan (2016-2020) and the Ethiopia Resilience Landscapes and Livelihoods project, which aims to improve climate resilience, land productivity and carbon storage, as well access to diversified sources of income in selected watersheds (AGRI-BILCHA Plc., 2022). These strategic plans and projects have mutually reinforcing objectives of reducing emissions and building resilience, while also being aligned to the broad objectives of the GGW. However, limited work has been done in terms of harmonising the interventions and aligning the strategies for more measurable outcomes (AGRI-BILCHA Plc., 2022). The GGW lacked a functioning platform to bring actors together and instead each project worked independently.

There have been several transboundary projects initiated by the World Bank, the Food and Agricultural Organisation (FAO), and UNCCD under the Sahel and West Africa Programme in support of the GGW (AGRI-BILCHA Plc., 2022). It is not clear, though, how effective these projects have been in terms of achieving their stated objectives. The UNCCD (2020) reported that Ethiopia has benefited from these projects through the improvement of landscape resilience and livelihoods and thus enhanced poverty reduction, food security and water resource security. Another question is how the Green Legacy Campaign can be integrated into the GGW. The Green Legacy Campaign is currently treated as part of the CRGE, distinct from the GGW, and there are no platforms to bring the two initiatives together and coordinate activities (AGRI-BILCHA Plc., 2022).

Incomplete decentralisation processes

In Mali and Senegal, **incomplete decentralisation processes limit the effectiveness of local institutions, including those in charge of land management, in supporting national land restoration endeavours** (Mentz and Karambiri, 2022; Mentz et al., 2022). There are deficiencies in the regulatory frameworks, as well as **inadequate resource allocation** to support the responsibilities conferred by existing legislation (Mentz and Karambiri, 2022). Senegal is slightly more advanced, with their decentralisation law completed, but the transfer of financial resources from the national to local government remains a challenge (Mentz et al., 2022). **The impact of the contribution of local authorities is further compromised by the weakness of their project management capacity** (World Bank 2021).

Lack of involvement of local populations and non-state stakeholders

Producer organisations should be an integral part of the implementation of the GGW (Garreau, personal communication, 2022). Yet too often the primary actors (farmers, herders and local populations) have been excluded from project design and decision-making processes. In Senegal for instance, the geographic focus of the GGW overlaps with pastoral land practices, hence the importance of consulting herders in these areas and the need for strong capacity building and engagement of local communities in designing interventions (Ka, personal communication, 2022). Too often, there is a **lack of genuine support for pastoral communities**. Ultimately, the populations that benefit from land restoration measures must be able to take over these activities from the state services. However, local buy-in is often lacking due to the **marginalisation of local stakeholders in the design of interventions**, as well as the absence of land tenure rights.

In Mali and Senegal, a study on the mobilisation of non-state stakeholders of the GGW found that the implementation of the initiative tended to be **top-down, technocratic, and non-inclusive**. Failing to introduce non-state actors in projects will result in the risk that "the projects presented (lack) territorial anchorage" (Mentz and Karambiri, 2022; Mentz et al., 2022). Greater involvement of civil society organisations and research actors in the dynamics of the GGW via a support programme for the field actors of the GGW is needed (UNFCD, 2021).

Lack of data sharing and exchange

Lessons learned and knowledge generated from GGW projects is **not effectively disseminated beyond the project intervention area** and relevant parties to the broader scientific and academic community, policy drivers and technical specialists. In Ethiopia, researchers from the International Food Policy Research Institute (IFPRI), the Center for International Forestry Research (CIFOR), the FAO and other UN organisations conduct specialized studies to test certain hypotheses and/or evaluate performance, but this is not fed back to GGW implementing entities like the Ministry of Agriculture for improved outcomes (AGRI-BILCHA Plc., 2022). In Senegal, it has been emphasized that there is weak communication and a lack of information sharing and coordination in the GGW zone (Mentz et al., 2022).

