



# Senegal

## Great Green Wall Initiative –Country Review



ClimBeR: Building Systemic Resilience Against Climate Variability and Extremes



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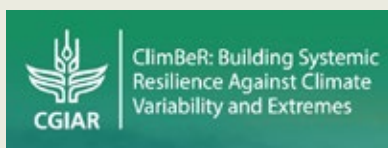
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### ClimBeR

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.

 <https://www.cgiar.org/research/publication/initiative-overview-climber-building-systemic-resilience-against-climate-variability-and-extremes/>



### Knowledge series





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# Abbreviations and acronyms

<b>3AO</b>	National framework of the Alliance for Agro-ecology in West Africa	<b>M&amp;E</b>	Monitoring and Evaluation
<b>ADENA</b>	Association for Livestock Développement in Senegal	<b>MEDD</b>	Ministry of Environment and Sustainable Development
<b>AFOLU</b>	Agriculture, Forestry and other Land Uses	<b>MEPA</b>	Ministry of pastoral development
<b>ANGMV</b>	National Agency of the Great Green Wall of Senegal	<b>NDC</b>	Nationally Determined Contributions
<b>ANR</b>	Assisted Natural Regeneration	<b>NDT</b>	Land Degradation Neutrality
<b>ASERGMV</b>	Senegalese Agency for Reforestation and the Great Green Wall	<b>NPA</b>	New Agricultural Policy
<b>CAADP</b>	Comprehensive Africa Agriculture Development Program	<b>PAF</b>	Forestry Action Plan
<b>CEDAW</b>	Elimination of All Forms of Discrimination against Women	<b>PAGGW</b>	Pan-African Agency for the Great Green Wall
<b>CNIGDT</b>	National Intersectoral Council for Sustainable Land Management	<b>PAN/LCD</b>	National Action Programme to Combat Desertification
<b>CNIS/GDT</b>	National Strategic Investment Framework for Sustainable Land Management	<b>PFS</b>	National Forest Policy
<b>COMNACC</b>	National Climate Change Committee	<b>PNAE</b>	National Environmental Action Plan
<b>CNCR</b>	National Consultation and Cooperation Framework with the Rural People	<b>PNDE</b>	National Programme for the Development of Livestock
<b>CRAFS</b>	Land tenure thinking and action tank in Senegal	<b>PNIA</b>	National Agricultural Investment Plan
<b>CSE</b>	Ecological Monitoring Center	<b>POAS</b>	Land Use Planning and Allocation Plans
<b>DEFCCS</b>	Directorate of Water, Forests, Hunting and Soil Conservation	<b>PRACAS</b>	Senegalese Agriculture Acceleration Programme
<b>DSRP</b>	Document de Stratégie pour la croissance et la Réduction de la Pauvreté	<b>PRSP</b>	Poverty Reduction Strategy Papers
<b>DyTAES</b>	Dynamic for Agroecological Transition in Senegal	<b>SAWAP</b>	Sahel and West Africa Programme in the Support of the GGW Initiative
<b>ECOWAP</b>	ECOWAS Common Agricultural Policy	<b>SDGs</b>	Sustainable Development Goals
<b>FAO</b>	Food and Agriculture Organisation of the United Nations Climate Change	<b>SLM</b>	Sustainable Land Management
<b>FNRAA</b>	National Agricultural and Agrifood Research Fund	<b>SNDD</b>	Senegal National Development Strategy
<b>FNDASP</b>	Agro Sylvo Pastoral Development Fund	<b>SNDES</b>	National Economic and Social Development Strategy
<b>GGW</b>	Great Green Wall	<b>SNEEG</b>	National Gender Equality and Equity Strategy
<b>ICAT</b>	Initiative for Climate Action Transparency	<b>SNSAR</b>	National Food Security and Resilience Strategy
<b>LADA</b>	Land Degradation Assessment in Drylands project	<b>SIRT</b>	Land Resource Information System
<b>LDN</b>	Land Degradation in terms of Neutrality	<b>SAIDA</b>	Agricultural Services and Digital Inclusion in Africa
<b>LOASP</b>	Agro-Sylvo-Pastoral Orientation Law	<b>TaFAé</b>	Task force for the promotion of agroecology in Senegal
<b>LPSEIN</b>	Sectoral letter for environment and natural resources	<b>UCAD</b>	Cheick Anta Diop Dakar University
		<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
		<b>WAEMU</b>	West African Economic and Monetary Union



# 1 Great Green Wall Initiative – Country Assessment

This section provides a brief analysis of the history, progress and key bottlenecks related to the Great Green Wall (GGW) initiative within Senegal. It also provides an overview of key institutions responsible for coordinating and implementing GGW-related activities within the focus country.

## 1.1 Overview of the Great Green Wall Agency in Senegal

The GGW in Senegal is 545 km long, 15 km wide and involves three regions: Louga, Matam and Tambacounda. The population affected by this project is 322 221 inhabitants.

Senegal was one of the first countries where the GGW was operationalised, starting with the creation of the Senegalese National Agency of the Great Green Wall (ANGMV) in 2008, through the leadership of former President Abdoulaye Wade. In 2014 the GGW initiative was ratified.

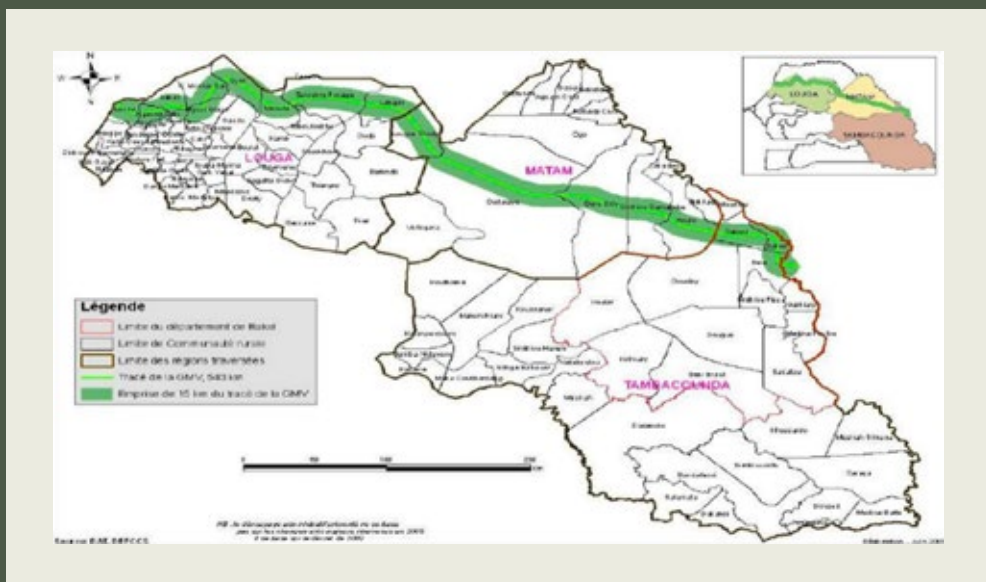
According to the International Livestock Research Institute (ILRI), the implementation of the GGW initiative can be attributed to institutional continuity between 2005 and 2012, and the active participation of scientific, institutional, research and academic

partners, such as the Cheick Anta Diop Dakar University (UCAD), the Centre de Suivi Ecologique (CSE), the Institut Senegalais de Recherche Agricole, the Ministry of the Environment and the Ministry of Agriculture (ILRI, 2022).

In 2019, Haidar El Ali was appointed Director General of the Senegalese Agency for Reforestation and the GGW (ASERGMV). The Agency was by decree merged with two other structures, extending its portfolio to also cover eco-villages and reforestation (Savadogo, personal communication, 2022). As such, the newly created ASERGMV is a “super structure”, based in Dakar, that operates under the technical supervision of the Minister of Forestry and the financial supervision of the Finance Ministry. It implements and oversees all sustainable land management (SLM) interventions nation-wide. ASERGMV now has three departments:

1. The management of the GGW;
2. The management of ecovillages; and,
3. The management of reforestation.

The Agency's core mandate is to continue to re-green the GGW area and to reforest the whole of Senegal.



**Figure 1.** Route of the GGW in Senegal: 545 km at a width of 15km

Source: Senegal GGW Funding and Action Plan (2012-2016)



### ACHIEVEMENTS TO DATE

The 2020 GGW Global Report (UNFCCC, 2020) indicates that Senegal had restored a total area of 119 202 hectares (ha), as of 2019, broken down as follows: 72 452 ha reforested area, 33 500 under Assisted Natural Regeneration (ANR) and 13 205 km of windbreaks. These achievements required the production of 18 million seedlings/plants and resulted in the creation of 1 396 jobs.

Total funding allocated to the GGW in Senegal, as of 2019, amounted to US\$18.3 million of international funding (UNFCCC 2020). The domestic funding allocated to the GGW is not reported in the 2020 report.

### MANDATE AND STRATEGY

The ASERGMV's general mandate is to intensify reforestation, develop ecovillages and implement the GGW. This mandate includes mobilizing actors to implement and maintain reforestation activities, create green jobs, ensure access to renewable energy in ecovillages and support sound water management as well as sustainable funding sources for these eco-villages.

The national strategy for the GGW focuses on:

- Local appropriation – implementing GGW with and for local communities, through local authorities;
- Development partnerships; and
- Job creation for youth and women and poverty eradication (African Union 2022).

### MODUS OPERANDI

The ASERGMV includes a Surveillance Council (which include a representative from the Presidency, representatives from the Ministries of Finances, Community Development, Agriculture, Forestry, Livestock, Wellbeing, Youth, and a representative from the Union of Associations of the Locally Elected Officials) who meet on a quarterly basis. The ASERGMV Director General is nominated by the Minister of Forestry and is responsible for ensuring the implementation of the decisions made by the Surveillance Council.

In 2020, the Agency signed a framework agreement with the Programme for the Inclusive and Sustainable Development of Agriculture in Senegal (PDIDAS). Partnership agreements to support implementation were also signed with the Organisme National de Coordination des Activités de Vacances, which represents more than 7 600 sports and cultural associations in Senegal. Partnership agreements were also signed with numerous cities in the Louga, Thiès, Casamance and Tambacounda regions, as well as with CorpsAfrica (which has placed 20 volunteers in 10 regions in support of establishing Tolou Keur, i.e. 'circular gardens'), and with Fabrimétal in Dakar (which has developed a tree nursery near its factory, from where it distributes saplings free of charge for reforestation and sponsors the Tolou Keur of Belvédère).

On the ground, 2 000 water and forestry agents are responsible for supporting the implementation of the programme in the field. These agents supervise the 7 000 young people recruited by the agency for GGW activities.

### CONSULTATION FRAMEWORKS

All actors are represented within the national GGW multi-stakeholder consultation frameworks, including state structures, NGOs, civil society organisations, the private and parastatal sectors and research institutions. The modus operandi of these consultation frameworks at different levels is described below:

- At the local level (local authorities/communes), meetings are held on a quarterly basis. The Agency signs territorial plans with monitoring and implementation mechanisms, validates the plans, and provides guidance and recommendations. Issues emerging from these local meetings are fed into the regional meetings (Diop, personal communication, 2022). To promote coordination the Agency has brought together all the mayors of the GGW intervention zone and established performance contracts. In addition, the Agency has recently set up a schedule of conditions between the communities (Ba, personal communication, 2022).

- At the regional level, meetings are held every six months. The results of these meetings are consolidated in a follow-up report that is used to inform the annual national meeting (Diop, personal communication, 2022).
- At the national level, an annual meeting is convened during which the work plan and budget for the coming year are validated. The ASERGMV submits an annual report to the Pan-African Agency of the GGW (PA-GGW). The technical committee of national GGW experts (focal points) meets once a year to prepare for the annual Council of Ministers of the Environment and the Conference of Heads of State (Diop, personal communication, 2022).

Meetings with the PA-GGW and its implementation partners happen in an informal manner – meetings are organised on an ad hoc basis and this informal arrangement has proved functional (Boëte, personal communication, 2022).

### NATIONAL COALITION

In March 2021, a Presidential Council on GGW met to discuss the development of a national coalition to implement GGW. This meeting resulted in 10 recommendations, including the creation of consultation frameworks at the national, regional and local level.

The national consultation framework will gather actors across all relevant ministries, as well as civil society, to leverage the GGW for resilient socio-economic development. In addition, local planning contracts will be signed with all 17 local authorities in order to increase local communities' participation in the GGW, with technical, financial and operational support provided by the Government of Senegal (AU, 2022).

### RECENT DEVELOPMENTS

In March 2021, Oumar Abdoulaye Ba was appointed the Director General of the ASERGMV. He has been described by his peers as very dynamic and pro-active. Since his arrival, ASERGMV has been revitalised, with more partnerships and better visibility in the field. Upon taking office, the Director General took European Union and US ambassadors to the GGW field sites to sensitize them to the project.

The Director General is reportedly reviewing the Agency's organisational chart and is actively putting the ASERGMV on a highly technological pathway (Ba, personal communication, 2022). This technological focus is apparent in the strategic orientation of the Agency, as captured by the UNCDD (2002). The Great Green Wall Accelerator's briefing note underlines Senegal's focus on the "promotion of the green economy, articulated around the strengthening of SMEs and their economic environment" (GGW

Pillar 1: Investment in farms, value chains, local markets, exports), as well as on the "development of techniques and technologies for reforestation and integrated and sustainable management of ecosystems" (GGW Pillar 2: Land restoration and sustainable management of ecosystems). With regards to the GGW Pillar 3 (Climate resilient infrastructures and access to renewable energy), Senegal's priority is to "develop techniques and technologies that are resilient to climate change both in the field of agro-sylvo-pastoral and fishing production (food security), in access to alternative energy (energy security) and in the prevention of risks and disasters". This is illustrated for instance by the purchase of solar powered digging machinery (Ba, personal communication, 2022). Under GGW Pillar 4 (Frameworks for effective governance, sustainability, stability and security), Senegal's reported main intent is to "improv(e) the institutional and economic environment of the programme intervention area". Lastly, in terms of the Agency's capacity building priority (GGW Pillar 5) Senegal seeks to "develop capacity building activities for the various stakeholders for the effective, efficient, and sustainable implementation of the programme" (UNCCD, 2022:25).

Among the new partnerships engaged in by the Agency, notable is the partnership with the Moroccan Office Cherifien des Phosphates. Through this partnership, ASERGMV has acquired new equipment such a solar-powered shovel tractor to plant trees (Ba, personal communication, 2022).

The ASERGMV, under the leadership of the new Director General, embarked on a new 'Integrator' programme for the GGW. This programme is providing support for the development of a new five-year strategic plan for the ASERGMV.

## 1.2 National Technical Assistance needs for the GGW in Senegal

One of the challenges highlighted by national GGW stakeholders was that many of the programmes had limited impact at ground level. Sufficient studies have been done on the biophysical context for land restoration in Senegal, but the funds are not reaching the communities. Generally, the sense was that an adequate skills base was in place, but the costs of land restoration processes was a barrier. That being said, new skills development may be required as ASERGMV ratchets up its use of modern technologies, for example, training on the piloting of drones.

A key issue plaguing the progress of the GGW, as related by the GGW Director in Senegal, Colonel Diop, is the lack of adequate and systematic information sharing. This challenge will be addressed by a new communications department within



#### ASERGMV.

There is also further work to be done in terms of the analysis of degraded lands in Senegal. It has been suggested that the Institute of Soil Science needs to strengthen the technical capacity of its teams to support accurate assessment of the total amount of degraded land by type of degradation and to assess all the land restoration interventions that are being carried out. This would allow stakeholders to better understand the status of national land restoration efforts, identify good practice, and assess progress against stated policy objectives (Sow, personal communication, 2022).

The ASERGMV is currently working to translate into a national programme the PA-GGW Decennial Priority Investment Plan (DPIP)<sup>1</sup> at the national level, aligned with the five pillars of the plan and those of the GGW Accelerator (Savadogo, personal communication, 2022). A first draft has already been produced, as well as indicators for 2022 and 2023, which will be discussed in a validation workshop with all stakeholders and submitted to the Presidency. COP15 of the UNCCD, convened in Abidjan in May 2022, was an opportunity for the AU to launch this national platform with technical and financial partners (AU, 2022).

