

Great Green Wall Climate Change Adaptation Regional Support Project

Part I: Project Information

GEF ID

11000

Project Type

FSP

Type of Trust Fund

LDCF

CBIT/NGI

CBIT No

NGI No

Project Title

Great Green Wall Climate Change Adaptation Regional Support Project

Countries

Regional, Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Senegal, Sudan

Agency(ies)

IFAD

Other Executing Partner(s)

IFAD

Executing Partner Type

GEF Agency

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Climate Change, Climate Change Adaptation, Influencing models, Demonstrate innovative approach, Stakeholders, Private Sector, SMEs, Gender Equality, Gender results areas, Knowledge Generation and Exchange, Integrated Programs, Food Security in Sub-Saharan Africa, Resilience to climate and shocks, Capacity, Knowledge and Research, Learning

Sector

AFOLU

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Duration

72 In Months

Agency Fee(\$)

848,580.00

Submission Date

5/11/2022

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCA-1	LDCF	8,932,420.00	29,878,600.00
	Total Project Cost (\$)	8,932,420.00	29,878,600.00

B. Indicative Project description summary

Project Objective

To improve access to best practices, foster innovation and digital transformation and facilitate cross-learning across Great Green Wall countries for enhanced resilience to climate change impacts.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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1. Knowledge management and experience exchange	Technical Assistance	Enhanced knowledge management and experience exchange on climate change adaptation in GGW countries	1.1.1 Climate adaptation knowledge products on lessons learned, good practices and policy recommendations from adaptation projects, e.g. a "GGW State of Adaptation" report published, and other specific knowledge products, such as policy briefs, social media pages, monthly newsletters, internal bulletins and toolkits	LDC F	2,157,067.00	8,052,000.00
		<i>Indicators:</i>				
		11 GGW countries exchange experiences on adaptation practices	1.1.2. Peer-based knowledge exchanges on climate adaptation through communities of practice on e.g. CSA, annual knowledge share fares, etc.			
		1 GGW State of Adaptation Report	1.1.3. Coordination enhanced on NDC/NAP and programming of adaptation actions at country level (for GEF-8 LDCF projects, GCF and other relevant projects)			
		Number of adaptation projects engaged in knowledge exchange 53,000 male and 50,000 female beneficiaries with enhanced capacity to adopt and implement adaptation innovations and resilience measures				
		GEF and GCF projects engaged in knowledge exchange				

2. Identification of innovations and digital transformations	Technical Assistance	Identified climate adaptation innovation and digital transformation technologies in GGW countries	2.1.1 Stock taking of and promotion of adaptation innovations and digital transformation technologies in relevant adaptation projects on e.g. social enterprise innovations, climate technologies, remote sensing, digital finance services, financial innovations, and other innovative adaptation approaches	LDC F	1,350,000.00	830,000.00
		<u>Indicators:</u>				
		Number of innovations and transformation technologies identified	2.1.2 Identify new gender-responsive opportunities for investing in climate adaptation innovations in the GGW			
		Number of new investment opportunities identified				

3. Innovation grants, capacity building and Programm e M&E	Investme nt	Climate adaptation innovations grants and capacity building provided in GGW countries <u>Indicators:</u> 17,000 ha of land with improved climate adaptation and resilience measures 50,000 male and 50,000 female beneficiaries with enhanced capacity to adopt and implement adaptation innovations and resilience measures	3.1.1 Small grants for climate adaptation and resilience measures to e.g. climate smart agriculture 3.1.2 Capacity building provided to groups of farmers, land users, cooperatives, MSMEs and the private sector 3.1.3 Project monitoring and evaluation	LDC F	5,000,000.00	15,000,000.00	
Sub Total (\$)					8,507,067.00	23,882,000.00	
Project Management Cost (PMC)							
					LDCF	425,353.00	5,996,600.00
					Sub Total(\$)	425,353.00	5,996,600.00
					Total Project Cost(\$)	8,932,420.00	29,878,600.00

Please provide justification

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Donor Agency	Green Climate Fund (GCF)	Grant	Investment mobilized	14,878,600.00
GEF Agency	IFAD	Loans	Investment mobilized	15,000,000.00
			Total Project Cost(\$)	29,878,600.00

Describe how any "Investment Mobilized" was identified

Co-financing from the GCF comes from "Inclusive Green Financing Initiative (IGREENFIN I): Greening Agricultural Banks & the Financial Sector to Foster Climate Resilient, Low Emission Smallholder Agriculture in the Green Great Wall (GGW) countries - Phase I" and its Component 3: GGW Regional Support Programme. This component will increase the collective impacts of the individual GCF projects and programmes (including IGREENFIN I and II) through two outputs: i) Output 3.1. Enhanced knowledge management and exchanges to accelerate the uptake of good practices, increase learning and inform policy and investments across GCF and other projects, and ii) Output 3.2. Innovation and digital transformation technologies are mapped and a digital and innovation ecosystem built. Co-financing from IFAD comes from country loans to GGW countries that will be matched with an Innovation grant based on competitive selection, including from IGREENFIN components 1 and 2.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
IFAD	LDCF	Regional	Climate Change	NA	8,932,420	848,580	9,781,000.00
Total GEF Resources(\$)					8,932,420.00	848,580.00	9,781,000.00

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount (\$)

200,000

PPG Agency Fee (\$)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)	
IFAD	LDCF	Regional	Climate Change	NA	200,000	19,000	219,000.00	
					Total Project Costs(\$)	200,000.00	19,000.00	219,000.00

Meta Information - LDCF

LDCF **true**

SCCF-B (Window B) on technology transfer

false

SCCF-A (Window-A) on climate Change adaptation

false

Is this project LDCF SCCF challenge program?

false

This Project involves at least one small island developing State(SIDS).

false

This Project involves at least one fragile and conflict affected state.

true

This Project will provide direct adaptation benefits to the private sector.

true

This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs).

false

This Project has an urban focus.

false

This Project covers the following sector(s)[the total should be 100%]:*

Agriculture	25.00%
Natural resources management	25.00%
Climate information Services	0.00%
Costal zone management	0.00%
Water resources Management	25.00%
Disaster risk Management	0.00%
Other infrastructure	25.00%
Health	0.00%
Other (Please specify:)	0.00%
Total	100%

This Project targets the following Climate change Exacerbated/introduced challenges:*

Sea level rise
false

Change in mean temperature
true

Increased Climatic
Variability

Natural hazards
true

Land degradation	Costal and/or Coral reef degradation	GroundWater quality/quantity
true	false	false

Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	100,000	50,000	50,000	50.00%
CORE INDICATOR 2				
Area of land managed for climate resilience (ha)	17,000.00			
CORE INDICATOR 3				
Total no. of policies/plans that will mainstream climate resilience	11			
CORE INDICATOR 4				
Total number of people trained	3,000	1,500	1,500	50.00%

Part II. Project Justification

1a. Project Description

1) Adaptation problem, root causes and barriers that need to be addressed

1. The GEF LDCF programme supporting the Great Green Wall will be implemented hand in hand with the GCF GGW regional support programme led by IFAD. This will ensure that the GEF network (projects, OFP, experts) are fully involved in the GCF GGW regional support programme, and that the depth of GEF knowledge, lessons learned, best practices and policy recommendations are promoted and used to inform the climate adaptation investments in GGW, including those under GEF-8/LDCF. This complementary GGW programme funded by GEF will be efficient, as it will use the platform, community of practices established and events organized by the GGW GCF regional support programme. Moreover, it will contribute to concrete implement the GEF-GCF long-term vision on complementarity.