5.3. Resources constraints

Lack of finance, with slow release of funds from donors and difficulties in accessing the various climate funds

Many land restoration targets and commitments **rely heavily on funding from external donors**. For Mali's GGW efforts, this represents 70% of the funding received. Yet, one common issue across the GGW countries has been that funds from international sources have been insufficient, unpredictable, and often not released for timely execution of the planned activities. Despite various technical and financial partnership agreements and funding pledges, **commitments and disbursement of financial resources are slow to materialize**. Moreover, the intermittency and difficulties in accessing the various climate funds, particularly the Green Climate Fund, the Adaptation Fund and the Global Environment Facility, have undermined the mobilisation of the pledged resources. In Ethiopia, much of the international commitments to fund GGW projects have not been realised and the national GGW secretariat even lacks resources to manage its office, let alone implement interventions or initiate projects (AGRI-BILCHA Plc., 2022). Among the major constraints that have considerably diminished achievements is the problem of **planning and effective mobilisation of financial resources**, rightly considered the weak link in the GGW initiative's implementation strategy. More than 90% of the financial resources accounted for by the PA-GGW and targeted in the GGW flagship programmes and intervention zones come from the endogenous resources of the GGW member states (AGRI-BILCHA Plc., 2022). Senegal has highlighted that their agency suffers from a lack of information on the financial instruments of the various partners and has limited capacity to develop projects that appeal to donors (Mentz et al., 2022).

Institutional blockage in the financial dialogue

The main obstacle to the mobilisation of resources is the **positioning of national agencies**. These agencies are typically under the direction of their country's ministry of the environment. However, the financial partners generally engage with the ministries responsible for finance and planning. International funding agencies often channel their funds mostly through UN agencies, while donor programmes use international NGOs to implement certain activities related to the GGW. This gives them more control over how the funds are spent, but bypassing the PA-GGW and the national structures of the GGW creates a problem for transparency, as it makes it harder for the AU to determine precisely who is funding what. **This parallel funding is a major impediment to harmonized strategies for coherent programming.** In addition, financing may reach the central government but not the regions where restoration is to be implemented.

5.4. Gender and youth inclusion

Challenges related to the inclusion of gender and youth in natural resource, land and environment policy formulation and implementation also represent a bottleneck to scaling up and achieving the GGW initiative's ambitions.

In Mali, gender equity and inclusion of women, youth, and other vulnerable groups are mentioned in most policy documents, however, most of the actions relate to solving the current practical needs of these groups with sometimes narrow socio-economic and financial solutions, but little focus on changing their status through addressing the root causes of these inequalities (Mentz and Karambiri, 2022).

In Sudan, gender roles, status and relations are impacted by the country's diverse ecology and land tenure systems, cultural (partly tribal) factors, and conflicts (Ganawa, 2022). Gender disparities are particularly magnified in rural areas, in large part owing to inequalities in access to land and other resources (Ganawa, 2022). Although the country's land laws do not discriminate against women, in practice women have significantly less access to natural resources, especially land, and are more likely than men to be landless, despite their significant role in agricultural production. Even in cases where women obtain land ownership rights, their authority, control, and management over the land is highly constrained due to social factors (Ganawa, 2022). In the rainfed agriculture sector, it is not uncommon for land not to be demarcated or registered. In these cases, land rights are governed by local customary law, which depends on unwritten traditional rules administered by traditional leaders, contingent upon tribal or community membership (Ganawa, 2022).

Under this system, households have strong, exclusive residential rights, seasonally exclusive rights to arable land, and shared rights to grazing land and other common resources. This is the most common pattern of land tenure, particularly in Darfur, Northern and Southern Kordofan, the Nile Valley, Blue Nile, and Eastern Sudan (Ganawa, 2022). The main means of access to land for women is through their male relatives. Women gain access to land indirectly by birth or marriage, as daughters, wives, or mothers. Even more limited is women's access to semi-mechanised, rainfed lands and mechanized irrigated lands (FAO,2021). Gender inequalities related to land differ from one region to another and even within the same region (Ganawa, 2022). Gender-based inequalities must be recognised and considered in issues related to access to and ownership of land.