Senegal is receiving support from the GGW Accelerator programme as well as the World Bank, International Fund for Agricultural Development (IFAD), the European Investment Bank and the African Development Bank (AfDB) (UNFCDD 2021).

Senegal has over time developed a range of technologies and processes to address land degradation. In this respect, Senegal (Forestry Department) is considered as having capable approaches to address land degradation, but all NGO partners on the ground and farmers might not have mastered these techniques and would require further support (UNCCD 2022).

Critical bottlenecks flagged with regards to research include:

- Technical expertise in restoration is not matched by strong research on the socio-economic dimensions of restoration, which might constitute one of the main stumbling blocks to the long-term sustainability of interventions;
- Critical research topics concerning water stress and water management are not adequately addressed;
- The lack of coordination in the research undertaken around the GGW;
- The lack of a central repository where all the research linked to the GGW in Senegal could be housed;
- Research is often top down and not fed back to the community level;

- The lack of research funding to support Senegalese researchers. Research organisations such as the Observatoire Homme-Milieu could increase their research production if more funding was allocated to support PHD and Master candidates;
- Research grants are allocated for short time periods (2-3 years), whereas the monitoring of restoration takes place over long time periods (i.e. 10 years); and,
- There are gaps in the mapping of stakeholders on the ground and facilitation of information flow to synergise initiatives.

### 1.3 National Platforms

Senegal's needs around consolidating platforms is ambiguous. Colonel Diop, the GGW-A Director, has argued that there are already adequate consultation frameworks and that the focus should lie in strengthening these platforms rather than creating new ones. He further underlined that those platforms set up by international NGOs are not sustainable.

Others also argue that existing platform structures, especially those that seek to integrate SLM efforts, need additional support. The multi-stakeholder, inter-ministerial platform called the National Strategic Investment Framework for Sustainable Land Management is a case in point. This platform was originally launched under the Terra Africa platform and administered by the World Bank. It was then formally adopted as a ministerial framework in 2014, with support from the EU. This framework brings together different actors working on SLM, in an attempt to integrate interventions related to the GGW. The framework includes a portfolio of projects and is intended to be a framework for dialogue and investment in SLM. However, this framework is not very active.

The actors want a formalisation of this organisational structure, which is one of the objectives of the Riposte project. For a while the committee sought formal recognition from the Presidency, then from the office of the Prime Minister. In October 2022, all the stakeholders involved in the platform met and decided that the platform would fall under the Ministry of Agriculture, and a committee was established to support further activities. The committee drafted a technical note addressed to the Ministry of Agriculture in support of the institutionalisation of this structure. Strategic partners were also requested to support this initiative (Sow, personal communication, 2022). Engagement with various stakeholders in the

1. The Decennial Priority Investment Plan (DPIP) will be a reference framework for planning and technical and financial execution of the activities and financial resources required for their implementation. The overall objective is to develop a 10-year strategic plan 2021-2030 for key technical activities, together with an efficient financing scheme to further relevant and sustainable responses to emergencies of social, economic, and environmental resilience. The Priority Programs in the two cycles 2021-2025/2026-2030 (PAGGW 2021).

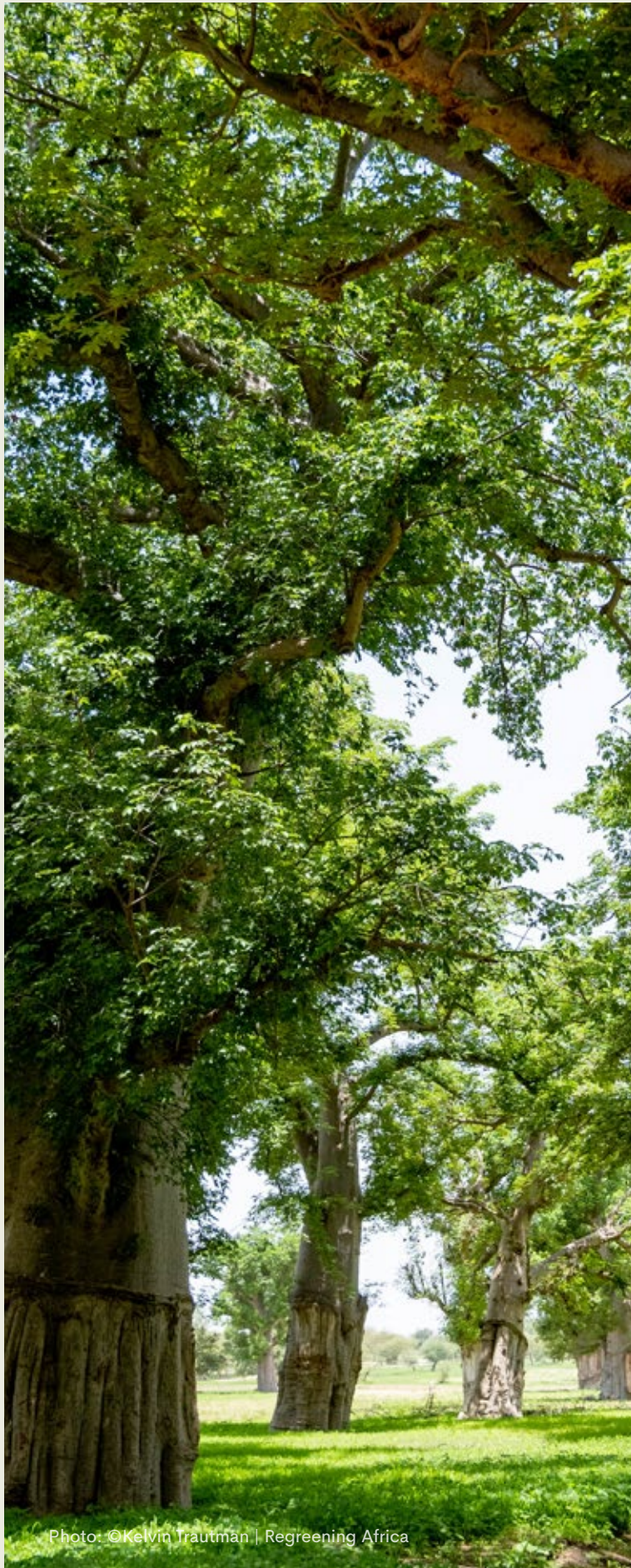


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preparation of this report revealed that many were satisfied with the current institutional framework governing the work of the GGW. What was highlighted as lacking is strong information sharing among GGW actors. Support was also expressed for the current focus on strengthening governance at the decentralised level, i.e. improving the institutional and economic environment of the programme intervention area and local Terroir Development initiatives. A further challenge highlighted was the perceived lack of coherence between the different existing platforms, often engaging the same actors. Greater coherence is required to improve efficiency of GGW programme delivery (ClimBer 2022).

#### 1.4 Dialogue and scaling

The national consultation framework initiated by the National Agency of Senegal is focused on fostering a national coalition to gather actors across all Ministries, as well as civil society, to leverage GGW for resilient, socio-economic development. This is reflected in the above mentioned effort by the Agency to establish local planning contracts with 17 local authorities in order to increase local communities' participation in the GGW, with technical, financial and operational support provided by the Government of Senegal (AU 2022).

Prior to the establishment of the GGW national coalition in early 2022, stakeholders underlined that there was a dire lack of inclusion and information sharing with many relevant actors. However, all key stakeholders were included in the establishment of the national coalition and the activities of the coalition itself may well serve to address these concerns. Going forward, there is a need to ensure the systematic inclusion and information sharing with all actors (including non-state actors) relevant to the GGW (Mbaye, personal communication, 2022). At a national level, a priority should be to support formalising the National Strategic Investment Framework for Sustainable Land Management (Sow, personal communication, 2022).

#### 1.5 Data platforms

##### NATIONAL-LEVEL DATA PLATFORMS

There doesn't seem to be a system of clear data and evidence organisation related to the GGW ambitions and this lack of a centralised system was flagged as problematic by the GGW Accelerator. The ASEGMV website is out of date and, in the words of the Director, information is not shared adequately, which gives a poor reflection of the work Senegal is doing and undermines its relationships with other governmental entities, the donor community and non-state actors (Diop, personal communication, 2022).

At the national level, each entity has its own data. The research identified several initiatives involved in centralising data linked to SLM and climate change on existing platforms:

- The Ministry of Environment centralises all data with the Centre de Suivi Ecologique (CSE). The CSE is setting up a Climate Reference Bureau with support from Luxembourg. It aims at building the capacities of territorial authorities (communes and departments) to integrate climate change in their local development plans and support the elaboration of Local Climate Adaptation Plans (ClimBer, 2022).
- The Institute of Soil Science is working on the development of a database through a GCF-funded project, namely, Support for Enhancing Ecosystem and Community Resilience through the Restoration of the Productive Base of Saline Lands, with support from IUCN/SSC and the African Network for Integrated Development. They are working to build a database on saline soils. Other types of degradation besides salinization will be integrated. The geographic focus of the GGW in Senegal does not overlap with areas of high salinity, but this database remains relevant in terms of the broader focus on land degradation.
- The National Council for Food Security has developed a [Land Resource Information System \(SIRT\)](#) to use modern information and communication technologies to provide information on the specific resources – biophysical, social and economic – of each of the defined territories. It is also a tool for integrating this knowledge for better decision-making in support of enhanced food security and resilience.
- A database of reforestation and GGW initiatives and actors is listed on a [Google Maps](#) database. The latest updates to the map date back to 2021 and speak of the tree planting the Agency supported in some areas.

There are several climate information services (CIS) available in Senegal:

- The [Agricultural Services and Digital Inclusion in Africa \(SAIDA\)](#) platform was launched in 2019 by the National Agency for Agricultural and Rural Council (ANCAR) in collaboration with FAO. The platform includes four ICT mobile applications for small-scale farmers and livestock keepers: Care and Feed Your Livestock, which provides real-time information on animal disease control and animal feeding strategies; Weather and Crop Calendar, which provides weather forecasts, crop calendars, and warning systems;

AgriMarketplace, which connects producers, traders, and consumers to facilitate trade and access to agricultural inputs; and eNutrifood, which provides information on the production, preservation, and consumption of nutritious food. In 2021, 84 000 Senegalese farmers received information through this platform on climate, market, health and nutrition and animal nutrition. This information was made available in six local languages, and was received as either an SMS or voice messages.

- The [Projet de Services d'Information Climatique pour Accroître la Résilience et la Productivité au Sénégal \(USAID/CINSERE\)](#) (2017-2021) provided capacity building and the establishment of a CIS platform.

Two additional platforms with a focus on climate change adaptation will be developed for Senegal by ClimBer through the Governance for Resilience (G4R) project, which will be rolled out in 2022-2025. These are:

- The Early Warning, Early Action, Early Finance (AWARE) platform that will be used as trigger mechanism to manage the response to floods and droughts, developing standard operating procedures with the relevant stakeholder coalitions. The purpose is not to duplicate data but to co-create locally-owned specific datasets for Senegal, reflecting the needs of disaster risk management stakeholders in Senegal (ClimBer 2022).
- The ClimAdapt-Gov dashboard aims at empowering farmers, communities and policy planners to help community or provincial level organisations assess different resilience strategies at their scale, using simple resilience assessment indicators that could monitor if the portfolio of adaptation options they chose is right for their community and if there is resilience impact (ClimBer, 2022).

## REGIONAL LEVEL DATABASES

The [World Overview of Conservation Approaches and Technologies \(WOCAT\)](#) is a global network aiming to document, share, and apply SLM knowledge. The network establishes an innovative space for sharing and scaling good practices to address land degradation, climate change, and biodiversity loss. This facilitates local, national, regional and global knowledge sharing and analysis of which good practices work where, how and why, and their costs and benefits. The WOCAT Global SLM Database has been officially recognised by the UNCCD as the primary recommended global database for SLM best practice. The best practice adopted by the GGW are profiled on the WOCAT database.



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Through the support of the TerrAfrica Leveraging Fund, [TerrAfrica's Regional SLM Knowledge Base](#) has been established. It contains tools, documents, and practical information to assist in sustainable land and water management upscaling at national, regional and continental level. Senegal is in the process of creating a country-specific information system based on this system. One of the main tools of the TerrAfrica platform is the [Country SLM Investment Framework \(CSIF\)](#), which aims to provide guidance on the design and implementation of SLM investment frameworks at national level.

The Building Resilience Through Innovation Communication and Knowledge Services (BRICKS) project (the regional component of the Sahel and West Africa Programme in the Support of the GGW Initiative - SAWAP) supports the efforts of national projects in designing M&E systems, developing tools (remote sensing, mapping and GIS), defining and setting up platforms for the exchange of good M&E practices, promoting South-South partnerships within and outside the SAWAP portfolio, and evaluating programme performance on best practices.

In addition, the GEF-funded [Large-Scale Assessment of Land Degradation to Guide Future Investments in Sustainable Land Management in the GGW Countries](#)

(detailed in projects below) aims to assist countries with assessing available tools and methodologies for scientific measurement of the ecological impacts of land degradation and SLM practices to guide future investment decisions in the GGW region.

The [Regreening Africa App](#), which has been deployed in some of the GGW countries, helps farmers, government agents and project officers to collect data on key indicators of land restoration. The data ranges from the number and types of trees planted, plant survival rate over time, location of tree nurseries and the tree species they stock, polygons and management practices in farmer-managed natural regeneration sites, training offered to farmer groups, and the number of women and youth who have benefited from the project. Lead farmers and extension agents collect data on their land restoration activities – they become an integral part of efforts to scale the assessment and the monitoring of impacts of land restoration across a wide range of landscapes. By aggregating and synthesizing this information and combining it with evidence from systematic, science-based assessments of land health, stakeholders' understanding of what interventions work best where and for whom can be improved.

SOS Sahel has developed an [online platform](#) listing all non-state actors involved in the GGW. The goal is to give visibility to non-state actors. State entities initially pushed back on this database and the willingness of civil society organisations to take ownership of the GGW. However, in 2018 they were given the mandate to develop this platform, which is struggling to gain momentum. Listings are far from comprehensive as it is proving difficult to get the relevant stakeholders to agree to be listed – considerable effort will be needed to lobby for membership in this platform and also to channel traffic to it.

In 2021, FAO and the African Union Commission presented the results of the Africa Open DEAL10: [Open Data on Environment, Agriculture and Land & the GGW](#), which has provided a detailed picture of the continent through bringing together more than 300 000 collections. This data opens up huge opportunities for addressing issues related to environment, agriculture and land use in Africa, and strengthens the capacity of countries to monitor change and conduct analyses (Sacande et al, 2021).

The Green Alliance for Reforestation is a non-state initiative developing platforms based on satellite imagery. This is an interactive platform where large international NGOs can create awareness around their initiatives. This NGO database does not include state programmes and activities.

## 1.6 Financing

The key needs related to institutional strengthening in Senegal include:

- The development of a robust M&E system: This is an issue the GGW Accelerator is seeking to address. It is worth noting that the Ministry of Environment is implementing a monitoring system to inform the Nationally Determined Contribution (NDC) of Senegal, with support from the French Development Agency (ClimBer, 2022). This M&E system should be integrated into the GGW system.
- Senegal needs to build capacity of the various stakeholders for the effective, efficient, and sustainable implementation of programmes, as identified in the GGW results framework (UNFCCC 2022a:26).
- The Land Degradation Assessment (2008) developed a baseline scenario of land degradation for Senegal and subsequently set the country's restoration targets. However, since then there has been no inventory update. Capacity building is required on the use of improved methodologies and tools to carry out such an update (Sow, personal communication, 2022).
- Optimising information sharing between stakeholders through online collaboration (identifying the right tools and methodologies).
- There is a need to build a strong community base to support the sustainability of national GGW activities and reduce implementation costs. There is also a need to undertake more rigorous evaluation of the success rate of tree planting programmes (ILRI, 2022).