2. The eleven countries^[1] of the Great Green Wall (GGW)^[2], Côte d'Ivoire and Ghana^[3] are among the world's poorest and most vulnerable countries to climate change^[4]. They ranked at the bottom of the Human Development Index in 2020^[5] and a large majority of their population lacks access to employment, basic healthcare and education and natural resources, which contributes to food insecurity, youth migration and conflict^[6]. Agriculture, livestock and forestry activities are the foundations of their economies and more than 70 per cent of rural communities depend directly on rainfed agriculture (crops, livestock, fishery and forestry)^[7]. The agricultural sector is extremely vulnerable to climate change and climate variability due to these countries' geographical location and their socioeconomic and technological characteristics. Over recent decades, climate change has increased the frequency, intensity and duration of droughts and floods, temperatures, desertification, water stress and soil erosion, all of which reduce agricultural productivity and food security. Shocks from climate change and adverse weather conditions – resulting in the loss of assets, crops and livestock, disruptions in value chains and soaring food prices – and COVID-19 are pushing millions of smallholder farmers further into poverty.

3. Climate projections indicate that precipitation levels will continue to decrease, while temperatures are expected to increase between 1 and 1.72°C for the 2031-2050 period compared to the 1986-2005 reference period. According to these projections, agricultural production is expected to drop by at least 20 per cent in the region, which will reduce food availability and farmers' incomes and fuel competition over diminishing natural capital, greater instability and migration, especially of rural youth. The climate models produced using the IFAD Climate Adaptation in Rural Development Assessment Tool indicated that the production of the main crops in the targeted countries will be severely affected by future climate change: average millet production is predicted to decrease by 10 percent, groundnut by 11 percent, and rice by 8 percent over the next 20 years. This will have negative impacts on the 50 million people in the region, including smallholders who already experience high levels of food insecurity and poverty. It will also augment these countries' dependence on grain imports, which has been growing over the past three decades, placing a heavy burden on government resources. According to the Ecological Threat Report

2021, climate change also has far-reaching implications for national and regional economic, political and social stability and security in the GGW area, which will increasingly transcend the capacity of each country to manage these issues alone. Hence, the urgent need for a regional approach that integrates and coordinates the efforts of multiple stakeholders, including governments, private investors, public and private banks, insurance companies, project developers, cooperatives, producers' organizations, technical institutions and international and regional organizations.

4. The Sahel stretches from the Atlantic Ocean to the Horn of Africa across all eleven countries of the Great Green Wall and the northern part of coastal countries such as Benin, Côte d'Ivoire, Ghana, Guinea and Togo. One of the largest semi-arid and arid areas in the world, it is wedged between the Sudanian Savannah to the south and the Sahara Desert to the north. It is considered one of the poorest and most environmentally degraded regions in the world and therefore, one of the most vulnerable to climate change, as the increase in temperatures, rainfall variability and the frequency of extreme weather events will only worsen the already harsh living and growing conditions. According to the IPCC 6th Assessment Report, monsoon precipitation is projected to increase over the central Sahel and decrease over the far western Sahel, and the monsoon season is expected to have a delayed onset and retreat. The IPCC also reported an observed increase in river flooding, drying and agricultural and ecological droughts, and projected increases in meteorological droughts at GWL 4° (mostly in seasonal timescales), as well as mean wind speed, heavy precipitation and pluvial flooding.

5. The Sahel is home to over 500 million people and its population is expected to double by 2040. The region harbours a range of ecosystems and agricultural zones, such as savannas and steppes, semi-arid and sub-humid areas, as well as extensive coastal areas. Farmers in the Sahel produce various tradable commodities such as maize, soybean, dairy and livestock across the Guinea Savanna; rice and cassava in humid and sub-humid zones; and tree crops (cocoa, coffee, cashew, mango and oil palm), horticulture and fish in other regions. The region is endowed with great potential for renewable energy sources, primarily solar, which can be used to power the agricultural sector and accelerate its industrialization. It has one of the most diverse cultural bases in the world and a large, vibrant and creative youth population. The countries of the GGW are committed to achieving the goals of the Paris Climate Agreement, as expressed in their INDCs (conditional and unconditional), by strengthening the mitigation and adaptation capacity of the agricultural sector.

Climate Change in the Sahel: Observed trends and projected impacts

6. Rising temperatures: As GHG emissions warm the Earth's surface around the world, the impacts of this human-influenced driver of climate change are already visible in the Sahel. Temperatures have increased by nearly 1°C since 1970, at a rate twice the global average. In West Africa and the Sahel, 2019 and 2020 were the seventh warmest years on record. According to the IPCC's 6th Report, near surface temperatures have increased over the last 50 years for the 11 countries of the GGW. Statistically significant warming of between 0.5°C and 0.8°C has occurred between 1970 and 2010 over the Sahel region, with a greater magnitude of change in the last 20 years. According to climate projections, average temperature increases in the Sahel region are projected to be high, with an extremely marked north-south gradient, directly affecting soils and ecosystems due to a higher level of evapotranspiration. By mid-century (2031-2050), temperatures are expected to rise between 1 and 1.72°C above those of the reference period 1986-2005. Projections for the Sahel at the end of the 21st century from both the CMIP3 GCMs (SRES A2 and A1B emission scenarios) and CMIP5 GCMs (RCP4.5 scenarios) show temperatures that are 3°C above the late 20th century baseline. It is estimated that temperature increases of more than 2°C will cause millet and sorghum yields to decrease by 15-25 per cent by 2080 under RCP8.5, with substantially higher impacts on sorghum yields. The highest increase in the daily maximum temperature is expected over southern Mali and western Burkina Faso, where it is projected to reach >5°C above current temperatures by the end of the century under the RCP8.5 scenario.

7. Shift in precipitation patterns: In the 1970s and 1980s, the region experienced one of the most severe multi-year droughts in the last hundred years, resulting in a 30 per cent decrease in rainfall. Since the 1980s, rainfall has not returned to pre-1960s levels and droughts have become recurrent. The lengthening of the dry season and more frequent dry spells combined with less frequent and more intense rainfall over shorter wet seasons have affected the balance of the water cycle, resulting in a greater frequency of extreme rainfall events and severe floods.