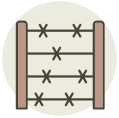
5.5. Physical infrastructure constraints

In many GGW areas of geographic focus conditions can be extremely harsh, with high temperatures and little rainfall during many months, making it difficult to establish trees. This is the case in Ethiopia, where agriculture is vulnerable to climate change impacts such as droughts and dry spells. The farming system is rainfed, with only 1% of arable land under irrigation (AGRI-BILCHA Plc., 2022). Consequently, many of the GGW target areas in the highland regions of Ethiopia have yet to be brought into the GGW-Ethiopia geographic influence (AGRI-BILCHA Plc., 2022). These arid and semi-arid areas, largely inhabited by pastoral communities and stretching all the way from the border with Djibouti and through the Afar and Somali regions down to Kenya, are the parts of the country where the GGW intervention is supposed to take place, but these areas are dry and poorly suited for afforestation (AGRI-BILCHA Plc., 2022).

Low investment over many decades has created a legacy of insufficient physical infrastructure (irrigation systems, access to energy, climate resilient roads, etc.), which undermines development efforts (AGRI-BILCHA Plc., 2022). Some international NGOs like Helvetas, Mercy Corps, and Catholic Relief Services, as well as donor programmes like Pastoralist Areas Resilience Improvement through Market Expansion strive to build the resilience of these communities by improving natural resource management practices and market linkages for increasing off-take rates and diversifying income sources. However, these efforts are not integrated into or aligned with the national GGW strategy (AGRI-BILCHA Plc., 2022).

In Senegal, the GGW operates in water constrained environments, with deep aquifers and water scarcity compounded by climate change (Mentz et al., 2022). There is tremendous pressure from pastoralist communities on government to drill boreholes for their livestock (Mentz et al., 2022). There is a high mortality rate for seedlings – approximately half the seedlings are lost before planting or at planting due to water constraints, cattle and fire (ICLEI, 2022).

5.6. Political and economic instability



Political instability

Ethiopia has been trying to implement major reforms focusing on agriculture, mining, manufacturing, tourism, and digital services (AGRI-BILCHA Plc., 2022). However, this has occurred in a context where the economy is facing daunting problems, including macroeconomic instability, higher inflation, shortage of foreign exchange and a high debt burden, which is aggravated by the military conflict with the Tigray region, coupled with the impact of the Ukraine-Russia conflict on fertilizer and energy costs (AGRI-BILCHA Plc., 2022).

In Sudan, decreasing productivity of land under conditions of increasing population numbers, a rapid transition to a market economy and climate change impacts have resulted in heightened competition for access to land (Ganawa, 2022). This situation has led to decreased resilience and exacerbated poverty, inequality, violence, and human insecurity, while undermining environmental health (Ganawa, 2022). This is also occurring in the context of significant economic and social changes brought about by the secession of South Sudan following more than two decades of political strife and armed conflict, with associated negative impacts on agriculture and the rural population (Ganawa, 2022).

Insufficient income generation in rural areas

The original vision of the GGW, which was focused on planting trees rather than a more holistic approach, resulted in insufficient investment capacity in agricultural production activities and sustainable value chains. Other challenges included insufficient connection with local and national markets, as well as challenges in structuring and empowering small and medium enterprises (GGW Accelerator, n.d.).

5.7. Weak monitoring and evaluation

There is no systematic way of tracking and reporting on the progress made towards achieving the GGW goals due to scarcity of monitoring and evaluation expertise in the region and the absence of a common framework to monitor, verify and report on GGW progress, including projects and programmes which have different geographical and administrative scales of implementation (GGW Accelerator, n.d.).

The absence of a single entity responsible for monitoring the progress of all GGW counterparts as well as insufficient resources for developing long-term MRV capacities are also critical (GGW Accelerator, n.d.).

Without effective monitoring, it is difficult to understand what works and what does not and therefore, where to invest, which activities to adjust and which to expand. There is limited collaboration, learning, and adaptation built into the GGW.

In Ethiopia, strategy documents from individual ministries and agencies, policy and regulatory guidelines and strategy papers released from official sources comprehensively address national GGW efforts. What is missing, however, is monitoring data tracking progress to inform, prepare for, and respond to challenges in implementation (AGRI-BILCHA Plc., 2022). Data gathering, analysis and sharing with implementation partners, government entities, NGOs and other parties has been neglected (AGRI-BILCHA Plc., 2022).