# 2 Bottlenecks for GGW's implementation

**Table 1.** The main bottlenecks for the implementation of the GGW initiative

Bottleneck or key issue	Description and underlying factors	How this can be addressed within the country
<b>POLITICAL AND INSTITUTIONAL BOTTLENECKS</b>		
<b>Lack of harmonised mainstreaming of land restoration strategy across different sectoral domains and jurisdictions</b>	<ul style="list-style-type: none"> <li>Lack of harmonization of sectoral interventions on the theme of desert advancement and SLM.</li> <li>The inconsistency of public policies is reflected by a poor harmonisation between regulations on decentralization, land use planning, mining operations (mining code), forestry code, agriculture, pastoral development strategies and land laws, which maintain the different resource managers and management in a siloed sectoral vision.</li> <li>What is lacking in the policy framework is a process/law articulating the synergies between different forms of land use. The Forestry Code, the Water Code and the Agro-Pastoral Law need to be synergized through a focus on development, taking the drivers of degradation into account.</li> </ul>	<ul style="list-style-type: none"> <li>Support the formalisation of the National Strategic Investment Framework for Sustainable Land Management.</li> <li>All the codes that deal with the same resources should be merged under a common heading and addressed under relevant categories.</li> </ul>
<b>Insufficient information flow</b>	<ul style="list-style-type: none"> <li>Weak communication and lack of information sharing are highlighted by the GGW Director as critical bottlenecks.</li> <li>The image of the Agency is poor in relation to donors. Information is not up to date or transparent (Diop, personal communication, 2022).</li> </ul>	<ul style="list-style-type: none"> <li>According to Col Diop, these shortcomings will be remedied with the new communication department of the ASERGMV</li> <li>A global study on the contribution of NGOs in reforestation and addressing desertification would be required (Ba, personal communication, 2022).</li> </ul>
<b>Conflicting policy orientations</b>	<ul style="list-style-type: none"> <li>Ecosystem restoration is not only focused on recovering the ecological function of degraded ecosystems; it also involves changes in land management. Large scale agro-industrial development still features strongly in Senegal (despite strong emphasis on supporting an agroecology transition) which is contradictory to the recommended land management practices linked to restoration.</li> </ul>	
<b>Lacking agroforestry development strategy</b>	<ul style="list-style-type: none"> <li>Despite the fact that some key documents support agroforestry, for example: Politique forestière du Sénégal 2005-2025, SNSAR 2015-2035, PANA 2006, LOASP and INDC, and the fact that the new forestry code (Law N° 2018-25 of November 12, 2018) is quite strict (in fact its strictness may disincentivise farmers with the adoption of ANR), the agroforestry elements are spread throughout different Ministries: environment (MEDD), agriculture (MAER) and MEPA (livestock/pastoral). But 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.</li> </ul>	<ul style="list-style-type: none"> <li>ANR and agroforestry should be adopted by the Ministry of Agriculture, as well as the MEDD, as essential elements of agricultural extension to achieve real impact on agricultural productivity and resilience.</li> <li>This could form part of a possible revision of the Agro-pastoral Orientation Law.</li> </ul>
<b>Competing demands in the GGW area</b>	<ul style="list-style-type: none"> <li>In the Ferlo region pressures on silvo-pastoral resources are already exacerbated by climate change, competition for land, and competition between users. In this context, reforestation of plots to which access is prohibited seems to be an additional factor in the fragmentation of the pastoral space and the immediate removal of resources without compensation (Goffner et al 2022).</li> </ul>	<ul style="list-style-type: none"> <li>Scope for mainstreaming land restoration into the Plan for an Emerging Senegal.</li> </ul>

Bottleneck or key issue	Description and underlying factors	How this can be addressed within the country
<b>Incomplete decentralisation processes</b>	<ul style="list-style-type: none"> <li>• Incomplete decentralization processes limit the effectiveness of local institutions (including those overseeing land management) to support national land restoration initiatives. Senegal is slightly in advance, with their decentralization law completed, however the transfer of financial resources from the state to the local government remains challenging.</li> <li>• The decentralization reforms undertaken in Senegal in 1996 and 1998 conferred various prerogatives on rural communities in the management of natural resources.</li> <li>• All prerogatives are held by the local government, but natural resource management issues are often neglected in favour of other sectors and issues (health, education, etc.).</li> <li>• Weak capacity of local authorities in terms of intellectual and technical skills.</li> <li>• Competences transferred without commensurate transfer of resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish legislative and regulatory frameworks supportive of local initiatives.</li> </ul>
<b>Insecure and tenure</b>	<ul style="list-style-type: none"> <li>• The Senegalese land tenure system is characterized by a plurality of norms that is manifested by the coexistence of customary law (widely applied by local communities) and modern land legislation</li> <li>• There is no formal recognition in the forestry legislation that farmers have an exclusive right to the trees resulting from ANR on their fields</li> <li>• Land restoration requires investments. No land restoration or development project attracts financial investment without land security</li> <li>• There is a need to put up fences before reforestation efforts commence.</li> </ul>	<ul style="list-style-type: none"> <li>• Support land tenure security mechanisms developed in collaboration with local authorities that will ensure that local actors, especially women, and investors benefit from the added value generated by their interventions.</li> </ul>
<b>IMPLEMENTATION OF THE GGW: DISPARITY AND "LOCK-IN" A TOP DOWN AND NON-INCLUSIVE APPROACH TO THE EXPENSE OF THE DEVELOPMENTAL PARADIGM</b>		
<b>Lack of synergy in the implementation of projects</b>	<ul style="list-style-type: none"> <li>• The lack of a coherent policy framework results in failures to take advantage of synergies between projects related to land restoration. This leads to an inefficient use of time and resources and ultimately undermines the effectiveness of interventions (Sow, personal communication, 2022).</li> <li>• There is a need to strengthen the coherence of action at the level of the governorates and prefects, whose mission is to promote community dialogue; there is a lot of duplication in the field and a lack of coordination of actions - it is necessary to harmonize this and allow for efficiency of actions (Ba, personal communication, 2022).</li> </ul>	
<b>A rigid, technocratically driven approach</b>	<ul style="list-style-type: none"> <li>• Local populations perceive GGW projects such market gardens or large scale SLM as a government environmental project with a "top-down" logic disconnected from local realities</li> <li>• A tendency has prevailed to implement the GGW with a "one size fits all" approach, whereas each and every socio-ecosystem along the GGW route is unique, with its own characteristics and dynamics, calling for adapting and aligning actions implemented accordingly. "This alignment requires in-depth knowledge of each socio-ecosystem, as a condition for success and acceptance of future actions. However, the time required for diagnosis, analysis and consultation is often considered incompatible with the urgency felt by decision-makers and GGW implementers." (Goffrey et al 2022).</li> <li>• There are reports that the protocol for planting is so strict that other potential partners are precluded from being incorporated into the GGW.<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• The implementation of each project is to be preceded by a grounded consultation and co-design with each community, with a greater focus on political ecology.</li> </ul>

2. The GGW is reported to be very driven by the "technical" aspects, to such an extent that it precludes collaboration. For instance, particular attention is paid to what species can be planted and how they should be planted. A private company that specializes in gum Arabic and who has planted 15 000 ha of acacia trees to plant gum Arabic (which creates added value in the GGW areas) wanted to meet with the GGW. It is reported that the agency did not want to meet with this company (AZYLA GUM) arguing that they do not do the planting properly. An open dialogue could lead to actors improving their techniques to the benefit of the GGW (Garreau, personal communication, 2022).

Bottleneck or key issue	Description and underlying factors	How this can be addressed within the country
<b>Exclusion of farmers</b>	<ul style="list-style-type: none"> <li>The GGW is problematic by design - the chosen location is essentially a pastoral axis, hence the importance of consulting the herders - this implies a strong capacity building and engagement of communities in designing interventions (Ka, personal communication, 2022).</li> <li>Lack of effective inclusion of a wide range of key actors, e.g. producer organisation are the grassroots of the GGW. The options advocated by producer organisations are often very close to the objectives of the GGW; they should be an integral part of the implementation of the GGW (Garreau, personal communication, 2022).</li> </ul>	<ul style="list-style-type: none"> <li>The proposed 10 recommendations brought forward by the UNFCCC (2021) to improve the work of the national coalition address these concerns.</li> <li>Put in place practical mechanisms for planning dialogue and action at the local and national levels, especially focusing on producer organisations. This would allow for getting closer to producers' organisations and to associating them with the GGW, taking into consideration their natural resource management strategies (UNFCCC, 2021).</li> <li>Elevate the GGW as a tool for improving the livelihood of populations to the highest political level.</li> <li>The solution is to work through the farmers' organisations, so that the communities and other stakeholders carry the project. The CNCR is present in the 14 regions, it includes grassroots farmers' organisations. Participation by the CNCR could allow better implementation and sustainability of the project.</li> </ul>
<b>Lack of involvement of partners: CSOs, private sector and local government</b>	<ul style="list-style-type: none"> <li>A study on the mobilization of non-state stakeholders of the GGW found that the implementation of the initiative was top down, technocratic and non-inclusive. Greater involvement of CSOs and research actors in the dynamics of the GGW should be encouraged via a support programme for the field actors of the GGW (UNFCCC, 2021).</li> <li>Failing to introduce these actors in projects will result in the risk that "the projects presented (lack) territorial anchorage". Funding partners should be encouraged to set up dedicated funding programmes for these actors (UNFCCC, 2022:14).</li> </ul>	<ul style="list-style-type: none"> <li>Set up multi-stakeholder, multi-sector dialogue mechanisms around the objectives of the GGW</li> <li>Involve local authorities in project management and the implementation of the GGW projects</li> <li>For better connections between GGW actors, harness existing opportunities and knowledge through the creation of a GGW multi-stakeholder hub.</li> <li>Establish practical, simple and clear criteria and procedures for engagement.</li> <li>Integrate the greatest number of actors through a system of recognition of different levels of commitment of actors and actions (UNFCCC 2022).</li> <li>National coalitions should enable the establishment of MoU between ministries and decentralized institutions, municipalities and cities, so that states can request dedicated funding for GGW municipal plans (UNFCCC 2022).</li> </ul>



Bottleneck or key issue	Description and underlying factors	How this can be addressed within the country
<b>LACK OF INVOLVEMENT OF LOCAL POPULATIONS COMPROMISES LONG TERM SUSTAINABILITY OF INTERVENTIONS</b>		
	<ul style="list-style-type: none"> <li>The populations that benefit from the land restoration measures must be able to take over from the state services. However often the lack of ownership and co-design of interventions with the local populations, as well as other factors such as access to resources and the absence of land tenure rights, are all factors inhibiting the buy in form local beneficiary populations.</li> <li>Lack of genuine support from pastoral communities.</li> <li>The humanitarian approach to implementing market gardens compromises their long-term sustainability. For instance, the "Food for Work" programme consist of providing women's groups with food aid; it is conditional on their participation in the farm plot. But most development initiatives do not yield high economic returns. This poor productive and financial performance might condemn them to remain dependent on programmes such as the GGW and actors such as the World Food Programme. This is the major ambiguity of the GGW gardens which, in attempting to promote tools for the fight against poverty, adopt the institutionalized practices of humanitarian aid.</li> <li>Given that this is their environment, rather than talking about a lack of ownership, we should talk about a lack of project continuity at the GGW level (Ka, personal communication, 2022).</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of GGW projects rely on existing instruments of territorial governance and shared resource management, such as pastoral units, borehole management committees and communal councils. The GGW would thus be catalytic to consultation processes and to consolidate decision-making and management bodies at the intermunicipal level for SLM.</li> </ul>
<b>LIMITED CAPACITY OF FARMERS AND FARMER ORGANISATION</b>		
<b>Limited technical capacity of farmers and farmer organisations to adopt the recommended techniques</b>	<ul style="list-style-type: none"> <li>Farmers and farmer organisations lack technical capacity.</li> <li>Supporting their technical staff is an action that the Accelerator should consider (UNCCD 2022). There are only a small number of NGOs with the required expertise on these issues.</li> </ul>	<ul style="list-style-type: none"> <li>Entry points identified by the GGW Accelerator: "In West Africa, the ROPPA network took the lead in January 2020 in the so-called West African initiative on agroecology and is a good entry point. (...) Farmer-to-farmer exchanges have proven to be a powerful tool for scaling up agroecological techniques."</li> </ul>
<b>GENDER</b>		
<b>Lack of addressing fundamental causes of gender inequalities</b>	<ul style="list-style-type: none"> <li>While there is mention of gender equity and inclusion of women, youth and other groups in situations of vulnerability in the policy documents, there is a lack of coordinated planning and activities able to address the root causes of inequalities. Most of the actions relate to solving the current needs of these groups, but there is less focus on changing their status through addressing their strategic needs.</li> </ul>	
<b>RESOURCES CONSTRAINTS</b>		
<b>Constrained resources mobilisation</b>	<ul style="list-style-type: none"> <li>Land restoration is extremely costly.</li> <li>Insufficient logistics given the isolation of reforestation areas.</li> </ul>	<ul style="list-style-type: none"> <li>ASGGMR has embarked on a high-tech drive to increase the pace at which activities are deployed on the ground (modern machinery, etc.).</li> </ul>
<b>High reliance on external funding</b>	<ul style="list-style-type: none"> <li>Many land restoration targets and commitments rely heavily on funding from external donors. The GGW was expected to receive financial support from the government, local authorities and villagers, while these entities, particularly at the local level, have limited capacities for resources mobilization.</li> </ul>	
<b>Institutional blockage in the financial dialogue</b>	<ul style="list-style-type: none"> <li>The main obstacle to the mobilization of resources is the positioning of national agencies. These agencies are under the direction of their country's Ministry of the Environment. However, the financial partners all dialogue at the level of each country with one interlocutor: the Ministry of Finance and Planning.</li> </ul>	<ul style="list-style-type: none"> <li>"There is a need to communicate about the opportunities available, 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).</li> </ul>

Bottleneck or key issue	Description and underlying factors	How this can be addressed within the country
<b>BIOPHYSICAL CONSTRAINTS</b>		
<b>Water scarcity</b>	<ul style="list-style-type: none"> <li>The GGW operates in water constrained environments, with deep aquifers (230 m) compounded by climate change (delayed arrival of long rains).</li> <li>There is tremendous pressure from pastoralist communities on government to drill boreholes for their livestock. The Agency promised many boreholes – the most challenging area is the Ferlo region.</li> <li>There is a high mortality of seedlings – approximately half the seedlings are lost before planting or at planting due to water constraints, cattle roaming and fire damage (ICLEI, 2022). Freshly transplanted trees need extra water due to the lack of moisture in the soil.</li> <li>The agency is planning on multiplying boreholes in the region. It has acquired highly technological equipment. It is important to verify whether there is enough water to irrigate newly restored land. This has long term consequences on the use of underground water.</li> <li>The water stress issue has implications from a gender perspective – women are forced to allocate significant time to collecting and transporting water.</li> </ul>	<ul style="list-style-type: none"> <li>Alternatives to and better management of water points/ponds.</li> <li>Studies required on the replenishment of underground water given the high intensity of boreholes being created.</li> </ul>
<b>Botanical</b>	<ul style="list-style-type: none"> <li>Some actors contend that uncertainty remains in terms of the most optimal species, whereas some maintain that the optimal species are known but that improvements could be done in terms of the management of these species.</li> </ul>	
<b>LOCAL DYNAMICS</b>		
<b>Insecurity and conflict</b>	<ul style="list-style-type: none"> <li>Different use of space by several actors e.g. pastoralists and farmers.</li> <li>Livestock wandering in reforested plots leads to inter-community conflicts. Incidents of open provocation by pastoralists have been reported, with livestock keepers walking their herds through the GGW perimeter at night during the season when pastures are abundant (i.e when there is no scarcity of feed); this has been construed as a sign of provocation towards the GGW (Ouedraogo, personal communication, 2022).</li> <li>Maintenance of measures to guard against external attacks (firewalls, fences, etc.).</li> <li>“In Senegal, the government introduced the concept of pastoral units (PUs) in the 1980s around water points with the objective to sustainably manage resources and spaces for the benefit of local populations and the community of transhumant pastoralists. Despite their apparent success, PUs have been implemented in a top-down manner and have failed to invest in or empower pastoral communities to manage the PUs. Once management plans are established, the PUs are often left without supervision, capacity building programmes or monitoring and as a result, management plans are rarely implemented. Where pastoral unit management bodies exist, they are often politicized and heavily influenced by local chiefs.”</li> </ul>	<ul style="list-style-type: none"> <li>The PRM approach can assist in overcoming these shortcoming – it is embedded in local land use practices with the community, building on customary management and governance norms. PRM can help bring a greater degree of community participation by including women and youth and in managing activities and interventions contributing to the GGW, where the mainly top-down approach to date has excluded communities and, in some situations, has created conflict with them.</li> </ul>
<b>Growth of the agricultural sector</b>	<ul style="list-style-type: none"> <li>The GGW does not go through protected forest areas but through silvo-pastoral areas, and one of the important challenges to be taken into account in planning human developments in the area is the sharp increase in the number of farms in the western zone. At the time, the law prohibited the development of crops in this area, but the agricultural sector is progressing, and livestock numbers in this area is increasing. In the northern part, there are important hydro-agricultural developments that favour crop production; in this sense, the government responds to the needs of the population, particularly in terms of agriculture, but the ecological aspect does not figure sufficiently in the planning.</li> </ul>	<ul style="list-style-type: none"> <li>The theme of water usage should be rethought within a framework of resource management, which calls for a revision of the Silvo-pastoral Law (2004), in order to accommodate these new dynamics (Ndiaye, personal communication, 2022).</li> </ul>