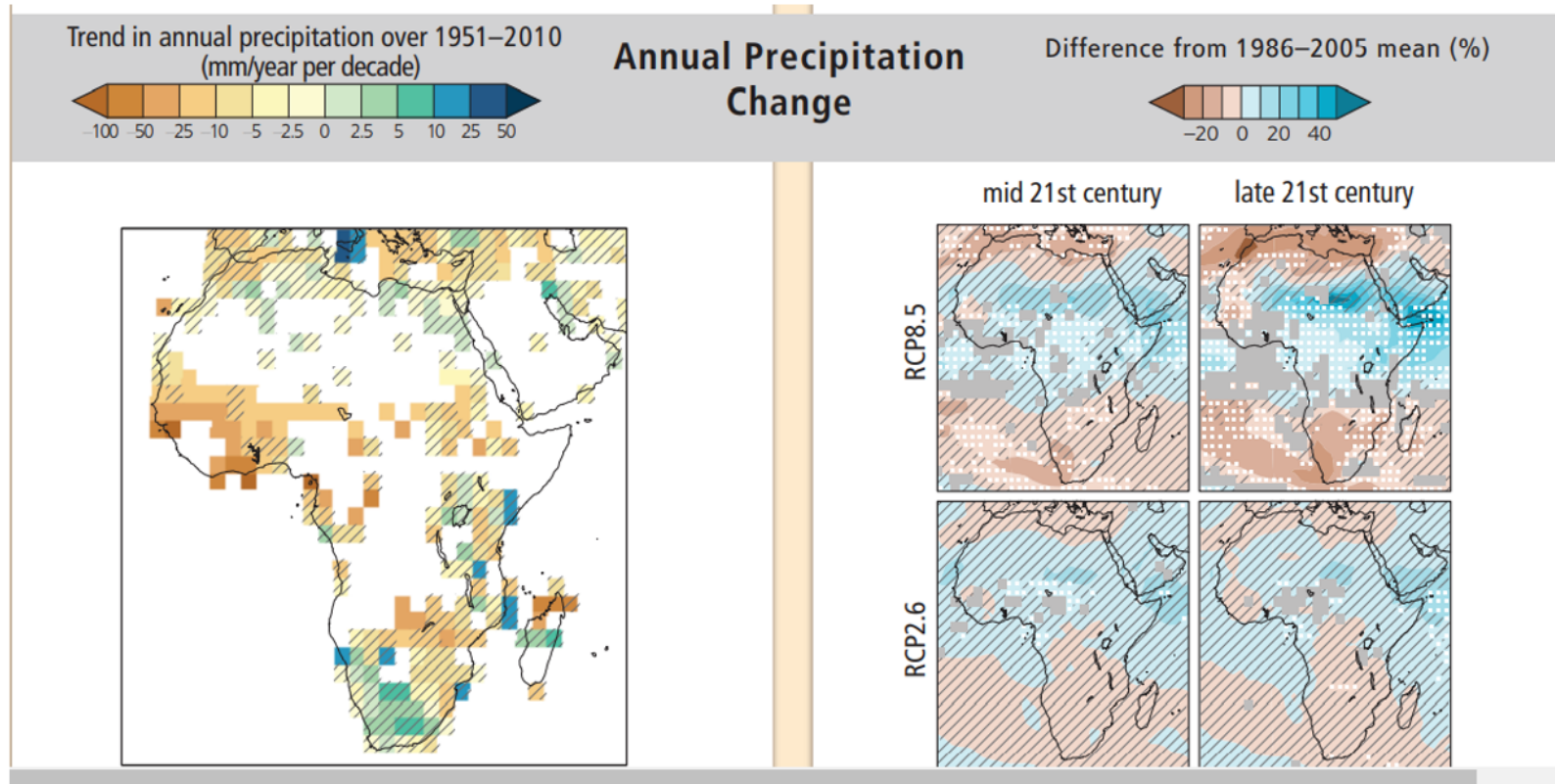


Figure 1. Trends in annual precipitation levels from 1951-2010[8].

8. Projections of extreme rainfall related to floods indicate a north-south spatial gradient with increased heavy precipitation (amount and occurrence) in the south and a decline in the north. This suggests that there will be a southward shift in the frequency and intensity of heavy precipitation events that produce floods. For the northern part of the target region (part of Burkina Faso, Mali and Senegal), the decline in the intensity and frequency of heavy precipitation events will be accompanied by an increased in dry spell length and droughts, implying that the region will be more vulnerable to pressure on water resources which will affect rainfed agricultural production. CORDEX RCM projections of a regional decrease in the length of the rainy season, an increase in the length of dry spells and in heatwave frequency, intensity and duration, highlight the importance of determining the right type and timing for planting and harvesting key crops, especially those prone to drought.

9. Shift of agro-climatic zones due to climate change: The combined effect of changes in precipitation and temperature will strongly affect the state of agro-climatic zones. Prevailing warmer and drier conditions will lead to a shift in the agro-climatic zone from dry to semi-arid zones in parts of the target region, which will have major implications for the native vegetation and farming. A recent study (OXFAM, 2017)[9] found that one in six trees in the region has died since the 1950s and a fifth of all species has disappeared locally because of rising temperatures and lower rainfall linked to climate change. It also found that in some sites in the Sahel, average temperatures rose by 0.8°C and rainfall decreased by 48 per cent and, as a result, trees have shifted southward towards wetter areas, which could affect rural communities engaged in the extraction of Non-Timber Forest Products (NTFPs).

10. Desertification is a process by which productive land becomes progressively drier and its soil nutrients, increasingly depleted, until vegetation is no longer able to grow. Both human impact and natural factors can cause and worsen desertification. Some scientists argue that by increasing global temperatures and altering rainfall patterns, climate change is lengthening the naturally occurring droughts in the Sahel. Extended droughts can turn naturally arid, low-yield land into areas completely unsuited for natural vegetation or plated crops. While climate change may be partly to blame for this, human activity – primarily deforestation (firewood and clearing land for farming) – has also contributed significantly. Without trees and other vegetation to protect the soil, desiccation and soil erosion by wind and water accelerates leading to loss of soil carbon, depletion of soil nutrients and formation of impermeable crusts. In recent years, vast areas of the Sahel have succumbed to desertification. As a result, water is becoming increasingly scarce for people, animals and plants in the region. Without water and productive land, farmers and herders are unable to sustain their traditional livelihoods. As many lack training for other types of work, they face poverty and have little choice except to migrate elsewhere to survive.