LDN in Mali is pursued through various programmes and projects. For example, the objective of increasing forest areas set in the LDN targets is expected to be achieved through the reforestation of 375 000 ha of forest, a tarted pledged in Mali's NDC and the national GGW programme in the country, which in turn relies on various programme and project interventions in the country to meet its targets (Mentz and Karambiri, 2022). However, these initiatives lack robust measurement and monitoring systems, making it more challenging to assess their contribution to LDN targets and potentially triggering double accounting and/or leakages issues (Mentz and Karambiri, 2022).

In Senegal, SLM indicators were developed at the national level in relation to the LDN process, however, the lack of a consensual methodology for SLM evaluation in the country remains a challenge (Mentz et al., 2022).

6 Recommendations and opportunities for an improved enabling policy environment for achieving GGW ambitions

Restoration success and the achievement of GGW ambitions requires enabling policies, good governance, sufficient technical, operational, and financial capacities, incentives for communities to sustain their actions and continuous monitoring and learning (GGW Accelerator, n.d.). This section highlights opportunities and recommendations to improve the enabling policy and institutional environment, thereby supporting the realisation of the GGW initiative's ambitions.

Promote GGW institutionalisation at the highest political level and enhance multilevel implementation and governance arrangements across scales

1. **Elevate the GGW to the highest political level.** In the face of countries' conflicting priorities in terms of their political stability and economic development, the GGW is not perceived with the same sense of urgency and allotted the same importance by all (World Economic Forum, 2022). Governance of the GGW is not streamlined at the country level and is often subject to siloed approaches by different ministries. Oversight at the presidential or prime minister's level would facilitate coordination among major stakeholders and ensure that GGW efforts are not undermined by administrative bureaucracy ((World Economic Forum, 2022).
2. **Enhance multilevel implementation and governance arrangements across scales while balancing security and development priorities.** The drivers and consequences of conflicts in the region are complex and interconnected, which is why regional collaboration and innovative solutions are needed to address these multifaceted challenges. Transnational initiatives such as the GGW require multilevel implementation and governance arrangements, ranging from the continental level with the AU to local municipalities and traditional authorities. Coordination across these different scales needs to be improved. Responses to climate change and land degradation need to be conflict-sensitive and should not result in generating new tensions (Mirzabaev et al., 2021). Addressing the insecurity in the region and advancing development outcomes require integrated development interventions and regional solutions coordinated between governments, international development partners and other actors. Regional collaboration and governance arrangements are also important as the GGW engages with potential new member countries such as Somalia, which has expressed an interest in joining the GGW (Personal communication with Elvis Tangem, 2022).

Support policy reforms and policy harmonisation efforts

1. **Enhance harmonized mainstreaming of land restoration strategy across different sectoral domains and jurisdictions and improve coordination of policies to accelerate land restoration and achievement of the GGW.** Strengthening coordination among key stakeholders from national to local level as well as across the different sectoral domains is critical. Both horizontal and vertical cooperation and coordination need to be strengthened. A better integration of SLM solutions is needed across the various sectoral policies, as well as a process/law articulating the synergy of uses. Better coordination of policies to accelerate land restoration and achievement of the GGW should address conflicting policy orientations between the promotion of "modernized" agriculture and agroecological approaches, with support for SLM and agroforestry development, organic fertilizer use, transport and market infrastructure, and research and extension services. Improving pastoral development policies, developing regulation to support rangelands, including the pastoralists themselves in the planning and decision-making process as well as supporting the pastoralists with other livelihood options are also critical to accelerate land restoration in the GGW.
2. **Develop and operationalize an agroforestry policy.** Countries should develop and implement national agroforestry policies and action plans that can be integrated into sub-national level plans, programmes, and policies. Countries should review, align, and revise their policies to support the scaling-up of agroforestry, to bring more coherence into the sectoral coordination of agroforestry and improve the management of restored ecosystems (Bernard et al., 2019). ANR and agroforestry should be adopted by the ministries responsible for agriculture and environment in the various countries and recognized as essential elements of agricultural extension to achieve real impact on agricultural productivity and resilience.