Bottleneck or key issue	Description and underlying factors	How this can be addressed within the country
<b>WEAK MONITORING AND EVALUATION</b>		
<b>Lacking M&amp;E system</b>	<ul style="list-style-type: none"> <li>• There is no systematic way of tracking and reporting on the progress made towards achieving SLM that addresses and meet the GGW goals (regionally applicable). This was underlines by Colonel Diop as the 'weakest link'. He says that 'we are aware of the gaps and problems, but the reality is that most people only see the money and the very large amounts. When the US\$1.7 billion is announced, there is a rush, there is no excitement about the impact and results' (Diop, personal communication, 2022).</li> <li>• Lack of reliable monitoring and evaluation system for strong reporting on the achievements of the GGW. In policy documents, emphasis is put on reports, making it difficult to trace and verify the interventions' results.</li> <li>• Obsolete datasets for tracking land degradation and impact of interventions. The 2008 land degradation assessment gives a baseline scenario of land degradation. This dataset is outdated and mid-term inventory of degradation is required.</li> </ul>	<ul style="list-style-type: none"> <li>• Improve M&amp;E by setting up a system accessible to all actors that centralises all knowledge for innovations in the field.</li> <li>• Undertake a mid-term appraisal of the status of land degradation in Senegal. The Accelerator is trying to remedy this by providing tools and equipment, and training sessions. Work has been underway for the implementation of a results management framework since May 2021. This has led to the establishment of two tools: 1) The annual financial tracking table to track commitments and disbursements by pillar and country for each funding partner and 2) The annual impact monitoring table to track achievements on the ground by pillar, for each national agency of the GGW (UNFCC 2017).</li> </ul>
<b>Undercapitalisation</b>	<ul style="list-style-type: none"> <li>• Many projects and investments, including the work of NGOs, CSOs, and autonomous investments by farmers and herders, go unreported and unrecognised.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore the possibility of a "GGW" label which actors can used depending on their level of contributions to the GGW.</li> </ul>
<b>Lack of multi-sector analytical accounting</b>	<ul style="list-style-type: none"> <li>• The evaluation of the effectiveness of investments related to the fight against land degradation should be inseparable from the inventory of global investments made at the level of the concerned sectors of activity (agriculture, livestock, water, etc.). However, in the absence of analytical accounting, it is difficult to know the real share of the total amount of investments that have had a positive impact on actions to combat land degradation.</li> </ul>	
<b>RESEARCH GAPS</b>		
<b>Research bias towards forestry and to on certain areas</b>	<ul style="list-style-type: none"> <li>• A review of the Sahelian GGW reveals a "predominance of ecological studies in the GGW literature and a concentration of studies in certain geographies of interest, such as northern Senegal" (Bruckmann et al, 2022).</li> </ul>	<ul style="list-style-type: none"> <li>• Redress this research bias by supporting research focusing on socio-economic and other aspects of GGW implementation, as well as addressing geographic bias.</li> </ul>
<b>Limited research time assigned to restoration/ reforestation projects</b>	<ul style="list-style-type: none"> <li>• Research funding is often allocated for short (2-3 year) time frames, which is deemed highly insufficient to capture the outcome of reforestation projects, taking social dynamics into account – these research time frames need to be expanded to a 10-year period (Mbaye, personal communication, 2022).</li> </ul>	
<b>Limited sharing of information and centralisation of research outcome</b>		<ul style="list-style-type: none"> <li>• Set up a mechanism to centralise all scientific and technical information and to easily disseminate findings, strengthen knowledge exchange, and promote valorisation of research findings.</li> </ul>
<b>Research is top down</b>	<ul style="list-style-type: none"> <li>• Often research outcomes are not fed back to the level of community-based organisations that could benefit from these research findings.</li> </ul>	<ul style="list-style-type: none"> <li>• As above – promote the establishment of observatories.</li> </ul>



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# 3 Stakeholder analysis relevant to the GGW

## 3.1 Government departments

The Ministry of Environment and Sustainable Development (MEDD) ensures the coordination of activities on climate change and supports the sectoral ministries in the planning of climate actions and M&E. Certain rangelands are in protected areas, which are under MEDD supervision. It is the lead ministry supporting the work of the GGW. It assists the Agency in the planning of activities and the formulation of M&E indicators.

Under the MEDD, the key departments are:

- The Directorate of Water, Forests, Hunting, and Soil Conservation (DEFCCS), which helps implement GGW activities on the ground
- The Directorate of Planning
- The Directorate of Environment and Classified Establishments (DEEC)
- The Directorate of National Parks (DPN)
- The National Institute of Pedology (INP)

The Ministry of Agriculture and Food Sovereignty (MAER) develops, coordinates and implements agricultural policy at the national level. MAER's involvement with the GGW is key, as they support planning of food gardens, water management, sinking of boreholes, etc.

The Ministry of Animal Husbandry and Production develops, coordinates and implements the national livestock development policy. The Directorate of Livestock addresses the role of livestock in forest degradation.

The Ministry of Finance and Budget signs bilateral and multilateral financing agreements granted to Senegal in all areas, including climate change. It supports fiscal decentralization efforts, both by law and also through local funding via rural tax collection and other revenue generation efforts.

The National Agency for Civil Aviation and Meteorology is in charge of supervising and

coordinating all meteorological, climatological and scientific activities related to climate change. The Agency is also responsible for the management of the meteorological observation network, including facilities, equipment maintenance and data exchange on a global scale.

### 3.2 Presidency, agencies and commissions

The Senegalese Agency for Reforestation and the GGW falls under the Presidency.

#### LOCAL GOVERNMENT

Local authorities are the custodians of local land management and access to resources (tenure, land use, etc.). They are responsible for local development planning and are equipped with legal tools adapted to this responsibility. Local government entities ("collectivités territoriales") further play a role in institutionalizing rural participation in national policy commitments; help form federations of elected local authorities; and support public forums to debate national policies that affect rural populations. These institutions also play an important role in developing models of natural resource management and in informing rural populations of their rights and the roles and powers of their elected representatives.

The Association of Mayors of Senegal plays a role in training municipal councils on policy frameworks (especially around decentralisation functions) and on their rights as local representatives and the means by which they can defend, exercise and develop these rights.

The [Agency for National Statistics and Demographics \(ANSD\)](#) centralizes and disseminates statistical data produced by the national statistical system. The Agency is also responsible for monitoring international technical cooperation on statistics. In this capacity, it represents Senegal in subregional, regional and international meetings relating to matters within its competence and monitors the activities of international organisations in the field of statistics. At the request of the government and public and private entities, the Agency may undertake research on statistical, economic and social issues.

The [National Agricultural and Rural Advisory Agency \(ANCAR\)](#) manages agricultural and rural advisory services throughout Senegal. It develops a decentralized agricultural advisory system, working for the producer organizations through a participatory approach based on partnership. It has set up the Agricultural Services and Digital Inclusion in Africa (SAIDA) platform.

The National Food Security Council (CNSA) was created in 1998. The Executive Secretariat of the National Food Security Council (SECNSA) was created within the CNSA. Its function is to inform all decisions in the field of food security and resilience, to facilitate the monitoring and evaluation of the food security and resilience policies and programmes, to participate in the mobilization of financial resources for the national food security and resilience system; and to facilitate consultation, synergy and ensure complementarity between actors involved in the implementation of food security and resilience projects and programmes. This Council is responsible for providing food insecurity early warnings, with two important meetings every year where all food security actors gather to analyse and map the food security situation for Senegal.

### 3.3 Development partners:

#### FINANCIAL INSTITUTIONS

- The AfDB has in [2021 pledged US\\$6.5 billion](#) in support of the GGW. It is involved in the recently launched Africa Integrated Climate Risk Management Programme.
- The West African Development Bank (BOAD) announced that between 2024 and 2034, the ["100 Million Trees" project](#) will bring together the efforts of eight West African countries mobilised against desertification. This major reforestation operation will cover the entire West African Economic and Monetary Union (WAEMU) zone, as part of the GGW.
- The GEF funds multiple SLM and climate resilience projects, including the recently completed [Mainstreaming Ecosystem-based Approaches to Climate-resilient Rural Livelihoods in Vulnerable Rural Areas through the Farmer Field School Methodology](#).
- The [European Investment Bank](#) funds several environmental projects in Senegal.
- Green Climate fund (GCF) funds a number of regional projects of which Senegal is part, such as [The Africa Integrated Climate Risk Management Programme](#) as well as [Inclusive Green Financing Initiative \(IGREENFIN I\)](#), both projects focusing on the GGW. It also funds the project [Increasing the Resilience of Ecosystems and Communities through the Restoration of the Productive Basis of Salinized Lands](#). Nationally, it funds the [Building the Climate Resilience of Food Insecure Smallholder Farmers through Integrated Management of Climate Risk \(R4\)](#) (2016-2024).

- The World Bank's International Development Association (IDA) is the main funder of the Livestock Climate Finance in Senegal project (ILRI 2022b). It finances activities of the Regional Support Project for Pastoralism in the Sahel to support climate mitigation and adaptation through sustainable landscape management, improved animal health and veterinary drug control, improved livestock value chains. It has been providing co-financing (US\$150 million) since 2021 for the new IFAD Programme in Senegal's [Agriculture and Livestock Competitiveness Programme For Results](#) and other projects focused on resilience. In 2021 the World Bank announced it would [invest US\\$5 billion](#) to help restore African drylands.
- The ASERGMV has signed a framework agreement with the [Programme for the Inclusive and Sustainable Development of Agriculture in Senegal \(PDIDAS\)](#), a programme initiated in 2014 with funding from the World bank and the GEF and another specific agreement for the implementation of the following activities:
  - The demarcation and signposting of eight classified forests in the Saint-Louis region.
  - The construction of three nurseries, two in the Saint-Louis region and one in the Louga region.
  - The production of 800 000 seedlings of a dozen species.
  - Capacity building of actors grouped in Inter-villages Association (AIV).
  - The establishment of 40 000 ha of land degradation defences.
  - The development of nine development and management plans (PAG).
- These activities will, among other things, contribute to the increase of the vegetation cover rate, the management of biodiversity and the development of income-generating activities in the regions of Saint-Louis and Louga.
- The OPEC Fund for International Development contributed financially to the Agricultural Development and Rural Entrepreneurship Programme - Phase II (PADAER-II).
- The EU supports several land restoration and agro-ecologically focused projects. See the EU funded project [database](#) for further details. Amongst the EU-funded projects is [Regreening Africa](#).
- The African Risk Capacity (ARC) Group is involved in the recently launched Africa Integrated Climate Risk Management Programme.
- USAID funds the Feed the Future Senegal Agricultural Policy and Reform Support Project (PSS).
- The Canadian (Quebec) [Union des producteurs agricoles du Québec \(UPADI\)](#) has been working with the CNCR on SLM projects country wide.
- The Moroccan [Office Cherifien des Phosphates \(OCO\)](#) features among key partners to the Agency, providing modern equipment to improve planting.
- GIZ supports land tenure security among the rural population and is very involved with developing a sustainable electricity supply through the deployment of renewable energy and the promotion of energy efficiency measures. A project on "climate-friendly cooking" in Senegal is underway (2020-24).

#### UN SYSTEM

- The [United Nations Development Programme \(UNDP\)](#) has historically supported Senegal with mainstreaming climate change into local planning of municipalities. The 2021 activity report mentions 21 communes in the intervention regions that have integrated climate change adaptation and gender into their communal development plans. It also supported the community nature reserves and pastoral units in the Ferlo and Bas-Delta regions with establishing development plans that facilitate the strengthening of their governance for participatory management of the environment. UNDP has reportedly played a part in reshaping Senegal's approach to the GGW, supporting a more integrated approach. UNDP is currently involved with the final stages of the [Ecosystem-based Adaptation for Resilient Natural Resources and Agro-pastoral Communities in the Ferlo Biosphere Reserve and Plateau of Thies](#).
- ICRAF is involved in the Regreening Africa project. The Data Science and Applied Learning Lab at ICRAF has spearheaded the development of the Regreening Africa App. ICRAF can play a further role in reinforcing investments in the practice of ANR and promoting Land Use Planning and Allocation Plans (POAs).
- IFAD is involved in several programmes related to climate change resilience and agricultural development.

#### BILATERAL DONORS

- As France relaunched the GGW initiative at the One Planet Summit in January 2021, by announcing the creation of the GGW Accelerator, the French Development Agency (FDA) naturally features as one of the primary development partners, especially in Senegal. The FDA positions itself as a [key strategic partner of the GGW Accelerator](#).

- The World Food Programme is the implementing agency of the [Building the Climate Resilience of Food Insecure Smallholder Farmers through Integrated Management of Climate Risk \(R4\)](#) (2016–2024) and is involved in the recently launched Africa Integrated Climate Risk Management Programme.

### 3.4 Civil society

Local and international NGOs working on land restoration, climate change and land management include:

- The Organisme National de Coordination des Activités de Vacances which accounts for more than 7 600 sports and cultural associations.
- Fabrimétal has developed a tree nursery near its factory, from which it provides saplings free of charge in support of reforestation, as well as sponsoring the the Tolou Keur ("circular gardens" of Belvédère.<sup>3</sup>
- IUCN is a membership union uniquely composed of both government and civil society organisations. It has recently called for bringing back the focus on the wetlands and water issues within the GGW. A biodiversity status assessment of the GGW was undertaken in 2017 "[Biodiversity and the GGW: Managing nature for sustainable development in the Sahel](#)".
- Oxfam is involved in the Regreening Africa project and support small scale agricultural projects in Senegal.
- CARE is involved in the Regreening Africa project.
- Catholic Relief Services are involved in the Regreening Africa project.
- The [Pierre Rabhi Endowment fund](#) supports associations with agroecological work in Senegal.
- [SOS SAHEL](#) is a French NGO currently active in 11 countries in the Sahel, from Senegal to Djibouti. It helps rural communities in sub-Saharan Africa to guarantee their food security and nutritional quality in a sustainable manner that respects their environment. The NGO has been actively involved in the GGW. It has taken part in identifying GGW champions and has, together with the [1t.org](#) platform<sup>4</sup>, which is hosted by the World Economic Forum, formed a partnership to support the GGW. This initiative is focused on encouraging the establishment of partnerships around landscape restoration, supporting and strengthening the visibility of Sahelian eco-preneurs, and attracting investment for restoration in the Sahel.
- Sahel Eco has signed a partnership agreement with the Pan-African Agency for Food Security to strengthen collaboration between governments and civil society actors. It also runs the GGW Partners' Platform.
- The NGO [Elevage Sans Frontières](#) has supported several livestock projects in Senegal.
- Entrepreneurs Without Borders ([OZG](#)) is implementing agroforestry projects in Senegal.
- [World Vision](#) has committed with ministries and national networks to institutionalise ANR and other sustainable land use practices.
- The [Association for the Promotion of Agroforestry and Forestry \(APAF\)](#) is a peasant organisation that supports the application of agroforestry techniques.
- [Reforest'Action](#) plants trees to restore soils depleted by decades of groundnut cultivation. Planted by and for the local farmers, the trees protect their fields and secure their crops.
- [WeForest](#) is a Belgium NGO which supports local governance frameworks in the GGW project areas. In Senegal, Weforest is involved in rehabilitating mangroves. It was involved in a reforestation project of 1 000 ha in the silvo-pastoral zone of Ferlo, a three-year pilot project with a view to scaling up over 10 years (Neyra, personal communication, 2022).