Climate change impact on key sectors

11. Agriculture and food security: Agricultural production and productivity levels in the region are already low by global standards and they are expected to decline even further due to the impacts of climate change and COVID-19. The causes are not only biophysical changes, but are also related to the GGW countries limited economic, financial and institutional capacity to cope with key risks (climate, biological, price, labour/health, policy and political). Agriculture in the West Sahel is almost entirely rainfed and reliant on three to four months of variable summer rainfall (June-September; annual precipitation between 200 mm to 1200 mm), making it highly vulnerable to increasing climate variability and putting the large percentage of the region's people who depend on agriculture at risk. FAO estimates that 20-80 per cent of the inter-annual variability of crop yields is associated with weather phenomena and 5-10 per cent of

national agricultural production losses is associated with climate variability. In addition, agriculture suffers 26 per cent of damages and losses caused by climate-related disasters. In the Sahel, dry spells and droughts lead to increased evaporation, which can reduce water resources and diminish soil moisture and fertility, with negative implications for agricultural yields. In tropical and coastal zones, where famine is already widespread, heavy rainfall events, flooding and reduced overall annual rainfall are among the main climate threats to agricultural production. The generally nutrient-limited soils in the region, which are being degraded by overgrazing, continuous cropping and deforestation, will be further threatened by desertification and sand intrusion brought about by reduced precipitation and higher temperatures. This will lead to increased food prices and food insecurity. Within the agricultural sector, there are also several transboundary issues that may be intensified by climate change such as the spread of animal diseases, land degradation and pollution, food contamination and pressure on natural resources.

12. The main subsistence crops grown in the region are maize, pearl millet and sorghum while important cash crops include rice, groundnuts, cashew and mango. Smallholders also exploit a range of NTFPs such as Arabic gum, shea butter, tamarind, baobab, etc. for their direct subsistence value and as an important source of cash income. NTFPs play a very important role in the local economies in Burkina Faso, Côte d'Ivoire, Ghana, Mali and Senegal. Climate change is expected to lead to significant declines in yields of the main crops in the area by 2100. The climate models generated using the IFAD Climate Adaptation in Rural Development Assessment Tool (CARD) indicate that in the targeted countries, the production of millet is predicted to decrease on average by 10 per cent; groundnut, 11 per cent, and rice, 7.82 per cent over the next 20 years in Burkina Faso, Mali and Senegal and the northern dry part of Côte d'Ivoire and Ghana. This will have negative impacts on livelihoods and production systems, which will push millions more people into poverty and generate acute levels of food insecurity. Climate change is also a threat to livestock production because of the impact on quality of feed crop and forage, water availability, animal and milk production, livestock diseases, animal reproduction and biodiversity. The Covid-19 pandemic has had severe impacts on the already vulnerable economies in the region and undermined efforts to strengthen the resilience of smallholder farmers to climate change. For instance, the prices of Senegal and Côte d'Ivoire's cashews dropped a record 47 percent due to the decline in demand in domestic markets, while demand for cocoa beans from Côte d'Ivoire and Ghana (the two largest cocoa producers in the world) fell across Europe in 2020-2021. Unemployment increased while household monetary incomes declined due to the closure of several MSMEs in key agricultural value chains.

13. Water resources: Climate change will significantly affect water resources and therefore, it is crucial to ensure that agricultural production and irrigation systems are better adapted to shorter rainy seasons. Climate models also project large declines in the flows of certain transboundary rivers in West African countries – a major issue, as 40 per cent of these countries' surface water resources originates outside their borders. Studies suggest that the five countries have significant groundwater reserves in dry areas, but these are far from urban centres. Declines in rainfall, rising temperatures and more frequent droughts contribute to a decrease in surface and groundwater availability and accessibility. However, total renewable water resources per capita range from 745,600 m³/year in Burkina Faso to 6,818,000 m³/year in Mali. It is projected that by 2025, countries such as Burkina Faso that have low, but sufficient water resources per capita are expected to experience physical water scarcity (defined as when the water supply falls below 1,000 m³ per person per year). As rains are often seasonal, groundwater is a primary source of water for many people in the region. As a result, disputes over access to water, fish catches and ownership of land exposed by receding waters have increased dramatically. Climate variability and change, together with non-climate stressors such as population and economic growth, inefficient water management and infrastructure, failure to jointly manage basin resources, fall in groundwater levels and land use/land cover changes, are expected to further reduce river basin water supplies in the future. All the above indicate that the implementation of sustainable practices such as low emission, climate-resilient agriculture that utilizes water in a sustainable manner is urgently required to mitigate the effects of climate change.

14. Climate change and conflict: According to the Global Peace Index 2021 report, sub-Saharan Africa experienced a slight fall in peacefulness, with the average country score declining by 0.5 percent. Changes in the regional climate are fuelling conflicts related to the availability of natural resources and food insecurity, which can lead to migration, more conflict or a combination of the two. Climate change affects livelihoods that are directly dependent on natural resources the most - for example, by causing agricultural yields to decrease, gradually contributing to the unsuitability of traditional grazing grounds or drying up important water bodies. Furthermore, incomplete institutionalization of land tenure and governance have allowed many natural resource conflicts to go on unabated. In some cases, this absence of clear, commonly accepted rules has added to the confusion over who owns and has access to these limited, but essential, natural resources. Demographic and climatic pressures are pushing the frontier of crop cultivation progressively northward in Burkina Faso, Côte d'Ivoire and Ghana, where it is increasingly encroaching on traditional pastoralist zones and transit routes. Pastoralists and their animals, who are also affected by changes in climate, are forced to travel through these areas of cultivation, damaging crops and possibly triggering conflict. In Burkina Faso, climate-linked internal migration has flowed from the central plateau to the more economically dynamic south-southwest and the more land-abundant east. It is probable that conflicts over scarce natural resources will continue to develop in these areas, especially those involving access to water and arable land. According to FAO, in northern Burkina Faso and Mali, the effects of climate change, combined with unresolved grievances of the pastoralist Tuareg population, have the potential to erupt into more intense violence and conflicts.

Table 1: Summary climate trends and impacts

CLIMATE TRENDS			IMPACTS			
Increased temperature	Shifts in precipitation patterns	Extreme weather events	Agricultural and food security	Water	Financial system	Energy resources
<p>Temperatures are expected to increase by between 1 and 1.72°C for 2031-2050 compared to 1986-2005. Temperature increases higher than 2°C are projected to decrease millet and sorghum yields by 15-25% by 2080 [10]</p>	<p>Precipitation is projected to decline by as much as 30% by the end of the century (RCP8.5). RCP 2.6; RCP 4.5, RCP 6.0 indicated a general trend of decline in precipitation between 30 to 40% by 2100 [11]. Greater frequency and intensity of heavy rains that produce floods. In northern Senegal, Mali and Burkina Faso, decline in intensity and frequency of heavy precipitation events is accompanied by an increase in dry spell length (CDD) [12]</p>	<p>Higher temperatures will increase the frequency of floods, droughts, heatwaves, locust outbreaks, desertification and sandstorms [13]</p>	<p>One in 6 trees in the region has died since the 1950s and 1/5 of all species has disappeared locally due to rising temperatures and lower rainfall. At some sites in the Sahel, temperatures rose 0.8 °C and rainfall decreased 48%. Trees shifted southward towards wetter areas [14] contributing to desertification. CC projected to reduce yields and livestock growth.</p>	<p>Increase in temperature and intensification of hydrological cycles is expected to result in water stress, affecting supply of ground and surface water. Further, climate change is expected to impact water quality and increase rainfall variability</p>	<p>Risks for financial institutions are higher, as climate change impacts can increase the number of defaults on loans; reluctance of farmers and MSMEs to borrow [15]</p>	<p>Hotter temperatures are likely to increase energy demand for cooling and food storage, consequently increase GHG emission and use of fossil fuel [16]</p>

15. Non-climate stressors and impacts: Livelihood vulnerability in the GGW countries is also linked to many non-climatic factors, such as unequal land distribution, insecure land tenure, poorly developed markets, existing trade barriers and inadequate infrastructure. Political instability, urbanization and pollution contribute to the degradation of land, forests and water and the destruction of biodiversity; these processes are likely to become more marked as

climate change progresses. Tensions from increased competition over diminishing natural capital add fuel to existing conflicts, which exacerbate poverty and hunger, undermine human rights and fuel migration, especially of rural youth. These negative impacts are exacerbated when smallholders have low adaptive capacity and limited financial resources to withstand disasters and losses. According to UNEP, migration, competition over natural resources and other coping responses of households and communities faced with climate-related threats could increase the risk of domestic conflict and have regional and international repercussions.