Box 4: *Completion of the decree on farmer-managed natural regeneration (FMNR) in Niger and opportunities to influence policy and initiate a similar advocacy process in Mali and Senegal for land restoration, ANR, FMNR and agroforestry (Koffi and Worms, 2021).*

In July 2020, the Republic of Niger became one of the first countries globally to adopt a presidential decree regulating and promoting the practice of farmer-managed natural regeneration or FMNR. In Niger, as elsewhere in the Sahel, tree tenure was a complex and poorly defined issue, which was a disincentive to the regeneration of trees. The new decree completely changes this situation by clearly awarding the exclusive rights to the trees farmers planted or maintained on their farms; and removing the widespread fear among farmers that the trees they planted would be cut and removed once they reached maturity. This seemingly simple step required extensive consultations because of the sheer complexity of the interests involved in the multilevel tenure management systems it replaced (Koffi and Worms, 2021). According to Karambiri (2022), high-level political will and commitment were required for the successful completion of Niger's FMNR decree. Meaningful and sustainable policy reforms were also possible because the demand for change was expressed at the grassroots level and was supported and sustained at the highest political level.

Niger's experience showed that advocacy to policymakers must be based on solid evidence and a robust mapping of gaps in existing policies and regulations if such efforts are to be successful and transformational. There is an urgent need to establish a clear legal text (decree or order) that stipulates the status of field trees, including those resulting from ANR and FMNR, their property rights, their conditions of exploitation, and the sharing of benefits resulting from the practice in Sahelian countries. This could start with building a movement or network of stakeholders to advocate for ANR reforms in Sahelian countries. Article 63 of Law No.10- 028 on the management of national domain resources can serve as a basis for such a reform (Karambiri, 2022). Article 19 of the 2018 Forestry Code of Senegal could serve as a basis for a new decree regulating the practice of ANR in the country (Karambiri, 2022).

3. **Address security of land and tree tenure.** Security of rights to land is essential for poverty eradication and prosperity in Africa (de Soto, 2000). Since the endorsement of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security by the Member States of the Committee on World Food Security in 2012, 46 Sahelian countries have made commitments to abide by related international conventions. This includes recognition of the need to promote an equitable, peaceful and decentralized approach to land tenure management, acknowledging the legitimacy of grassroots communities and granting powers to them, as well as building capacity and transferring ownership over natural resources. As part of these processes, there is a need to consider the legitimate rights and interests of all stakeholders, especially those often excluded from land ownership (women, youth, pastoralists), so that all benefit from the added value generated by interventions. Policy reforms to accelerate land restoration should include the clarification of the status of trees on farms, including those grown through ANR activities, and also address their management and use/ownership rights. Overcoming some of the challenges inherent to the postcolonial legacy, especially in the forest sector, is a priority. This can be supported by devolving governance to local levels, building trust, and reviving indigenous knowledge. Niger offers an inspiring example, where important changes in the national forest law enabled farmers to own naturally regenerated trees, which supported drastic transformation (IPBES, 2018). In addition, there is a need to pay special attention to prevention and management of land tenure-related conflicts (World Economic Forum, 2022).

4. **Promote a decentralized approach to use and management of natural resources.** The effective governance of natural resources is key to their sustainable management and to increase social stability and peace in dryland regions. The shift toward a more decentralized governance approach and the building of local capacity are important for long-term sustainability in restoration. It is therefore crucial to involve local authorities in the implementation of the GGW and ensure they have a significant role in local project management (Metz and Karambiri, 2022). Promoting a decentralized approach to the use and management of natural resources also requires supporting awareness of new legislative provisions of rights and responsibilities of various governance stakeholders, coupled with appropriate training. In Mali for instance, a 2018 decree transfers natural resource management powers to local authorities. However, this decree is not well known among local communities; and local municipalities are struggling to develop the appropriate competencies (Metz and Karambiri, 2022).

   The GGW Accelerator aims to support projects in establishing institutional and regulatory frameworks at a decentralized level (GGW Accelerator, n.d.). This will help empower local decisions-making and build community buy-in to adopt best practices for their sustainability, stability, and security. The GGW Accelerator will also support the establishment of rules in terms of access, use and management of natural resources and contribute to the decentralized management of natural resources, including by supporting local authorities to delegate the management of natural resources to local communities (GGW Accelerator, n.d.).