#### NATIONAL NGOS

- The "Sukyo Mahikari" association has been working alongside the Forestry Service on a voluntary basis on large-scale actions, notably through group of young people from different countries in Europe, America, Asia and Africa, to participate in the building of the GGW programme (GGW Action Plan 2011).
- University Cheikh Anta Diop de Dakar (UCAD) has been involved in GGW activities through reforestation activities, as well as providing medical care and literacy training, in particular to women's groups and youth associations, as a contribution to the building of the GGW by students and teachers with the support of the competent services (GGW Action Plan 2011).
- Union Nationale des Exploitants Forestiers du Sénégal (National Union of Forest Users) (UNCEFS), has also been active in the field assisting the GGW.

3. <http://www.burkinadoc.milecole.org/agroecologie-afrique/agroecologie-senegal/article-reforestation-et-grande-muraille-verte-asergm/>

4. [1t.org](#) platform was created as part of the UN Decade of Ecosystem Restoration, with the goal of conserving, restoring and planting 1,000 billion trees by 2030, with a particular focus on the Sahel and the GGW. [1t.org](#) particularly supports eco-entrepreneurship by highlighting innovative and promising solutions and helping them to grow through Uplink Trillion Trees challenges and accelerator programmes.



- [Centre d'Étude, de Recherche et de Formation en Langues Africaines \(CERFLA\)](#) is a grassroots development organisation which has been working with CNRS. Its intervention areas include organisational development, social transformation, community health, resource governance, local economy (milk, market gardening, fattening, etc.), pastoralism, water and land security, and resilience to climate change. CERFLA implemented the project Strengthening Local Institutional and Technical Capacities to Intervene in the Governance of Pastoral Resources (with financial support from USAID), implemented in Ranérou-Ferlo from 2018 to 2021, which forms part of the GGW intervention area (Balde Loum, pers. com 2022).
- [Green Sedhiou](#) is a local development association for the protection and preservation of the environment. Its vision is to rehabilitate the vegetation cover of Sedhiou via reforestation of one million plants by 2030. It is involved in restoration of mangroves along the Casamance River and the Soungouroungou River (outside GGW area).
- [Conseil des Volontaires Communautaires pour le Développement au Sahel](#) is a civil society organisation involved in pastoral counselling, economic animation for development, resilient non-formal education.
- [Agrécologie Afrique](#) uses an approach based on agroecology, on the social economy of solidarity and the development of innovations to help the population in a situation of poverty to become aware of this situation of vulnerability, to organize and mobilize themselves to better produce while respecting the environment, the earth and the health of people and animals, all in a participatory and responsible management.
- [ENDA Pronat](#) is a preeminent NGO in Senegal. It is a member of the international network Enda Tiers Monde, of the Senegalese National Federation for Organic Agriculture (FENAB) and leads the Avaclim research in Senegal. ENDA Pronat sits on the Cadre de Réflexion et d'Action sur le Foncier au Sénégal (land tenure think tank in Senegal - CRAFS), the multistakeholder task force for the promotion of agroecology in Senegal (TaFAé), and the national Alliance for Agroecology in West Africa (3AO) steering committee. The NGO is secretary of the Dynamique Nationale pour la Transition Agroécologique au Sénégal (DyTAES), focal point of the Coalition for the Protection of African Genetic Heritage (COPAGEN) at the national level and also of the sub-regional and international networks COPAGEN, and participates in the Alliance for Food Sovereignty in Africa (AFSA).



- The National Partnership for Senegal's Water (Partenariat National de l'Eau du Sénégal - PNES) is an association working in the field of integrated water resource management.
- The [Platform of European NGOs](#) in Senegal is a network of NGOs that was formed with the objective of creating synergies and establishing new partnerships. It aims to strengthen the effectiveness of the participation of its members in the economic, social and cultural development of Senegal. It seeks to promote dialogue between the different civil society actors in Senegal.

### 3.5 Private sector

[Total Energies Foundation](#) has in 2018 partnered with the Tèssékéré International Human and Environment Observatory, which is working in Senegal to promote the sharing of experiences between states and raise awareness of the project among local communities.

[The Jokalante platform](#) combines feedback mechanisms, IVR systems, voice services, SMS, social media and data collection tools. Through local community radios, a dynamic web platform and dedicated agents, Jokalante creates linkages with the rural population. Jokalante works with ANACIM (a climate information institution) to scale the distribution of this information.

mLouma is a company specialized in the digitalization of agriculture; with the support of several partners (ICCO, USAID, UNCDF, ICRISAT, ANACIM, ORANGE, OCP, MEDA), mLouma has in recent years developed a range of tools that address the problems of producers based on specifications developed by international organisations.

### 3.6 Networks and alliances

#### FARMER NETWORKS

[Conseil National de Concertation et de Coopération des Ruraux \(CNCR\)](#) (National Consultation and Cooperation Framework with Rural Communities) is a seminal partner for the GGW, especially in light of the recurrent call for GGW initiatives be developed from the ground. The CNCR is the representative of the Senegalese peasant movement. This network brings together different associations of farmers, fishermen, foresters, breeders, women's organisations, and youth organisations; representing 32 national peasant federations in all. In each federation there are hundreds of organisations; some are structured by region or by association (there are 38 associations that cover specific localities). In the GGW intervention areas (silvo-pastoral zones), there are associations that are members of the Federation of Peasant Non-Governmental Organisations.

Among these farmers' associations in the GGW area are ADIT, EGAB, ADENA (Association for Livestock Development in Senegal).

CNCR have worked extensively with the Union des producteurs agricoles du Québec (UPADI) in the context of various projects that seek to promote a community-based natural resource management approach to GGW projects. Engagement with the GGW Agency has been limited until recently, but collaboration has increased in the context of a project shaping community-based natural resource management and soil health that forms part of the FAO's Strengthening Agricultural Adaptation project (SAGA) (Ka & Thierno Cissé, personal communication).

In 2014 CNCR launched the National Family Farming Observatory and in 2015 it drove the launch of the National Observatory for Land Tenure Governance in collaboration with the Task Force for the Promotion of Agroecology in Senegal (Cadre de Réflexion et d'Action de la société civile sur le Foncier au Sénégal - CRAFS).

#### SLM/LAND NEUTRALITY MULTI-STAKEHOLDER PLATFORMS

Key platforms include:

- A **national SLM committee** which is responsible for 1) refining the main land restoration guidelines defined by the CNIS/GDT, 2) adopting the annual SLM work plan, budgets, and ensuring the coordination, monitoring, and evaluation of the different actions. The committee is supported by a multi-sectoral executive secretariat, and an operational unit for technical support and monitoring of the CNIS/GDT. The focal point of the Rio Convention on Desertification leads the national SLM committee.
- The **national land degradation neutrality (LDN) working group** is a subgroup of the steering committee (the federated group from the Action Programme Against Desertification and the SLM working group - PAN/LCD/GDT) that oversee the alignment of the Action Programme Against Desertification (PAN/LCD) with the CNIS/GDT development strategy and its integrated financial strategy.

#### CLIMATE CHANGE NETWORKS IN SENEGAL

The National Committee on Climate Change (COMNACC) ensures the coherence of programmes and projects with the national objectives related to climate change. The Regional Climate Change

Committees (COMRECC) are created to be the representatives of the COMNACC in the regions. They pursue the same mission as the national committee in the regions, i.e. information, awareness, training, and facilitation in the design, financing, implementation, validation and monitoring of projects in the regions.

The **pluri-disciplinary working groups (GTP) set up by ANACIM** at the department level gather all relevant sectors concerned with the preparedness and monitoring of the winter cropping season to guide farmers with their decision-making (ClimBer, 2022).

### LAND GOVERNANCE

The National Platform on DV (Directives volontaires) and Land Governance (COFIL DV/GF) ensures dialogue on land governance, the development of national consensus, the preparation of action plans for the implementation of the Voluntary Guidelines, and the monitoring and evaluation of land governance in Senegal.

Cadre de Réflexion et d'Action sur le Foncier au Sénégal (CRAFS) is a land tenure think tank in Senegal.

### NETWORKS FOCUSING ON THE AGROECOLOGICAL TRANSITION

Dynamique Nationale pour la Transition Agroécologique au Sénégal (DyTAES) is a network that brings together umbrella organisations of producers, consumers, NGOs and Senegalese and international research institutions, Senegalese and West African civil society organisations, and local elected officials. It plays a key role in fostering a transition towards agroecology.

[Task force multi-acteurs pour la promotion de l'agroécologie au Sénégal](#) (Multi-stakeholder Task Force for the Promotion of Agroecology in Senegal - TaFAé) promotes agroecology in Senegal.

[Alliance for Agroecology in West Africa \(3AO\)](#) – Senegal is part of 3AO, an IPES Food-supported coordination and information platform composed of farmers' organisations, research institutes, international NGOs and social movements. It aims to promote and support an agroecological transition in West Africa to ensure resilient, sustainable livelihoods adapted to local agricultural challenges. It seeks to facilitate intersectoral cooperation through a series of concrete and concerted actions in favour of agroecology, while providing greater visibility to the agroecological movement in West Africa.

## 3.7 Summary of stakeholders linked (or potentially linked) to the GGW in Senegal

**Table 2.** Summary of stakeholders linked (or potentially linked) to the GGW in Senegal

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Gov. agency</b>	Agence Sénégalaise de la Reforestation et de la Grande Muraille Verte (ASERGMV) Oumar Abdoulaye Ba (Director General of ASERGMV)  Director of GGW, Colonel Gora Diop	ASERGMV operates under the technical supervision of the Forestry Ministry and the financial supervision of the Finance Ministry and is responsible for the management of the GGW; the management of Ecovillages; the management of Reforestation.	Meeting its GGW target enhanced resource mobilisation, improved coordination and information sharing, monitoring of initiatives.	Primary stakeholder in charge of GGW.
<b>Gov. agency</b>	<a href="#">Ministry of Environment and Sustainable Development (MEDD)</a> Relevant directorates other than DEFCCS (see below) include: Direction de la planification - M. Boucar Ndiaye Direction de l'Environnement et des Etablissements Classés (DEEC) - Baba Dramé Direction des Parcs Nationaux (DPN) - Bocar THIAM	Ensures the coordination of activities on climate change and accompanies the sectoral ministries in the planning of actions and monitoring and evaluation. Certain rangelands are in protected areas which are under MEDD supervision; responsible for the preservation of natural resources (firefighting, etc.). It is the lead ministry supporting the work of the GGW.	Resource mobilisation, developing national funded project focusing on GGW, capacity development to develop bankable projects, greater project coordination, knowledge of what other stakeholders are doing in terms of SLM in the GGW area.	Assists the agency in the planification of the activities and the formulation of some indicators.

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Gov. department</b>	Directorate of Water, Forests, Hunting, and Soil Conservation (DEFCCS) (MEDD) Baidy BA	Helps implement GGW activities on the ground. This implies working within the 7 poles established with the 7000 young people recruited by the agency, who are in fact under the supervision of the water and forestry agents. In addition to this workforce, there are 2000 water and forestry agents.		Assume secretarial services – key partner in identifying funding for GGW projects.
<b>Gov. department</b>	<a href="#">Ministry of Agriculture and food sovereignty</a>	Develops, coordinates and implements agricultural policy at the national level. The MAER's involvement with the GGW is key – involved in the planning of food gardens, availability of water, sinking of boreholes.	Enhanced/dedicated resources to support GGW implementation.	Direct implementation support. Enhanced/more streamlined.
<b>Gov. department</b>	<a href="#">Ministry of Animal Husbandry and Production</a>	Develops, coordinates and implements the national livestock development policy. The Directorate of Livestock addresses the role of livestock in forest degradation and capitalizes on the economic importance of grazing resources in forest management.	Receiving some resource allocation from the GGW projects to supplement its own Operational budget, as its staff and resources are being used by GGW projects over and above its own site work.	Direct implementation support. Enhanced/more streamlined.
<b>Gov. department</b>	<a href="#">The Ministry of Finance and Budget</a> Laity René Pierre Ndiaye	Signs all bilateral and multilateral financing agreements granted to Senegal in all areas, including climate change. It supports fiscal decentralization efforts, both by law, and also through local funding via rural tax collection and other revenue generation efforts.		Funding to Agency.
<b>Gov. entity/ Research</b>	<a href="#">Centre de Suivi Ecologique (CSE)</a> Cheik Mbow	The CSE provides information for decision-making, particularly in the management of natural disasters, and has developed expertise in as coastal management, monitoring of rangelands, bushfires and agricultural production, vulnerability and adaptation studies to climate change, carbon sequestration, long-term monitoring of ecosystems, economic valuation of ecosystem services, environment-health issues, etc. It has been accredited as a National Implementing Entity (NIE) by the Adaptation Fund since 2010 and by the Green Climate Fund (GCF) in 2015.	Inclusion in the GGW Alliance.	Many areas of synergies possible setting up a Climate Reference Bureau that aims at building the capacities of territorial authorities (communes and departments) to integrate climate change in their local development plans and support the elaboration of Local climate adaptation plans (PLAC).  Relevant research partner.