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Barriers to scaling up of innovative climate adaptation and climate resilience measures

16. Against this background, the proposed GGW Regional Support Project will address the major barriers to exchange of experiences, knowledge and lessons learned between existing programs, projects and GGW partners that hinder the uptake and scaling up of climate adaptation and resilience measures related to natural resources management. These barriers include:

- Lack of analysis and sharing of lessons and experiences across projects and partners in the GGW, including those of the GEF and the GCF, which risks leading to duplication of activities by partner agencies due to limited awareness of similar topics or activities being implemented in different countries by the GEF and the GCF, as well as other projects, and loss of opportunities for synergies;
- Limited evidence-based knowledge generated and tailored to specific audience to inform GEF and GCF project development on innovative climate adaptation and climate resilient measures related to natural resources management in the GGW, including increased costs due to limited exchange of experiences and lessons learned on project implementation as well as on available studies (e.g., climate analysis, gender assessments, etc.);
- Lack of engagement of sectoral ministries/departments/agencies and governments in climate financed projects, as well as limited coordination at the country level to strategically plan the allocation of GEF, GCF and other climate resources that can contribute to the achievement of the GGW objectives resulting in a duplication of projects and activities. GEF OFPs and NDAs are not necessarily aware of the lessons learnt, best practices or innovation from other countries or other GEF and GCF projects, which could help them to better plan their respective Country Pipeline and Work Plan to the GEF and GCF, as well as project designs, and updating of NDCs or NAPs.
- Innovative climate adaptation solutions, in particular digital solutions and infrastructure, in addressing climate change in natural resources management and landscape restoration developed by GCF, GEF and other stakeholders' projects are not widely available and spread across climate adaptation project portfolios. While innovation and digital solutions are increasingly recognized as a strategic path for addressing climate change impacts, the ecosystem to support innovation and digital solutions developers is in its very early stage of development, meaning missed opportunities for replication and scaling up.

17. Implementation of the knowledge management and innovation activities will create a transparent and collaborative environment for knowledge generation at the country level and across adaptation projects, including those funded by the GEF and the GCF. Knowledge generated by adaptation projects will be captured, analysed and shared with specific audiences to improve the efficiency and effectiveness of GGW projects. Similarly, the collaborative environment created by the GGW RSP to foster innovation will increase stakeholders' capacities across the region to adopt and scale up innovative and digital solutions through coalitions. Increased access of GGW lead ministries and local governments at GGW sites, GEF OFPs, GCF NDAs, and AF focal points, AEs and DAEs to knowledge and innovation will increase their capacities to replicate, streamline and scale up innovative climate adaptation and resilience measures that have proven effective in similar contexts.

2) The baseline scenario and any associated baseline projects

18. To address the complex and interrelated challenges and support the transition towards climate resilient, low emission agriculture, **the Great Green Wall Initiative (GGWI)** was launched in 2007 by the African Union. The GGWI's initial objectives were to address land degradation, climate change adaptation and mitigation, and protect biodiversity and forests. Under the GGWI, environmental aspects and natural capital have been integrated into the development agenda and a multi-stakeholder dialogue has been established to ensure country ownership. It has also created opportunities for the deployment of scaled-up investments based on successful experiences on the ground. There is a need to accelerate investment in the region to address these issues, especially since the onset of the Covid-19 pandemic, which has had severe impacts on the region's economic development. In a post-Covid-19 context, the ambition of the GGWI is to pursue a green growth recovery by restoring 100 million ha of currently degraded land, sequestering 250 million tons of carbon and creating 10 million green jobs by 2030. It will support communities along the GGW to: i) increase the fertility of the land, one of humanity's most precious natural assets; ii) create economic opportunities for the world's youngest population; iii) build food security for the millions that go hungry every day; iv) build climate resilience in a region where temperatures are rising faster than anywhere else on Earth, and v) grow a new world wonder spanning close to 8,000 km across Africa. As Sahelian countries are struggling with limited budgets and funding in a COVID context, UNCCD set up the GGW Accelerator to help meet financial requirements and turbo charge the achievement of its goals with an estimated budget target of US\$33 billion from private, national and international sources.

19. **The Global Environment Facility (GEF)** has played a leading role in influencing a shift from the initial vision of a tree planting venture to one focused on integrated management of natural resources for improving livelihoods and landscapes. In response to demands of the countries in the region, the GEF has invested over US\$800 million in grants and leveraged an additional US\$6 billion from national governments, development partners and other multi-lateral donors for projects in the Sahel region. This financing has helped GGW member countries to boost their efforts to promote practices for improving crop and livestock productivity, restoring degraded parklands and strengthening resilience and adapting to climate change . Building on the GEF's experience with programmes using an integrated landscape approach , the GEF 7 "Harnessing the GGWI for a Sustainable and Resilient Sahel" project is currently being implemented by UNEP to engage with all GGW stakeholders in fostering dialogue with countries and fleshing out a longer-term vision. It will serve as the vehicle to design a program with potential to mobilize larger investments in GEF-8. GEF-8 resources to support the GGW will be determined upon completion of the replenishment process and discussion with beneficiary countries on the use of their STAR allocations.