Strengthen institutional infrastructure and improve governance

1. **Strengthen institutional infrastructure.** There is need to improve the institutional infrastructure in most countries, starting with clarifying the various institutional mandates and establishing a clear mandate to drive the implementation of the GGW. This would require high level political decision making and it would also mean strengthening the GGW offices so that they have a more effective structure. More synergy is needed between ministries to avoid institutional compartmentalisation, which can undermine impacts on the ground.
2. **Set up multi-actor multi-sector coordination dialogue mechanisms around the objectives of the GGW.** Cooperation and information sharing between GGW actors could be strengthened by the creation of a GGW multi-actor hub that integrates the greatest possible number of actors and accounts for different levels of commitment of actors and actions (UNFCCD 2022). This means, for instance, giving local authorities a significant role in local project management, as well as involving non-state stakeholders. This should enable better coordination of the many interventions between technical and financial partners as well as create synergy between the national development programmes and the objectives and the GGW. The Regreening Africa project provides an example of how structures and processes can be put in place to bring different actors and evidence from multiple sources together for enhanced impact (Bourne, 2022). The project undertook joint reflective learning missions every year involving field visits with implementing partners, researchers and governments to discuss with the communities what is working, what further action and resources are needed. These joint reflective learning missions incorporated the views of implementing NGOs and allowed for scientific data to be presented in more accessible ways. The process then allowed for structured dialogue around these different knowledge sources and different perspectives (Bourne, 2022). Reflection workshops are critical to support dialogue and understand where there are gaps and opportunities to enhance impact (Bourne, 2022). At a time when the GGW national coalitions and alliances are being formed, using similar approaches could inform policy development and offer many opportunities to achieve GGW ambitions. Such multi-actor multi-sector coordination dialogue mechanisms could enable better coordination between the GGW and other land restoration activities and programmes as well as improving data sharing and exchange.
3. **Increase capacity of stakeholders.** For the GGW initiative's ambitions to be achieved, countries must be able to take full ownership over their projects, working with the GGW partner organisations to develop their leadership and to support the capacities of stakeholders. Designing and implementing adequate and relevant capacity development activities will be critical to support the effective implementation of the GGW. Such efforts should be based on needs assessments within GGW member countries. The GGW Accelerator should support technical capacity development of farmers and farmer organisations through, for example, farmers-to-farmers exchanges, as well as supporting NGOs and service providers in sharing knowledge and promoting agroecological techniques throughout the region. Furthermore, addressing gender gaps through investment in women's technical and leadership skills, and ensuring their equal participation in the land restoration and management projects, will be essential (GGW Accelerator, n.d.).

Mobilize finance from public and private sources to support the acceleration of land restoration in the GGW

Based on the land restoration cost estimations averaging $440/ha in the Sahel (United Nations 2020), it will be critical to continue to mobilize funds and grants from international partners and donors, as well as attracting private sector in the land restoration process.

1. **Mobilize finance from multilateral and bilateral stakeholders.** In January 2021, at international One Planet Summit on Biodiversity, Emmanuel Macron, the French president, announced that the GGW would receive an extra $14 billion in funding and that a new body, called the Great Green Wall Accelerator, based in Bonn, Germany, would be responsible for pulling together funding pledges and tracking progress against targets. The first objective of the GGW Accelerator is to more effectively link up the existing financing sources with the available project opportunities, which will require sound coordination among current project generators, funders, implementors and beneficiaries under the GGW programme (GGW Accelerator, n.d.). The second objective is to identify and bring in new sources of funds for the GGW programme. This involves tracking ongoing activities of multilateral and bilateral development partners that may already support the GGW objectives, as well as mobilizing additional financial resources from private and public sources for GGW implementation (GGW Accelerator, n.d.). It will be important that the GGW Accelerator coordinates its work with the PA-GGW and other donors.

   The 2021-2030 DPIP for the GGW has also announced a New African Financial Instrument dedicated to the GGW for the mobilisation of sustainable public and private financial resources from states, bilateral and multilateral development partners, and the international private sector through the public private partnerships (PA-GGW, 2021). In order to improve the sustainable financing of the GWW initiative, it will be important to improve the GGW national agencies' knowledge and capacity related to available financial instruments and the requirements of donors.