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Gov. entity</b>	<p>Institut Sénégalais de Recherches Agricoles (ISRA) Diaminatou Sanogo</p> <p>ISRA Divisions include:</p> <ul style="list-style-type: none"> <li>• The National Forestry Research Center (CNRF), which is involved in GGW related research.</li> <li>• Tamsir MBAYE (Director)</li> <li>• The Bureau of Macroeconomic Analysis, Social Engineering, is also involved in GGW-related research</li> <li>• National Laboratory of Research on Crop Production</li> <li>• National Research Laboratory on Animal Production</li> <li>• National research laboratory on fisheries production</li> </ul>	<p>ISRA conducts basic and applied research. Its strategic scientific axes are:</p> <ol style="list-style-type: none"> <li>1. Promotion of efficient, resilient, competitive and sustainable production systems.</li> <li>2. Transformation of agriculture and sustainable support to family farms and agro-industries.</li> <li>3. Watch, prospective and valorization.</li> <li>4. Capacity building and partnership consolidation.</li> </ol>	Inclusion in the GGW Alliance.	ISRA has been involved in research essentially through the Pôle Pastoralisme et Zones Sèches" (PPZS) research partnership (see below).
<b>Gov. entity / research</b>	<p><a href="#">Soil Science Institute (INP)</a> (within the Ministry of Agriculture) Samba Sow</p>	The INP is in charge of identifying the degraded soils, of proceeding to their diagnosis and finally, of providing remedies in the form of amendment or promotion of best practices for SLM. It is equipped with a central laboratory and routine laboratories in charge of conducting analyses (soil, water, fertilizers) to meet the needs of producers for all crops.	Uptake of research on soil degradation by partners, alignment of initiatives.	The INP is involved in research on soil salinity and will be developing a database of all forms of soil degradation. This focus on soil degradation is relevant to the GGW.
<b>Gov. entity (local gov.)</b>	<p><a href="#">National Agricultural and Rural Advisory Agency (ANCAR)</a></p>	Its mission is to manage agricultural and rural advisory services throughout Senegal. It develops a decentralized agricultural advisory system, working for the POs through a participatory approach based on partnership and based on the demand of the producers. ANCAR was established through a World Bank project. It has set up the Agricultural Services and Digital Inclusion in Africa (Saida) platform.	Not known	Can assist through experience working with POs through a participatory approach.
<b>Gov. entity (local gov.)</b>	<p><a href="#">Agency for National Statistics &amp; Demographics (ANSD)</a></p>	Centralizes and disseminates summaries of statistical data produced by the entire national statistical system. The Agency is also responsible for monitoring international technical cooperation in statistics. In this capacity, it represents Senegal in subregional, regional and international meetings relating to matters within its competence and monitors the activities of international organisations in the field of statistics.	Not known	<p>Contribute to data as part of the M&amp;E system for the GGW through decentralised structures.</p> <p>May undertake, at the request of the government and public and private administrations, studies and research on statistical, economic and social issues.</p>

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Gov. entity</b>	National Food Security Council (CNSA)	Gives orientations in order to inform all decisions in the field of food security and resilience, to facilitate the monitoring and evaluation of the implementation of food security and resilience policies and programmes, to participate in the mobilization of financial resources for the national food security and resilience system; to facilitate consultation and complementarity.	To be involved in GGW to foster synergy and ensure complementarity between actors involved in the implementation of food security and resilience projects and programmes.	Identify synergy and ensure complementarity in the fields of food security and resilience, access to funding opportunities.
<b>Gov. entity (local gov.)</b>	The Association of Mayors of Senegal (AMS)	Plays a role in training municipal councils on knowing policy frameworks (especially around decentralisation functions. Land tenure) and on knowing their rights as local representatives and the means by which they can defend, exercise and develop these rights.	Not known.	The management of natural resources is the responsibility of the mayors; municipal councilors through the various commissions, including the State Commission.
<b>Gov. entity (local gov.)</b>	Local authorities  Partnership agreement to support implementation were signed with cities (such as: Diokoul Diawrigne (Louga Region), Tivaouane (Thiès Region), Ziguinchor (Casamance), Golmy (Tambacounda Region))	Local authorities are the custodians of local land management and access to resources (tenure, land use, etc.).  Institutionalizing rural participation in national policy commitments; helps form federations of elected local authorities and enable public forums to debate national policies that affect rural populations. Plays a role in developing models of natural resource development and management that can sustain investment in the sector.	Being involved in co-design.	As they are responsible for local development planning, they equipped with legal tools adapted to this responsibility. Their involvement is critical for the elaboration of local development plans. Can play a role in training rural populations on their rights and the roles and powers of their elected representatives.
<b>Programme</b>	<a href="#">Programmeme for the Inclusive and Sustainable Development of Agriculture in Senegal (PDIDAS)</a>	Partner of the ANGMV for the realization of land restoration activities (nurseries, tree planting, Capacity building of actors).	Resources to pursue restoration activities.	On site implementation of restoration.
<b>Local organisation</b>	ONCAV (Organisme National de Coordination des Activités de Vacances) which counts more than 7600 Sports and Cultural Associations in Senegal	Partner of the ANGMV for the realization of land restoration activities.	Resources to pursue restoration activities.	On site implementation of restoration.
<b>NGO</b>	Fabrimétal	Partner of the ANGMV for the realization of land restoration activities and developed a tree nursery.	Resources to pursue nursery/tree planting activities.	On site implementation of restoration.
<b>Local association</b>	Sukyo Mahikari	Has been working alongside the forestry service on a voluntary basis on large-scale actions.	Resources to pursue restoration activities.	Participation in the building of the GGW programme.

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
NGO	National Union of Forest Users (UNCEFS)	Has been active in the field assisting the GGW.	Resources to pursue restoration activities.	Participation in the building of the GGW programme.
NGO	<a href="#">Agrécolle Afrique</a> Assane Gueye	Promotes the adoption of agroecology.		On site implementation of restoration based on agroecology, organisation of communities.
NGO	<a href="#">ENDA Pronat</a>	Member of the international network Enda Tiers Monde, of the Senegalese National Federation for Organic Agriculture (FENAB) and leads the Avaclim research in Senegal sits on the (Land tenure thinking and action tank in Senegal (CRAFS), on the multi-actors Task force for the promotion of agroecology in Senegal secretary of the Dynamique National pour la Transition Agroécologique au Sénégal (DyTAES), focal point of the Coalition for the Protection of African Genetic Heritage (COPAGEN).	Agroecology integration in GGW practices.	NGO with significant local and international clout – can leverage off existing projects to amplify work of GGW.
NGO	National partnership for Senegal's water association	Working in the field of integrated water resource management.	Not known.	On site implementation of restoration incorporating integrated water resource management. <i>(Potential for involvement in GGW unknown).</i>
Private	<a href="#">Total Energies Foundation</a>	Partnered with the Tésékéré International Human and Environment Observatory .	Not known.	Funding.
Private	<a href="#">The Jokalante platform</a>	Specialises in data collection tools. Through local community radios, a dynamic web platform and dedicated agents, creates linkages with the rural populations.	Business opportunities.	Outreach to rural populations, dissemination of good practice, dissemination of research findings
Private	MLouma range of tools that address the real problems of producers based on specifications developed by international organisations with an inclusive approach.	A company specialized in the digitalization of agriculture.	Business opportunities.	Can assist with range of tools that address the real problems of producers based on specifications by GGW.
INGO	Elevage Sans Frontières	Has supported several livestock projects in Senegal.	Resources to pursue livestock management activities.	On site implementation of restoration.

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>INGO</b>	Promotion of Agroforestry and Forestry (APAF)	A peasant organisation recognized by the State of Senegal promoting agroforestry techniques.	Resources to pursue restoration activities.	On site diffusion of agroforestry techniques.
<b>INGO</b>	Reforest'Action	Plants trees in agroforestry initiatives.	Resources to pursue restoration activities.	On site diffusion of agroforestry techniques.
<b>INGO</b>	WeForest	Partners with the PPSZ in researching social dynamics and setting up local governance frameworks in the GGW project areas.	To be part of the Alliance.	On site diffusion of agro-forestry techniques.
<b>INGO</b>	CorpsAfrica	Partner of the ANGMV for the realization of land restoration activities - has placed 20 volunteers in 10 regions for Tolou Keur and with Fabrimétal in Dakar.	Not known.	Availing volunteers to project sites.
<b>Network</b>	National consultation and cooperation framework with the rural people	<p>This network brings together different associations of farmers, fishermen, foresters, breeders, women's organisations, the youth college, 32 national peasant federations in all.</p> <p>In each federation there are hundreds of organisations; some are structured by region or by association (there are 38 associations that cover specific localities).</p> <p>It launched the National family farming Observatory and in 2015 it drove the launch of the National Observatory for land tenure.</p>	Inclusion in GGW Alliance.	<p>Works in projects that seek to promote a community-based natural resource management approach to GGW projects.</p> <p>Best placed organisation to make linkages with farmer sat ground level and ensure participatory approach to GGW activities.</p>
<b>Network</b>	Professional agricultural organisations	<p>These include cooperatives, associations, unions, federations, confederations, foundations and foundations and unions.</p> <p>The CNOP and its member organisations, FENAFER, FENAJER, AOPP (at the national and regional levels) feature among the key professional agricultural organisations.</p>	Being included in co-design, to have farmers benefit GGW, knowledge shared.	Enhanced, participatory, sustained implementation of GGW and lasting legacy. The success of the GWI essentially rests on producers as the contributors to restoration and the gate keepers of restored areas.
<b>Working group</b>	Multidisciplinary working groups (GTP)	The GTPs set up by ANACIM at the department level gather all relevant sectors concerned by the preparedness and monitoring of the winter cropping season to guide farmers with their decision-making.	Expansion and use of the network to benefit farmers on the ground.	The activities of the GTPs are being expanded and they are not in all regions of the country – a good entry point to engage with farmers.

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Climate change Platform</b>	National Committee on Climate Change (COMNACC)	National platform set up by Presidential decree and in charge of the coordination, consultation, training, awareness-raising, management and monitoring body for the various activities identified in the framework of the implementation of the United Nations Framework Convention on Climate Change and its additional legal instruments. It ensures the coherence of programmes and projects with the national objectives related to climate change, at the level of mitigation.	Cohesion/alignment of initiatives related to climate change mitigation/adaptation. Integration of CC project into M&E system .	The Regional Climate Change Committees (COMRECC) are created to be the relays of the COMNACC in the regions.
<b>Land governance platform</b>	<a href="#">National Platform on DV and Land Governance (COFIL DV/GF)</a>	Ensures dialogue on land governance, the development of national consensus, the preparation of action plans for the implementation of the Voluntary Guidelines, and the monitoring and evaluation of land governance in Senegal.	Application of provisions in decentralisation law.	Platform aimed at addressing land tenure issues can be leveraged by GGW to address localised land tenure in the context of projects being implemented.
<b>Think tank</b>	Land tenure thinking and action tank in Senegal (CRAFS)	CRAFS in 2017 called onto the President to finalise the land reform process.	Application of provisions in decentralisation law.	As above
<b>Task force</b>	Multi-actors Task force for the promotion of agroecology in Senegal) (TaFAé)	A group of actors, born from a desire to think and act together between farmers' organisations, researchers, NGOs, institutions in order to promote agroecology in Senegal.	Greater uptake of agroecology.	Platform can be used to engage actors to promote/ learn about agroecology fr GGW projects.
<b>Network</b>	Dynamique Nationale pour la Transition Agroécologique au Sénégal (DyTAES)	Network that brings together umbrella organisations of producers, consumers, NGOs and Senegalese and international research institutions, networks of Senegalese and West African civil society organisations, a network of local elected officials.	Greater uptake of agroecology.	It plays a key role in fostering a transition towards agroecology. A good platform to engage on how to deepen agroecology uptake in context of GGW.
<b>Regional network</b>	<a href="#">National framework of the Alliance for Agroecology in West Africa (3AO)</a>	Coordination and information platform composed of farmers' organisations, research institutes/universities, international NGOs and social movements. It aims to promote and support an agroecological transition in West Africa.	Greater uptake of agroecology.	It seeks to facilitate inter-sectoral cooperation through a series of concrete and concerted actions in favour of agroecology, while providing greater visibility to the agroecological movement in West Africa.
<b>Financial &amp; strategic partner</b>	Green Climate Fund (GCF)	Funds a number of regional projects of which Senegal is part, such as the <a href="#">Africa Integrated Climate Risk Management Programme</a> , <a href="#">Inclusive Green Financing Initiative (IGREENFIN I)</a> , both projects focusing on the GGW.	Direct support to GGW projects.	Funding.



Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Financial partner</b>	Global Environment Fund (GEF)	GEF funds multiple SLM and climate resilience projects including.	Direct support to GGW projects.	Funding.
<b>Financial institution</b>	<a href="#">European Investment bank</a>	Funds several environmental projects in Senegal.	Status of support/ interest in GGW unknown.	Has been earmarked to fund projects for the GGW .
<b>Financial partner</b>	African Development Bank (ADB)	In <a href="#">2021 pledged US\$6.5 billion</a> in sup-port of the GGW.	Direct support to the GGW.	Consultations were held within the framework of the support project for the implementation of the GGW on the initiative of the ADB (pillar III of the transition support facility).
<b>Financial &amp; strategic partner</b>	World Bank	World Bank's IDA is the main funder of the livestock climate finance in Senegal. It finances activities of the Regional Support Project for Pastoralism in the Sahel to mitigate and adapt to climate change through sustainable landscape management, improved animal health and veterinary drug control, improved livestock value chains.	Vision for the Sahel: mobilize financial resources to protect a fragile environment, and help the countries restore the living conditions of populations, particularly live-stock herders.	Funding – In 2021 the World Bank announced it would <a href="#">invest US\$5 billion</a> to help restore African dry-lands.
<b>Financial partner</b>	West African Development Bank (BOAD)	Was earmarked to fund projects for the GGW (discussion held in 2022). Will fund the " <a href="#">100 million trees" project</a> 2024 and 2034 (cover the GGW area).	Direct investment in GGW.	Funding.
<b>Financial &amp; strategic partner</b>	European Union	Supports several land restoration, agro-ecologically focused projects.	Fostering an agro-ecological transition in the Sahel.	Funding.
<b>Financial &amp; strategic partner</b>	Canadian (Quebec) <a href="#">Union des producteurs agricoles du Québec (UPADI)</a>	Has been working with the CNCR on SLM projects country wide.	SLM	Funding & technical supports involved with on some SLM project in GGW.
<b>Financial &amp; strategic partner</b>	French Development Agency (AFD) Hélène Julien	Supporting regional projects focused on the agroecological transition, resolving transboundary issues in the context of the GGW. + funds "Programmeme d'Appui à la Transition Agroécologique" (PATAE). The French Development Agency puts itself forward as a key strategic partner of the GGW Accelerator.	Agroecological transition.	Funding – enhancing AE dimension of projects.
<b>Financial &amp; strategic partner</b>	USAID	Funds the Feed the Future Senegal Agricultural Policy and Reform Support Project (PSS).	Not known.	Not known.

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Financial &amp; strategic partner</b>	GIZ – (funding from German Federal Ministry for Economic Cooperation and Development (BMZ).	Supports land tenure security among the rural population and is very involved with developing a sustainable electricity supply, through the deployment of renewable energy and the promotion of energy efficiency measures to reach progressive decarbonisation involved in Regreening Africa.	Not known.	Not known.
<b>INGO</b>	IUCN	Undertook a biodiversity status of the GGW " <a href="#">Biodiversity and the GGW: managing nature for sustainable development in the Sahel</a> " (2017).	Involvement in GGW Alliance. Focus on biodiversity.	Ongoing monitoring of and update of biodiversity status of GGW.
<b>Multilateral partner CGIAR</b>	CIFOR-ICRAF Catherine Dembele	Data Science and Applied Learning Lab at World Agroforestry unit has spearheaded the development of the Regreening App.	Involvement in GGW Alliance, inclusion of Regreening Africa activities as part of the GGW achievements.	CIFOR-ICRAF can play a further role in reinforcing investments in the practice of ANR (NGOs, projects), of the parcels set aside and of the land under local conventions and promoting POAs.
<b>Multilateral partner CGIAR</b>	Alliance for Bioersity M. Issa Ouedraogo	Focal point for ClimBer in Senegal: 1. Risk management in agriculture and development of digital agri-advisories 2. Climate security 3. Policy 4. Multi-scale Governance.	Involvement in GGW Alliance, potential inclusion of GGW in next ClimBer cycle.	The Governance 4 Resilience, (G4R) project focus on climate resilience offers possible strong co-benefits to the GGW and in discussing with Mr Ouedraogo, possible linkages between ClimBer and the GGW were explored.
<b>Multilateral partner CGIAR</b>	International Livestock research Institute (ILRI)	Drives <a href="#">CGIAR Initiative on Livestock and Climate (LAC)</a> – working with public and private actors to identify existing solutions and to co-create and deliver innovations that help producers, businesses and governments adapt livestock agri-food systems to climate change and reduce GHG.  Also leader of <a href="#">AICCRA-Senegal</a> , which builds on existing scientific and educational networks in Senegal and across West Africa to enhance the capacity of public institutions and private enterprise to deliver climate information services and climate-smart agriculture along value chains vital to the Senegalese economy.	Involvement in GGW Alliance, potential inclusion of GGW in project activities.	Focus of LAC is relevant to GGW (Improving local capacities, developing digital services Improving the enabling policy environment).