20. **The Least Developed Countries Fund (LDCF)**, managed by the GEF has invested heavily in climate change adaptation and resilience in the GGW countries, from Senegal in the west to Djibouti in the east, with projects ranging from agriculture and livestock management, ecosystem-based adaptation, water supply, rural livelihoods adaptation and risk management. GEF-7 and still ongoing GEF-6 projects have invested almost USD100 million from the LDCF in grants and leveraged more than USD400 to adaptation in the Sahel region. These projects have all generated knowledge and experiences that need to be shared across the region. The projects include:

- Improving the climate resilience of agro-sylvo-pastoral production systems in Burkina Faso, FAO - 8,932,420 (LDCF), 42,424,707 (co-fin)
- Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP), Sudan, IFAD - 2,000,000 (LDCF), 49,930,000 (co-fin)

- Planning and implementing Ecosystem based Adaptation (EbA) in Djibouti's Dikhil and Tadjourah regions, UNEP - 8,925,000 (LDCF), 17,912,500 (co-fin)
- Enhancing the resilience of agriculture and livestock producers through improved watershed management and development of environmentally-positive value chains in South East Mauritania, FAO - 4,416,210 (LDCF), 15,071,430 (co-fin)
- Enhancing Adaptive Capacity of communities by up-scaling best practices and adopting an integrated approach in Ethiopia, UNDP - 8,932,420 (LDCF), 72,200,000 (co-fin)
- Resilience of Pastoral and Farming Communities to Climate Change in North Darfur, FAO - 2,429,680 (LDCF), 11,300,900 (co-fin)
- Climate change adaptation and livelihoods in three arid regions of Mauritania, UNEP - 4,416,210 (LDCF), 13,770,374 (co-fin)
- Strengthening rural and urban resilience to climate change and variability by the provision of water supply and sanitation in Chad, ADB - 8,700,000 (LDCF), 16,583,950 (co-fin)
- Rural Livelihoods' Adaptation to Climate Change in the Horn of Africa - Phase II (RLACC II), ADB - 7,082,407 (LDCF), 29,600,000 (co-fin)
- RLACC - Rural Livelihoods' Adaptation to Climate Change in the Horn of Africa (PROGRAM), ADB - 5,077,778 (LDCF), 34,051,500 (co-fin)
- Climate Resilience in the Nakambe Basin, UNDP - 4,416,210 (LDCF), 20,148,179 (co-fin)
- Climate Change Adaptation in the Lowland Ecosystems of Ethiopia, UNDP - 5,836,073 (LDCF), 10,450,000 (co-fin)
- Strengthening Agro-ecosystems' Adaptive Capacity to Climate Change in the Lake Chad Basin (Lac, Kanem, Bahr El Ghazal, and Part of the Hadjer-Lamis Region), FAO - 4,050,913 (LDCF), 18,585,000 (co-fin)
- Continental Wetlands Adaptation and Resilience to Climate Change, Mauritania, IUCN - 4,449,542 (LDCF), 7,057,990 (co-fin)
- Promoting Index-based Weather Insurance for Small Holder Farmers in Burkina Faso, UNDP - 4,466,175 (LDCF), 24,500,000 (co-fin)
- Planning and Financing Adaptation in Niger, UNDP - 8,925,000 (LDCF), 31,867,282 (co-fin)
- Community-based Climate Risks Management in Chad, UNDP - 5,250,000 (LDCF), 12,500,000 (co-fin)

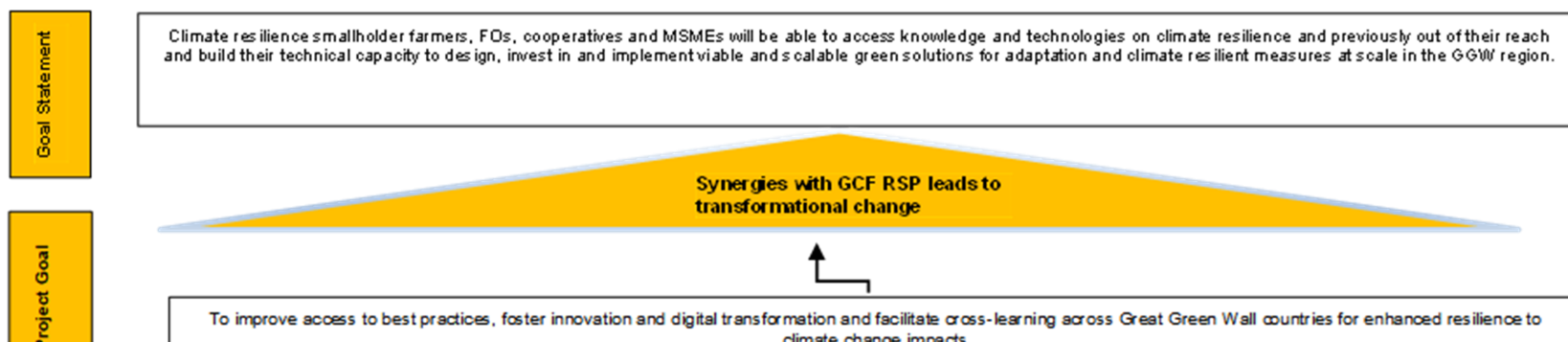
21. As of October 2021, 29 projects had been approved by the **Green Climate Fund (GCF)** for the 11 GGW countries by 17 different Accredited Entities, amounting to a total funding of around USD 1 billion with more than twice as much leveraged. In response to the call for pledges during the One Planet Summit in January 2021, the GCF invited IFAD to develop a Great Green Wall Regional Support Programme (GGW RSP). The objective of the GGW RSP is to enhance the collective impact of individual GCF projects and programmes which may otherwise be implemented in silos by facilitating knowledge exchange and innovation. The GCF GGW Regional Support Programme forms part of IFAD/GCF Inclusive Green Financing Initiative (IGREENFIN I): Greening Agricultural Banks & the Financial Sector to Foster Climate Resilient, Low Emission Smallholder Agriculture in the Green Great Wall (GGW) countries with grant funding of USD 36,900,720 and loan funding of USD 90,000,000, through its Component 3. It supports enhanced knowledge management and exchanges to accelerate the uptake of good practices, increase learning and inform policy and investments across GCF and other projects, and innovation and digital transformation technologies are mapped and a digital and innovation ecosystem built.