2. **Engage the private sector for longer-term and durable investments in the land restoration and promote youth employment and entrepreneurial opportunities.** Because land restoration supported through bilateral or multilateral donors is generally limited to short-term funding and not in line with the long-term nature of land restoration, it will be key to also turn to the private sector for investments in the GGW land restoration process. This requires a mind shift from seeing land restoration as a project or development activity, to seeing it as a business proposition worthy of investment. This could be pursued through a market-based approach, with investment in small and medium-sized farms and strengthening of commercially viable tree crop value chains or non-timber forest products that show the highest potential for environmental and social impact. Putting communities, grassroots SMEs and ecopreneurs at the centre of the strategy would support local value capture (World Economic Forum, 2022). Restoration must be understood, planned, and tackled along the entire value chain, from land management and seed preservation, to end products and markets (Wane, 2022).

   Boosting public private partnerships for the GGW is also critical. In partnership with the "IAM AFRICA" Coalition (International Agroecological Movement for Africa), the GGW Accelerator intends to gather a group of private companies and civil society actors to support GGW projects through private investments, sustainable sourcing, and peer to peer training, as well as connecting GGW stakeholders with the "IAM AFRICA" actors working on the same value chains (GGW Accelerator, n.d.). It will connect research centres and universities with NGOS and cooperatives for training and technical support, as well as connecting SMEs with local banks, investors, and buyers to support the development of local economies and small businesses (GGW Accelerator, n.d.). Creating entrepreneurial and employment opportunities along agricultural value chains is critical to stabilize the region, especially by integrating rural youths and improving the livelihoods of young people in the Sahel region (GGW Accelerator, n.d.). The GGW national agencies could also encourage public and private actors

to form consortiums when applying for funding from the Green Climate Fund.

The GGW presents an opportunity for Sahelian countries to participate in international carbon trading, linked to Articles 6.2-6.3 of the Paris Agreement as well as the sustainable development mechanism under Articles 6.4-6.7. However, this would require adjusting national legislation and regulations to create appropriate conditions for potential investors (Mirzabaev et al., 2021).

3. **Enhance dialogue in the mobilisation of funds.** There is a need to communicate available funding opportunities, not only to the Ministry of Finance and Planning, but also to the sectoral ministries that prepare projects for the government budget (UNFCC, 2021:5). Advocating for inter-institutional dialogue in the mobilisation of funds is critical in each GGW member country.

Strengthen community participation and decision making, including youths and women

1. **Strengthen community participation and decision making, including women and youths.** Local communities currently fail to capture the full benefits of GGW investments. Yet local ownership is fundamental to the success of GGW projects. Greater inclusion of communities is needed in decision making across the design, operation, and monitoring of partnerships. This can be achieved by building mechanisms for participation into partnership design; ensuring that project evaluation criteria include local ownership and benefit-sharing metrics; and providing technical assistance on community engagement to local and international stakeholders (World Economic Forum, 2022).

   The implementation of each project could be preceded by a grounded consultation and co-design with communities (including women and youth), with a greater focus on political ecology than pure botany. The proposed 10 recommendations brought forward by the UNFCD (2021) to improve the work of the national coalitions can contribute to the required changes. It recommends putting in place practical mechanisms for planning dialogue and action at the local and national levels, especially focusing on producer organisations. This would allow for closer collaboration with producer organisations and bring them more actively into the GGW initiative (UNFCD, 2021).

   Implementation of GGW projects should also rely on existing instruments for territorial governance and shared resource management, such as pastoral units, borehole management committees and communal councils. The GGW would thereby help strengthen consultation processes and consolidate decision making and management bodies at the intermunicipal level for SLM. Strengthening community participation and decision making also means improving the relationship between the state and society through changes in national policies and legal frameworks to address power imbalances.