Stakeholder Category	Stakeholder & Contact Person <i>Phone, Email, Website, Address</i>	Role	Specific role of the stakeholder related to GGW	Role of stakeholder linked to GGW
<b>Multilateral partner</b>	UNDP	Supports the Government with mainstreaming Climate change into local planning of local municipalities. UNDP has reportedly played a part in reshaping Senegal's approach to the GGW with an « integrated approach.	Direct support to GGW, technical support.	GGW project funding – technical assistance with developing plans that facilitate the strengthening of their governance for participatory management of the environment.
<b>Multilateral partner</b>	UNEP	The GEF, through UNEP, has committed to supporting the APMV Member States in establishing their baseline situation.	Being part of GGW Alliance. Direct support to GGW, technical support.	GGW project funding.
<b>Multilateral partner</b>	IFAD Liza Leclerc	Involved in several programmes related to climate change resilience and agricultural development.	Being part of GGW Alliance.	GGW project funding.
<b>Multilateral partner</b>	FAO Patrice Savadogo	Provides technical support to the Agency and offered training on accessing funds from the GGF	Being part of GGW Alliance. Direct support to GGW, technical support.	Funding has been solicited to fund a resilience focus project in the GGW perimeter (status unknown).
<b>Multilateral partner</b>	WFP	Implementing agency of the <a href="#">Building the climate resilience of food insecure smallholder farmers through integrated management of climate risk (R4)</a> .	Being part of GGW Alliance. Food security focus.	Not known.
<b>INGOs</b>	<a href="#">World Vision</a> Oxfam CARE Catholic Relief Services	All organisations are involved in the Regreening Africa project. World Vision has committed with ministries and national networks to institutionalise ANR and other sustainable land use practices.	Inclusion in GGW platform, recognitions of its projects as being part of the GGW.	Implementation support. Enhanced surface area under SLM for the GGW. Support with institutionalising ANR.
<b>INGO</b>	SOS Sahel Jean-Marc Garreau	The NGO has been actively involved in the GGW, having taken part in identifying GGW champions and has together with the 1t.org platform. SOS Sahel has also signed a partnership agreement with the Pan-African Agency for Food Security to strengthen collaboration between governments & CSOs. It also runs the GGW partners' platform.	Inclusion in GGW platform, recognitions of its projects as being part of the GGW.	Implementation support. Enhanced surface area under SLM for the GGW.
<b>Private sector</b>	Moroccan <a href="#">Office Cherifien des Phosphates (OCO)</a>	Features among key partners to the agency – modern equipment to improve planting was sourced from the OCP (cross check with agency) maybe with support from the Mohammed VI Foundation accompanies the agency. Through this partnership, they have acquired new technologies such a solar powered shovel tractor to plant trees.	Business opportunities and philanthropic interventions.	Not known.

# 4 Land restoration and climate change initiatives

## 4.1 Land degradation, land neutrality and land restoration

Although not always strictly located within the GGW intervention zones, a number of transboundary programmes and projects exist to support the implementation of the GGW initiative at the regional level. The GGW in Senegal overlaps with a number of these global and regional restoration initiatives. In as much as an attempt was made here to classify projects according to a main theme, the reality is that many projects linked to the GGW have a multi-sectoral focus.

### Projects explicitly linked to the GGW (completed):

The TerrAfrica Partnership is a coalition-based partnership created in 2005 by the World Bank. TerrAfrica was established to combat land degradation by increasing the scale, efficiency, and effectiveness of investments in SLM. The programme has provided US\$1 billion in development funding – including US\$150 million from GEF and US\$580 million from the International Development Association. NEPAD-AUDA is the Secretary to this partnership.

The Action Against Desertification Programme (2014 – 2019), funded by the EU and FAO, targets the GGW intervention area and focuses on the creation of reforestation plots, the restoration of land using anti-erosion techniques and the development of market gardening plots through to the creation of small hydraulic installations.

The Local Environmental Coalition for a Green Union Front (FLEUVE) (2014–2018) was implemented by UNCCD and financed by the European Commission. FLEUVE targeted the GGW intervention area in Senegal and four other GGW countries and aimed to strengthen the capacities of local communities to help boost investments in land restoration and create employment opportunities through green jobs. It was co-implemented by CARI and members of ReSaD, RADD0 and Drynet.

The Emergency Community Development Programme (PUDC) (2015–2018) was a UNDP-implemented national programme, focusing especially on the Ferlo area of the GGW, which entailed the construction of tracks and support for agricultural development, including the diversification of activity systems.

The Combating Desertification by Supporting Pastoralism in the Ferlo project (2016–2020) was funded and implemented by the French Fund for the Global Environment and French Development Agency. This project aimed to improve the management of pastoral resources in the Ferlo region and in the Senegal River Valley, and to fight against desertification through the provision of services (animal health, environmental information), the creation of infrastructure, and support for pastoralists.

The Inclusive and Sustainable Development Project for Agribusiness in Senegal (PDIDAS) (2014–2021) was implemented by the Ministry of Agriculture. Through this project equipment was funded with a loan from the World Bank to the tune of US\$80 million. This financing targeted medium and small producers, salaried workers and small independent farmers in the GGW zone with the aim of improving the uptake of agricultural technologies, secure land tenure rights, and to restore forests.

The Sahel and West Africa Programme in the Support of the GGW Initiative (SAWAP) (2012–2019) was a programmatic approach developed by the World Bank using US\$100 million of GEF resources on the top of US\$1.2 billion IDA resources for 12 Sahelian countries, including Senegal and Mali. A review of the project concluded that they have surpassed their initial cumulative targets establishing 1.6 million ha of sustainable land and water management practices across the 12 countries, with success stories particularly in Ethiopia, Niger, Nigeria, and Sudan. The positive effect of the SAWAP was demonstrated for rangelands in Senegal (where the programme focused on the development of inclusive commercial agriculture and SLM practices in project areas).

## Current projects which are explicitly linked to the GGW:

Scaling-Up Resilience in Africa's GGW (SURAGGWA) (2021- 2030): implemented by a regional coordinating body (FAO with the Pan-African Agency of the GGW) and specialised regional and national agencies and NGOs. Working in Burkina Faso, Chad, Djibouti, Mali, Mauritania, Niger, Nigeria, Senegal, SURRAGWA aims to remove barriers to heightened resilience and greater mitigation in these countries through:

1. scaling-up of successful restoration practices with native species;
2. supporting the development of climate-resilient, low-emission value chains of non-timber forest products in support of vulnerable communities' livelihoods, and
3. strengthening the GGW's regional and national institutions. The proposed project aims to restore 2 million ha of degraded drylands by 2030.

The Building Resilience through Innovation Communication and Knowledge Services (BRICKS) project: This is a six-year regional knowledge and monitoring hub. This US\$4.6 million project supported the SAWAP, as well as financing country operations and related partner-supported activities that together contribute to the regions and clients' GGW priorities. The project aimed at improving accessibility of best practices and monitoring information within the SAWAP portfolio on SLM. The project contributed to improved ecosystem and people's resilience and the countries' efforts towards poverty reduction, food security and SLM. It established an M&E system for the SAWAP programme, which include indicators such as change in vegetation cover, change in carbon accumulation rates in biomass and soils, additional land brought under SLM, institutions with increased adaptive capacities to reduce risks and address climate change.

Boosting Restoration, Income, Development, Generating Ecosystem Services (BRIDGES), a project that contributes to the GGW and will work in synergy with the Action Against Desertification project. In Senegal the FAO is supporting the consolidation of projects legacy of the AAD through this BRIDGES project.

The GGW initiative Ten-Year Priority Investment Plan (2020 –2030) being rolled out in the GGW intervention area in Senegal and other GGW countries. The plan is 20% funded and implemented by states, local authorities and national private sector, with 80% accounted for by foreign direct investments and financing. The main expected



results and impacts include land restoration and development; biodiversity conservation; integrated management of water resources; management of climate and ecological impacts and risks; capacity building; resilient economic development and security.

Harnessing the GGW for a Sustainable and Resilient Sahel (implementation start in 2020), implemented by UNEP Terrestrial Ecosystems Unit in collaboration with National Great Green Wall Agencies, Pan-African Agency of GGW, the UNCCD Global Mechanism, and the UNEP Africa Office. This project is funded by GEF.

The Africa Integrated Climate Risk Management Programme was announced in late 2021 as a US\$143 million investment programme aimed at supporting vulnerable Sahelian populations adapt to climate change, with a wide-reaching plan to restore degraded land and provide CIS and agricultural insurance. The programme is funded by the GCF. It will operate in seven countries: Burkina Faso, Chad, The Gambia, Mali, Mauritania, Niger and Senegal (where it is implemented by the MEDD). Through this programme, IFAD will work with the African Development Bank, the World Food Programme and the African Risk Capacity Group to address climate-related agriculture risks.

"Closing the gaps in the GGW," a programme implemented by IUCN and UNEP, and funded by GEF in GGW 11 countries. One of the global objectives is to review and analyse the existing set of SLM indicators to improve policies and practices of SLM.

Large-Scale Assessment of Land Degradation to Guide Future Investments in SLM in the GGW countries (2019 to 2024) funded by the GEF Trust Fund to the tune of US\$5.6 million, and executed by CILSS / AGRHYMET through SERVIR West Africa Programme, with the goal of improving scientific evidence supporting SLM in the GGW region. Intervening primarily in Burkina Faso, Ethiopia, Niger and Senegal, the project aims to assess tools and methodologies available to conduct scientific assessment of the ecological impacts of land degradation and SLM practices, as well as monitoring and knowledge management. The focus is on aiding the countries to use existing platforms and establish the coordinating mechanisms, build technical capacities, and information dissemination strategies. Partners involved include the European Space Agency (making available the EO4SD Climate platform), the Sahara and Sahel Observatory (OSS), Lund University Centre for Sustainability Studies, National Aeronautics and Space Administration, the Institut de Recherche pour le Développement and the European Space Agency (DHI/GRAS and SISTEMA).

The Communities Regreen the Sahel (2018-2027) project, implemented in Burkina Faso, Niger and Senegal, focuses on supporting agricultural and fodder production through the introduction of trees in livestock breeding and farming areas through ANR. The expected results are the restoration of 200 000 ha and an increase in agricultural production, food security, biodiversity preservation and the incomes of households involved in the greening process. The project is implemented by Enda Energy, in partnership with IED Afrique and DOB Ecology.

Inclusive Green Financing Initiative (IGREENFIN I): Greening Agricultural Banks and the Financial Sector to Foster Climate Resilient, Low Emission Smallholder Agriculture in the GGW Countries (Phase I). This cross-cutting programme, funded by the GCF, with a US\$100 million investment, focuses on enhancing access to credit and technical assistance for local farmers, farmers' organisations, cooperatives and micro- and small-scale enterprises. This will help them implement climate-resilient and low-emission agriculture and agroforestry. This programme covers 11 countries in the GGW, in addition to Côte d'Ivoire and Ghana.

The Prevention of Conflict and Resilience of Cross-border Food Systems in Africa (PCR-SAT) is a €3 million project funded by the Minka Peace and Resilience Fund, launched in 2022. The project aims to sustainably strengthen the resilience of food systems in communities in two cross-border areas through collaborative management of the plant protein potential of agro-silvo-pastoral resources and economic development initiatives. The aim is to prevent and mitigate conflicts linked to the anthropogenic and/or climatic impact on natural resources by strengthening the resilience of food systems through support for the plant protein sector, thus also contributing to the implementation of the Plant Protein Development Initiative launched at the 6th EU-AU Summit. The project will operate in the Mauritania-Senegal cross-border area, as well as the Mali-Senegal cross-border area.

Resilience and Intensive Reforestation Project for the Safeguarding of Territories and Ecosystems in Senegal (RIPOSTES) (2021-2025), funded by the GEF and EU, with €6 million, is being implemented by FAO, and is framed as the continuity of the Action Against Desertification (AAD) programme. The project aims to reduce soil erosion in Senegal by 34-30% and to improve forest cover. The project will cover the eco-geographic zones of the groundnut basin (Fatick and Kaffrine regions) and silvo-pastoral regions (Louga and Matam). The project aims to strengthen the adaptive capacities of communities in the face of climate change and mitigate its effects on land and ecosystems. ASERGMV is responsible for the project, which will create eco-villages and green cities. RIPOSTES seeks to capitalise on the

knowledge acquired thus far with regards to the implementation of the GGW.

A project being carried out by the [Observatoire Homme-Milieux de Tessékéré](#) focuses on the Ferlo populations in the GGW intervention area. The funding of the foundation stems from the Klorane Foundation, University Cheikh Anta Diop and the French Centre Nationale de la Recherche Scientifique (CNRS) and the Total Foundation. The OHMT has been studying complexity of Sahel ecosystems. It has been working on the production and centralisation of data, carrying out individual or collective research projects (funding of theses, hosting of students, scientific publications); and supported the organisation of an annual reforestation camp.

The ASERGMV entered into a partnership with the [Programme for the Inclusive and Sustainable Development of Agriculture in Senegal \(PDIDAS\)](#), a project that intervenes in nine communes in the regions of Saint Louis and Louga and in 41 villages. A framework agreement was signed with PDIDAS for the following activities:

- The demarcation and signposting of eight classified forests in the region of Saint-Louis in order to avoid any encroachment by the populations and the agro-industrialists installed in the zone;
- The construction of three nurseries, two in the Saint-Louis region and one in the Louga region;
- The production of 800 000 seedlings of about 10 species;
- Capacity building of actors grouped in the Intervillages Association;
- The establishment of 40 000 ha of land degradation defences; and
- The development of nine development and management plans.

[Ecosystem-based adaptation for resilient natural resources and agro-pastoral communities in the Ferlo Biosphere Reserve and Plateau of Thies](#) (2021–2026), is funded by GEF and implemented by UNDP. The project aims to reach a total of 310 000 direct beneficiaries and support the direct restoration of forest and rangelands over 5 000 ha. The project aims to ensure that 245 000 ha of land in the Wildlife Reserve of Ferlo Nord and the Wildlife Reserve of Ferlo Sud, and the protected Forest of Thies will be put under improved sustainable management to maintain adaptive ecosystem services in the context of climate change. The programme will also include a climate-resilient green infrastructure component (i.e., well-managed forests, natural earth berms, weirs, basins).

[Restoration and Monitoring of Degraded Land in the Groundnut Basin of the Saloum Delta](#), is a \$US970,000 project (2022–2024) funded by the India, Brazil and South Africa Facility for Poverty and Hunger Alleviation (IBSA Fund), with the implementation support of UNESCO. The project's main objective is to restore degraded lands in the important World Heritage Site and Biosphere Reserve of Delta Saloum.

[Land Degradation Neutrality for Biodiversity Conservation, Food Security and Resilient Livelihoods in the Peanut Basin and Eastern Senegal](#), (2021–2026), is a GEF-funded project (US\$5 million) that will be executed by the Ministry of Agriculture and Rural Economy's National Institute of Pedology (INP). The project will demonstrate the LDN approach in the Peanut Basin and Eastern Senegal for biodiversity conservation and delivery of ecosystem services to achieving food security and livelihood resilience. The project will seek to create an enabling environment for large-scale SLM dissemination and targets 12 000 ha under reduced or reversed degradation.

[Increasing the Resilience of Ecosystems and Communities through the Restoration of the Productive Basis of Salinized Lands](#). This US\$8 million project (2020–2024), funded by the GCF, focuses on strengthening the capacity to develop desalination and land management plans, raise awareness of the threat of salinisation, and improve knowledge by creating maps and a real-time database of salinized land. It includes activities to reduce the impacts of salinisation, including the construction of small dams and artificial basins, large ponds, anti-salt works, and the use of drip irrigation. Biological measures will include reforestation, protection of soils against erosion, mangrove restoration, promotion of bio-saline agriculture, and the use of natural phosphate, manures, and composts to improve soil fertility.

[Regreening Africa](#) (2017–2022) is a partnership between CARE International, Secours Catholique, GIZ, ICRAF, Oxfam, Sahel Eco and World Vision. The majority of funding comes from the EU, which accounts US\$21 million of a total US\$24.7 million. The main objective is to improve livelihoods and food security and strengthen resilience of smallholder farmers to climate change by restoring ecosystem services, including through agroforestry. It aims to reverse land degradation on 1 million ha in eight countries Africa. In Senegal, the project is implemented by World Vision and ICRAF, where it targets the adoption of regreening practices by at least 50 000 households on at least 100 000 ha of land.

[Initiative to Combat Desertification to Build Resilience to Climate Change in the Sahel and Horn of Africa \(IACD\)](#) (2016–2022). Supported by the UNCCD and the Japanese International



Photo: ©Kelvin Trautman | Regreening Africa

Cooperation Agency, IACD aims to make countries and communities resilient to climate change by promoting measures to combat desertification and to draw international attention to the issue. It covers seven countries in the Sahel (Burkina Faso, Cameroon, Chad, Mali, Mauritania, Niger and Nigeria) and seven countries in the Horn of Africa (Djibouti, Eritrea, Ethiopia, Kenya, Somalia and Sudan). To achieve its ambitions, the IACD plans to establish networks between these countries to share and promote good practices in combating desertification, and to improve access to funding for combating desertification. The GGW-I can capitalise on the lessons learnt from this regional project.