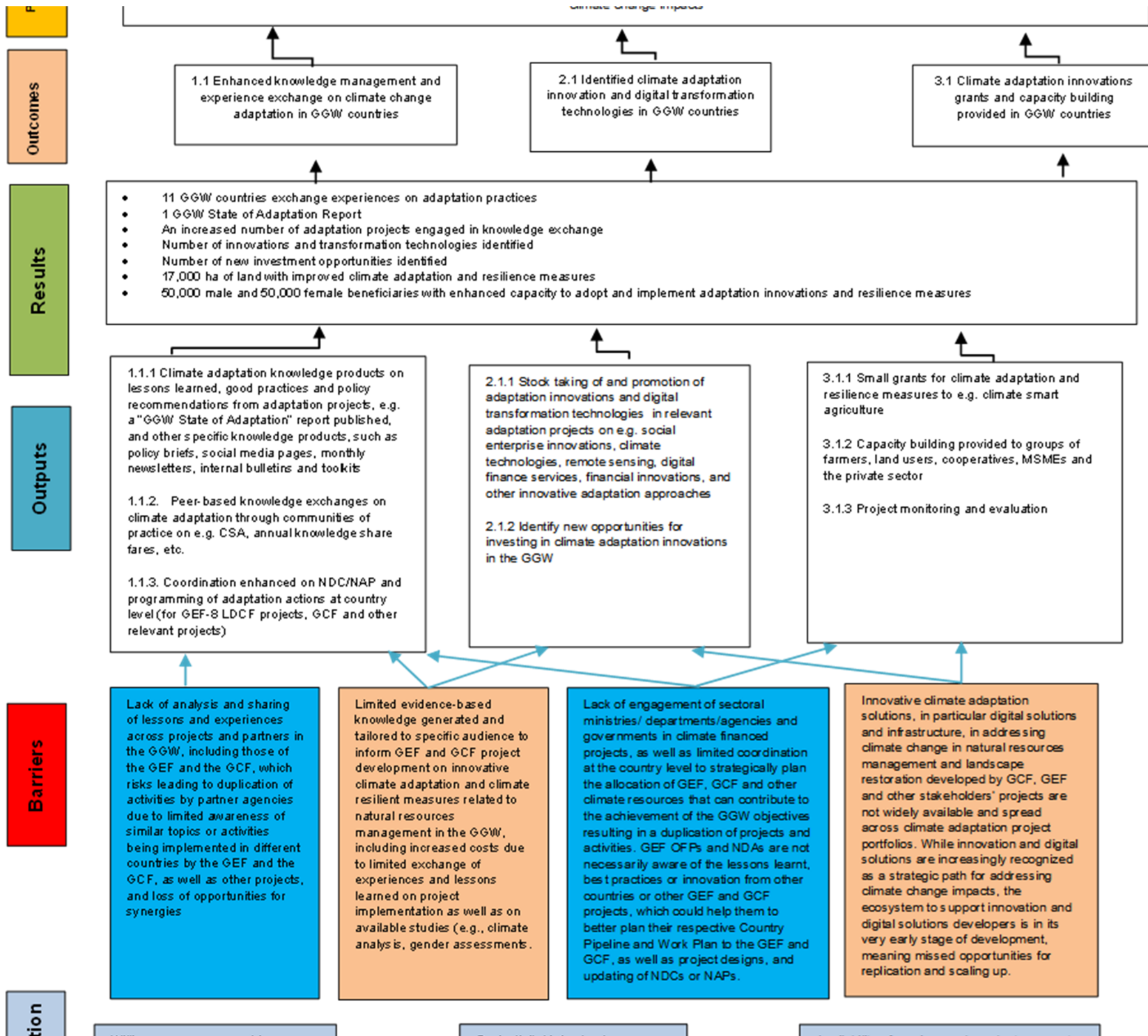
22. The Long-Term Vision on Complementarity, Coherence, and Collaboration between the GEF, LDCF and the GCF responds to the need to build on the experiences from ongoing collaboration between the GCF and the GEF and respond to developing countries' needs. Advancing the GGW vision will require an approach that is underpinned by holistic and systemic thinking to maximize potential for harnessing synergies at scale. In this context, the collaboration between the GEF and GCF and joint financing of the GGW Regional Support Programme will create an opportunity to implement this long-term vision and enhance complementarity and collaboration at the regional and country level through specific activities that foster the facilitation of national investment planning for the GGW countries and the sharing of information, lessons learned and knowledge on climate change adaptation and resilience measures related to natural resources management.

1. the proposed alternative scenario with a brief description of expected outcomes and components of the project;

23. The Regional Support Project (RSP) will improve access to best practices for climate smart agriculture and resilience measures, encourage learning and foster innovation and digital transformation across Great Green Wall countries so as to increase individual GCF, GEF and other adaptation projects' collective impact. The RSP's added contribution is that its entire structure and all its actions are geared towards building the knowledge and systems necessary to identify transformational pathways for the GGW area. The RSP will not replace the knowledge management and innovation activities of each GCF and GEF project, nor take over the responsibilities of the corresponding agencies. It aims to create bridges through a structured framework to ensure that project specific information, knowledge and learning is properly captured and disseminated across GCF and GEF projects and other entities contributing to tackling climate change in the GGW. The GGW RSP will be uniquely placed as a facilitator between individual GCF and GEF projects to promote the scaling up of existing innovation in the GGW and to increase the uptake of innovations and digital solutions developed by other stakeholders in current and future GGW projects. The GGW RSP will promote and amplify action on the ground to bring it to scale and generate spillover effects that positively affect other GGW initiatives and undertakings, by improving access to best practices, foster innovation and digital transformation and facilitate cross-learning across Great Green Wall countries for enhanced resilience to climate change impacts. The project's theory of change and underlying assumptions are summarised below:

Theory of Change for GGW Climate Adaptation Regional Support Project







24. Component 1: Knowledge management and experience exchange

Outcome 1.1. Enhanced knowledge management and experience exchange on climate change adaptation in GGW countries. This involves the 11 GGW countries exchanging experiences on adaptation practices and resilience measures, development of one GGW State of Adaptation Report, and engaging a number of projects in knowledge exchange with 50% participation of women. The project will also result in improved coordination at country level between GEF, GCF and other adaptation projects supporting NDC/NAP implementation.

Output 1.1.1. Climate adaptation knowledge products on lessons learned, good practices and policy recommendations from adaptation projects, e.g. a “GGW State of Adaptation” report published, and other specific knowledge products, such as policy briefs, social media pages, monthly newsletters, internal bulletins and toolkits on methods, tools, templates, techniques and good examples that will be identified in the PPG phase.

Output 1.1.2. Peer-based knowledge exchanges on climate adaptation among the 11 GGW countries through communities of practice on e.g. CSA, annual share fares, etc. targeting sectoral ministries, departments and agencies as well local governments with GGW projects.

Output 1.1.3. Coordination enhanced on NDC/NAP and programming of adaptation actions at country level (for GEF-8 LDCF projects, GCF and other relevant projects).

25. Component 2: Identification of innovations and digital transformations

Outcome 2.1 Identified climate adaptation innovations and digital transformation technologies in GGW countries. A number of innovations and transformation technologies will be identified through stocktaking and mapping, and a number of new investment opportunities will be identified that can be piloted by the private sector, MSMEs, cooperatives, etc.

Output 2.1.1 Stock taking of and promotion of adaptation innovations and digital transformation technologies in relevant adaptation projects on e.g. social enterprise innovations that bridge the service delivery gap using Internet of Things (IoT) platforms, climate technologies (e.g. early warning systems), remote sensing (using open-source data, such as trends.earth), digital finance services that can give smallholder farmers access to loans, and financial innovations

(e.g. crowdfunding, social impact bonds, mobile money), and other innovative adaptation approaches (e.g. precision farming, index-based insurance) through digital outreach and communication adapted to existing infrastructure and platforms at country level.

Output 2.1.2 Identify new gender-responsive opportunities for investing in climate adaptation innovations in the GGW involving the private sector, MSMEs, cooperatives, etc. While some innovations are already being implemented on a small scale, their potential for upscaling in the GGW needs to be assessed and feasibility studies need to be conducted, based on the stocktaking in 2.1.1. An important focus will be on identifying ways of closing the gender gap related to innovations and digital transformations. This output will also build on the the GEF MSP with UNEP on “Harnessing the GGWI for a Sustainable and Resilient Sahel”.