2. **Secure a youth-oriented agenda focused on protecting future generations and involve youths in policy formulation.** More emphasis needs to be placed on supporting the networks of young people that can maintain activities and build institutional support nationally, regionally, and globally through different agencies and youth bodies. At national level, youth perspectives should be mainstreamed into national policies and strategies on climate change (Ganawa, 2022). Young people can gain valuable skills and abilities through supporting the implementation of initiatives, while government can strengthen its inclusiveness and responsiveness to development issues. Financial support is needed not only to facilitate participation in international events and conferences, but also to support the operational functioning of youth organisations and networks to ensure their sustainability (Ganawa, 2022). It is also necessary to develop education and awareness programmes to help youth develop deeper understanding of the impacts of climate change and develop skills and knowledge in responding to these impacts.

A knowledgeable, capacitated, and active civil society, with youth at its core, is essential to achieving climate-resilience across Africa. Engagement of youths in policy processes is critical for securing a youth-oriented agenda focused on protecting future generations, but many existing policies have been developed without significant youth participation.

Policy does not only need to reflect youth interests, but youth themselves need to be involved in policy formulation. In Sudan, established civil society institutions such as national and international NGOs and academic institutions are actively seeking ways to support youth agency. Young people have also shown strong initiative in establishing their own networks, campaigns, and organisations where they sense that they are not adequately served by existing structures. Such networks can operate at a variety of levels– they can be local (such as through schools or community groups) or more regionally or globally oriented. Networks help to ensure that different voices are heard and can help to strengthen the participation of young people in decision-making processes. Action at all these levels is necessary to tackle the complex and pressing challenges of the climate crisis.

Develop monitoring and evaluation learning mechanisms

Good governance and monitoring and evaluation learning mechanisms should be in place to better track the GGW project results as well as the financing of programmes and projects associated with the GGW initiative. The GGW needs to be strengthened with the appropriate M&E personnel and technologies to conduct research, monitor implementation, evaluate performance and share the outcomes of these processes with relevant stakeholders to scale up successful practices. This will require strengthening national institutions in terms of data collection and human resources. In the Regreening Africa project, a Regreening Africa App was developed to document the restoration areas, species, management (species-specific) and uses (species-specific) (Ahmad, 2022). A reporting system enabled project participants to monitor data collection, report on key performance indicators, and share data with stakeholders. Such tools enable connections to be established between researchers, development partners, decision makers, beneficiaries and other stakeholders.

The 2021-2030 DPIP M&E Plan calls for M&E to be undertaken at the regional level by the PA-GGW and at the national level by GGW national structures (PA-GGW, 2021). This should be based on a participatory approach to assess the outputs and impact of each of the DPIP programmes and projects, highlighting progress, difficulties encountered and performance in implementation. A results framework will indicate the roles and responsibilities of the different actors involved in the data collection for the defined indicators. There will also be financial monitoring, with a financial audit at the end of each year by an external auditor (PA-GGW,2021). This will enable stakeholders to determine the relevance, consistency, efficiency, and effectiveness of the implementation of the investment plan, the sustainability of the interventions and the impact of the actions. Implementation of the M&E plan will also entail assessment of progress against specified indicators and the causal relations of the results obtained, making it possible to draw lessons and build on successful experiences (PA-GGW, 2021).

Invest in physical infrastructure (e.g., irrigation systems) in moisture-stressed areas

Investment for irrigation in moisture-stressed areas is needed. In the face of water scarcity, there is a need for better management of water storage and other water management-related infrastructure. **Studies are required on the replenishment of underground water** given the high intensity of sinking boreholes (Mentz and Karambiri, 2023).

7 Conclusion

With the GGW now in its second decade of implementation, there is a need to accelerate impact and address institutional, policy and implementation gaps. This policy coherence analysis has sought to highlight challenges and opportunities at the regional and national levels, focusing on four GGW member countries (Ethiopia, Mali, Senegal and Sudan). Key bottlenecks have been highlighted and a series of recommendations presented to support GGW ambitions. Concerted action is required to improve policy coherence and coordination, which will in turn drive enhanced impact and support the mobilisation of funding for the further scaling of regional and national GGW actions.

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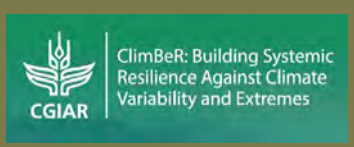
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