The Food Security Support Project in the Regions of Louga, Matam and Kaffrine (PASA LMK) (2013-2023), a programme implemented and funded by the Global Agriculture and Food Security Programme and the African Development Fund. Supported with a US\$40 million grant and implemented by the Ministry of Planning and Finance, with a focus on the regions of Louga, Matam and Kaffrine, the project involves the following activities:

1. Support for the development of 2 110 ha of land through water control (1 600 ha of lowland, 450 ha of irrigation areas, and 60 ha of gardens);
2. Establishment of 25 pastoral units around eight new and 10 rehabilitated boreholes;
3. Construction of various kinds of buildings (18 farm buildings, 30 inoculation centres, 25 fodder storage sheds, 120 goat/sheep barns, and 60 poultry houses);
4. Construction of 120 km of rural roads; and
5. Training and organisation of more than 30 000 producers.

Scaling up Climate Ambition on Land Use and Agriculture through Nationally Determined Contributions and National Adaptation Plans (SCALA).

Senegal is one of 12 countries where the FAO-supported SCALA project will be implemented, working with the Ministry of Environment and Sustainable Development and the Ministry of Agriculture. It is to be implemented with the technical support of UNDP and the FAO, by drawing on the learning from the programme "Integrating Agriculture into National Adaptations Plans", financed by IKI. The Inception report for the 5-year project was released in May 2022. The programme focuses on fostering stakeholder commitments to build institutional, financial and technical capacities and foster transformation actions such as agroecology, improving crop varieties, agroforestry and the importance of operationalizing the concept of agri-preneurship. It also aims to support the Government of Senegal in accessing sustainable solutions, by considering cross-cutting issues and promoting synergies between ongoing initiatives. The CNCR was involved in the conception of the project.

Regional Pastoralism Support Project (PRAPS)

(Phase II) (2022-2027), funded by the World Bank, with the aim to improve access to essential productive assets, services, and markets for pastoralists and agro-pastoralists in selected transborder areas and along transhumance axes across six Sahel countries. At the regional level, the project is implemented by CILSS, which also ensures overall coordination under the political leadership of ECOWAS and WAEMU. At the national level, it is implemented by the ministries of livestock or rural development in each of the six beneficiary countries. In Senegal, the loan was awarded to the Ministry of Finance and Budget, and the focus is on the regions of Saint Louis region; Matam, Louga, Kaffrine, Tambacounda. It targets pastoralists and agro-pastoralists distributed among 24 400 pastoral households.



The [“Programme d’Appui à la Transition Agroécologique” \(PATAE\)](#), is funded by the French Development Agency to the tune of €8.2 million. It aims to support organisations in the implementation of innovative agro-ecological projects to improve food and nutritional security in West Africa. It further aims to stimulate the development of innovative practices that optimise the mobilisation of ecological processes in the field of agricultural production and food and nutritional security in the ECOWAS zone.

[FAIR Sahel \(2020-2023\)](#), a project coordinated by CIRAD and co-funded to the tune of €9 million by the EU and FDA. It aims to bring together 10 European and West African partners for four years to conduct activities in Burkina Faso, Mali and Senegal to support a transition to agroecology. Activities will be carried out at three levels:

1. The communities, based on the experiences of the producers themselves and the contributions of research and development actors, to define new production methods and techniques;
2. Regional institutions (producers’ federations, local authorities, market and commodity chain companies, local research, training institutes and NGOs), using foresight tools (workshops, role-playing games), all the actors collectively explore the conditions for the emergence of tomorrow’s agroecology: access to commodity chains, access to seeds, mechanisation, specialised technical support, training; and
3. At the national and intra-Saharan levels, advocacy work aims to achieve convergence with other similar initiatives, but above all political support from governments. The aim is to perpetuate and extend the agro-ecological transition of systems.

[The Promoting Innovative Finance and Community Based Adaptation in Communes Surrounding Community Natural Reserves \(Ferlo, NiokoloKoba, Senegal River Bas Delta & Saloum Delta\)](#), Senegal is a US\$5.4 million GEF project that seeks to create financial incentives to cover the incremental costs of climate change adaptation and support capacity building for vulnerable households and community groups to build holistic responses to climate change. The initiative aims to assist Senegal to pursue a transformational pathway towards resilience. In the long term it will empower local institutions to provide adaptation services to vulnerable communities.

[The Agricultural Value Chain Resilience Support project \(PARFA\)](#), (2015-2021) a GEF-6 project, co-financed by IFAD and UNIDO, with a goal to improve the incomes and livelihoods of poor farm families in Senegal’s groundnut basin, and includes actions in livestock value chains (not in the GGW area).

The [Agriculture and Livestock Competitiveness Programme for Results \(Pcae-PforR\)](#) (2021-2025) is a US\$150 million project designed by the World Bank Group, IFAD, and the Government of Senegal to reduce rural poverty and improve people’s food and nutrition security in the poorest regions of Senegal. The programme aims to enhance the productivity and market access of priority commodity value chains and livestock. Stakeholders include smallholders, cooperatives, research and development agencies, traders, processors, and exporters.

[The Rural Youth Agri-primeur Support Project \(Agrijeunes Tekki Ndawñii\)](#) (2019-25) is a US\$83 million project, funded by the AfDB and implemented by IFAD. It aims to create a rural transformation initiative targeting rural youth who have been excluded from the wealth creation process due to a lack of productive and innovative jobs in the agro-silvo-pastoral and fisheries sectors. Its aim is to enable them to become agricultural entrepreneurs. The project seeks to promote the social and occupational inclusion of youth in family farms and profitable ventures that will create income and decent, sustainable jobs in agro-silvo-pastoral and fisheries value chains. The project will benefit 150 000 rural young people. Among this group, 45 000 young people (50% of whom will be female) will be integrated into or receive support to start up a sustainable profitable activity in the agro-silvo-pastoral and fisheries value chains. The project will be implemented across four agroecological zones in Senegal: the Niayes region, the groundnut basin, the silvopastoral zone and lower and middle Casamance (not GGW areas).

[The Projet de Développement de la Productivité et de la Diversification Agricole dans les Zones Arides du Mali \(PDAZAM\)](#) is funded by IDA. It aims to strengthen the resilience of poor and vulnerable households and to enable government institutions to strengthen their capacity in terms of agricultural planning, supporting agricultural sector productivity and household resilience. In November 2022, the World Bank has approved an additional IDA credit of US\$30 million to support this project.

[The Support to Agricultural Development and Rural Entrepreneurship Programme - Phase II](#) (2018-2024) is a US\$75 million project implemented by IFAD, with co-funding from the OPEC Fund for International Development, to contribute to reducing poverty for women, young people and men living in the programme area by integrating them with profitable, diversified value chains that are resilient to climate change. The development objective is to sustainably improve the food security and incomes of smallholder crop and livestock farmers and to create permanent, well-paying jobs for rural people, particularly women and young people.

FERLO-LAIT 2020–2022, implemented by the PPZS research consortium, is the continuity of the EU-funded LeapAgri Africa Milk project, with a territorial approach to the dairy sector around the Ferlo. The main goal is to support the emergence of dairies on the margins of the Ferlo through various projects (PRAPS, ENDA). The aim is to characterise the relationships between these dairies, their suppliers and the silvo-pastoral zone. The Ferlo milk project is also intended to repeat the market access survey of Niassanté farmers and to update the territorial dynamics around boreholes.

SUSTAIN Sahel: Synergistic Use and Protection of Natural Resources for Rural Livelihoods through Systematic Integration of Crops, Shrubs and Livestock in the Sahel - 2020–2024. Funded by the EU, the project aims to strengthen the resilience and intensification potential of smallholder farming systems in the face of climate change, through scalable innovations on the integration of crops, shrubs and livestock. The project partners are both European and African partners in a consortium coordinated by FiBL (Switzerland).

Building the Climate Resilience of Food Insecure Smallholder Farmers through Integrated Management of Climate Risk. This is a US\$ 10 million ISDGCF project (2020– 2024), with a focus on risk-reduction activities such as water and soil conservation measures, increased water availability, livelihood diversification and training on climate-resilient practices, complemented by risk transfer through a weather index insurance programme that will transfer risk to the international market.

The Health & Territories project, signed between CIRAD and AFD, and launched in 2021. It is co-funded by the AFD and the EU's DeSIRA programme, with a budget of €6 million, the project aims to revolutionise integrated approaches to health by linking them to the agro-ecological transition framework. Coordinated by CIRAD, this five-year project will develop its activities in four countries: Senegal, Benin, Laos and Cambodia.

Feed the Future Senegal Agricultural Policy and Reform Support Project (PSS), is a five-year project, with US\$15 million funded by USAID, that aims to improve the business environment for inclusive growth in the agricultural sector. The project aims to strengthen Senegal's agricultural and food policy and reforms.

The project interventions are carried out through two components:

1. Strengthening the existing processes of policy formulation, implementation and evaluation of Senegal;

2. Strengthening the capacity of the private sector and civil society to influence policy formulation, implementation and evaluation. IPAR is a local partner.

#### AT PLANNING STAGE

DUNDI FERLO (2023–2026) is a project funded by WeForest (Belgium NGO) focusing on the development of innovative reforestation options in the GGW area.

## 4.2 Climate Change

Recent research by ILRI found that, of the total amount of climate funding allocated for the livestock in Senegal between 2015 and 2022, only 39% was allocated to the livestock sector as the main target, the remaining of 61% was allocated to the agricultural sector, with a component for the livestock sector (2022b:46). Most of this was World Bank funding (95%) for phases 1 and 2 of the Regional Support Project for Pastoralism in the Sahel, and a small contribution from the French Development Agency (AFD) and the NGO Elevage Sans Frontières.

Strengthening Agricultural Adaptation (SAGA) funded by the Government of Quebec and implemented by FAO and a range of partners on the ground focuses on reinforcing adaptation planning for food security and nutrition in Senegal which has increasingly suffered from climate change impacts. Through training and community-based participatory approaches, the project has reached more than 1300 beneficiaries and is implementing a broad range of initiatives from gender-sensitive Farmer Field Schools, market gardens, agroforestry and rainwater harvesting to beekeeping activities and the production of energy-efficient vegetable charcoal. The programme is proving catalytic in adopting a "new" approach to GGW projects, that are far more community based. The CNCR was recently involved in the conception of the project. They are part of the community-based natural resource management and soil health component of the SAGA project. The intervention is implemented in the Nyaé region and in the central north zone. These projects are thought out by the communities.

Landscapes for our Future: Reforestation and resilience to protect Senegal's territories and ecosystems is a GEF funded project implemented by the ASRGM with technical support from the FAO, municipalities, private sector and non-governmental organisations, aiming to improve the resilience of communities to the impacts of climate change through participatory and sustainable management

of land and ecosystems. The project will be implemented across two eco-geographic zones of Senegal: a silvo-pastoral zone in the north, where the GGW is being built, and a groundnut basin in central and western Senegal.

[Mainstreaming ecosystem-based approaches to climate-resilient rural livelihoods in vulnerable rural areas through the farmer field school methodology](#) (2015-2021), is a GEF funded project, implemented by the MAER, the MAEDD and ANACIM with FAO support. The projects sought to promote

1. The adoption of agroclimatic information, innovations and best practices for climate change adaptation by agro-silvo-pastoral producers,
2. Increasing household incomes, agropastoral productivity APFS have increased due to the implementation of climate adaptation practices and the use of agrometeorological information; and
3. Specific strategies for building climate change resilience are refined and piloted in agropastoral systems and scaled up, including the optimal use of genetic resources as well as dryland farming in the three agroecological zones targeted by the project.

[The project was subject of a Good Practice Brief: Strengthening Climate Resilience through People-centred Approaches](#) which highlights how the resilience of people to climate change was enhanced by the project by building the capacity of communities and women through two innovative, people-centred approaches, namely the Farmer Field Schools and Dimitra Clubs.

[The Down to Earth: Territorial Approach to Climate Change \(TACC\)](#) is part of a partnership between the United Nations and sub-national governments for fostering climate friendly development at the sub-national level. This partnership is a collaborative effort involving UNDP, UNEP and 8 associations of regions.

[CASSECS 2019-2023](#) - The CASSECS project is an ongoing project, funded by the EU, on the impact of livestock on climate change in CILSS countries. The overall objective of the project is to provide the CILSS countries with emission factors and reference data that will enable them to better establish the seasonal and annual carbon balance of agro-silvo-pastoral ecosystems and thus correctly fulfil their commitments in the implementation of the Paris Agreement. Among the project objectives are a focus on training and strengthening the skills of the technical services of the CILSS member states, local and international NGOs and livestock breeders' associations.



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**Promotion of Climate-Smart Agriculture in West Africa** (2020-2023). Senegal is part of this project, initiated by ECOWAS in collaboration with the West African Development Bank (BOAD), to support the implementation of the ECOWAP/SADC AIC Intervention Framework by providing a mechanism for consultation, coordination, convergence and monitoring of the various initiatives.

**R4 Rural Resilience** is a USAID-funded project that has been implemented by WFP since 2011. The second phase is starting now with GCF support. **Building the climate resilience of food insecure smallholder farmers through integrated management of climate risk (R4)** (2016-2024). This project is aimed at increasing the resilience of vulnerable households in Senegal to climate-related risks through better risk management, water and soil conservation. These activities are complemented by risk transfer through a weather index insurance programme that will transfer risk to the international market and provide farmers with compensation in case of climate shocks in 5 regions of Senegal. The CNAAS is involved.

**Promotion of Climate-Friendly Cooking:** Kenya and Senegal (2018-2022): A GEF-funded project that aims to accelerate the growth of ICS markets in Senegal and significantly increase the level and quality of ICS production and sales, particularly in remote rural areas. The intended outcome is to triple annual ICS production and sales by project end and achieve a six-fold increase by 2030, thereby supporting Senegal to reach their NDC targets.

The **AICCRA programme** is scaling CCAFS' CIS and CSA innovations in different African countries including Senegal. ISRA/CERAAS, ANCAR, ANACIM, Jokalante are some of the partners (ClimBer 2022)

#### AT PLANNING STAGE

Fair carbon: a research project still at the final stage of conception, to be funded by the EU and being led by IRD and involving the PPZS, with a possible start in 2023. The project will focus on assessing soil carbon in the GGW area.

### 4.3 Major Environmental Agreements or Commitments

Senegal is signatory to the three Rio Conventions for biological diversity, climate change and the fight against desertification, as well as a number of other agreements and commitments reflected below:

- The Bonn Challenge<sup>5</sup>.
- The New York Declaration on Forests<sup>6</sup>.
- The African Forest Landscape Restoration Initiative (AFR100)<sup>7</sup> launched in 2015.
- The UNCCD Land Degradation Neutrality by 2030.
- The African Resilient Landscapes Initiative<sup>8</sup>.
- The UN Decade on Ecosystem Restoration (2021-2030)<sup>9</sup>.

Senegal has also adhered to international conventions on the elimination of specific ozone depleting substances (for example the Vienna Convention, the Montreal Protocol and the Kigali Amendment) and has set national targets, and instruments to reach the elimination objectives.

5. A global effort to restore 150 Mha of deforested and degraded land by 2020 launched by IUCN and Government of Germany in 2011.

6. Voluntary international declaration to halt global deforestation, endorsed at the UN Climate which during a 2014 Summit extended the Bonn pledge.

7. A regional, country-led land restoration effort in Africa to accelerate progress towards SDGs and the Paris Agreement; 30 African countries, 12 financial partners (including BMZ, WB, WRI, IUCN, FAO, etc.), 28 technical partners.

8. Launched 2015 by NEPAD, WRI and WB, ARLI focuses on integrated landscape management for adaptation & mitigation. It is implemented through the African Landscapes Action Plan

9. GGW is one of the flagships programmes of the UN Decade on Ecosystem Restoration.

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