26. Component 3: Innovation grants, capacity building and Programme M&E

Outcome 3.1: Climate adaptation innovations grants will be approved on a competitive basis and capacity building provided in GGW countries. A number of innovation grants will be approved on a competitive basis to pilot and test new adaptation and resilience measures and 3,000 people (50% women) will be trained and have enhanced capacity to adopt, implement and scale up adaptation innovations and resilience measures. The competitive grant process could involve: 1) sourcing challenge where large and smaller companies are targeted (UNILEVER, Nestle, Mars etc.) to pledge for increased sourcing from the GGW. Support could be provided to grantees to expand supply to global/regional markets; 2) innovation challenge for localised solution to adaptation and resilience - demonstrating high impact while at the same time nurturing and highlighting local innovative capacities. Both could ensure a wide capture, as well as engagement of networks created of innovative high impact and market oriented companies. The total number of beneficiaries of the innovation grants and associated co-financing will be 100,000 (50% women).

Output 3.1.1 Small grants for climate adaptation and resilience measures for natural resources management and climate smart agriculture. This could follow the model of Enhanced Adaptation for Smallholder Agriculture Programme (ASAP): <https://www.ifad.org/en/asap-enhanced> and Indigenous Peoples Assistance Facility (IPAF): <https://www.ifad.org/en/web/knowledge/-/publication/the-indigenous-peoples-assistance-facility-ipaf-assessment-of-the-performance-of-the-fourth-ipaf-cycle>. The LDCF grant will be co-financed by IFAD loans and GCF grants with a ratio of around 1:3 and this will be one of the selection criteria. The most suitable grant models and mechanisms would be assessed and identified in the PPG phase.

Output 3.1.2 Capacity building provided to groups of farmers, land users, cooperatives, MSMEs and the private sector (to a total of 3,000 people) in adoption and implementation of adaptation innovations and resilience measures.

Output 3.1.3 Project monitoring and evaluation - a monitoring & evaluation plan for the project is formulated and implemented, and an exit strategy is formulated

2. alignment with GEF focal area and/or Impact Program strategies;

27. The project is aligned with the LDCF GEF-7 Strategy and its Objective 1 to reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation with a focus on both technical, social and institutional innovations in the GGW generated by the GCF and IFAD-funded baseline programmes, as well as GEF supported projects and programmes. The contribution of the project to LDCF objectives and outputs is summarised below.

Table 2. Alignment with LDCF.

	LDCF OUTPUTS	PROPOSED PROJECT OUTPUTS CONTRIBUTING TO LDCF OUTPUTS
Objective 1. Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation	Output 1.1.4. Vulnerable ecosystem services and natural resources assets strengthened in response to climate change impacts	Output 1.1.1, Output 1.1.2, Output 1.1.3
	Output 1.2.1. Innovation incubators and/or accelerators introduced	Output 2.1.1, Output 2.1.2, Output 3.1.1, Output 3.1.2, Output 3.1.3

3. incremental/additional cost reasoning and expected contributions from the baseline, the LDCF and co-financing;

28. The complementarity between the GEF funding and the GCF for the GGW Regional Support programme is outlined in the table below. GEF funding will be used to create additional benefits of the programme by integrating lessons learned and experiences from GEF projects into the GGW RSP, ensuring synergies between GEF and GCF projects and avoiding duplication in implementation of NDCs and NAPs, and promoting possible joint future programming. Joint knowledge products will be developed and capacity built of GEF OFPs in adaptation and resilience measures. Small grants for innovative climate adaptation and resilience measures and capacity building will be provided to groups of farmers, land users, cooperatives, MSMEs and private sector on a competitive basis to promote adoption and scaling up of innovative measures.

Table 3. Complementarity between GEF and GCF funding.

GEF		COLLABORATION WITH GCF	GCF ACTIVITIES
OUTPUTS	ACTIVITIES		
<p>Output 1.1. Enhanced knowledge management and exchanges on climate change adaptation in GGW countries</p>	<p>Activity 1.1.1. Produce climate adaptation knowledge products on lessons learned, good practices and policy recommendations (from GEF projects)</p> <p>Activity 1.1.2. Participate to peer-based knowledge exchanges on climate adaptation</p> <p>Activity 1.1.3. Enhance coordination on NDC/NAP and programming of adaptation actions at country level (for GEF-8 LDCF projects)</p>	<p>KM will be disseminated through the knowledge platforms and communities of practice to be established by the GCF GGW regional support programme</p> <p>The GEF project managers and OPF will join the KM events.</p>	<p>Activity 1.1.1: Establish a knowledge baseline</p> <p>Activity 1.1.2 Develop a knowledge and communication strategy and plan</p> <p>Activity 1.1.3 Establish a knowledge platform by creating a knowledge centre</p> <p>Activity 1.1.4. Create communities of practices:</p> <p>Activity 1.1.5. Produce knowledge products on lessons learned, scalable practices and policy recommendations</p> <p>Activity 1.1.6. Organize peer-based knowledge exchanges</p> <p>Activity 1.1.7. Enhance coordination and programming at the country level</p>
<p>Output 2.1. Identified climate adaptation innovation and digital transformation technologies in GGW countries</p>	<p>Activity 2.1.1 Stock take on and promotion of adaptation innovation and digital transformation technologies (in GEF projects)</p> <p>Activity 2.1.2 Identify new opportunities for investing in climate adaptation innovations in the GGW</p>	<p>The annual fairs organized by the GCF GGW regional support programme will be open as well to innovators in GEF projects. These will be promoted through the digital marketplace created by the GCF programme.</p>	<p>Activity 2.1.1 Build a digital and innovation ecosystem</p> <p>Activity 2.1.2 Create a digital marketplace</p> <p>Activity 2.1.3 Identify new opportunities for investing in climate innovation in the GGW</p>
<p>Output 3.1 Climate adaptation innovations grants and capacity</p>	<p>Activity 3.1.1 Small grants for land restoration and capacity building provided to groups of farmers, land users, cooperatives, etc.</p>	<p>These grants could be provided:</p> <ol style="list-style-type: none"> 1. to the recipients of the GCF loans in the IGREENFIN1 and IGREENFIN2 projects 	

building provided in GGW countries	atives, MSMEs and private sector (need cofinancing ratio)	cts, focusing on the land restoration and capacity building pillars of the GGW accelerator. 2. to enhance GEF projects, or 3. through a competitive process.	
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4. adaptation benefits (LDCF/SCCF);

29. Adaptation benefits that will be generated by the GEF-supported alternative scenario will relate to increased climate adaptation and resilience in the GGW through support to innovation and technology transfer for climate change adaptation. This will be achieved through enhanced knowledge management and exchange at the regional level of lessons learned and experiences from GEF as well as GCF projects, publication of a GGW state-of-adaptation report, identification and testing of new opportunities for investment in climate adaptation innovations and resilience measures through small grants and capacity building of GGW countries.

5. INNOVATION, SUSTAINABILITY AND POTENTIAL FOR SCALING UP;

30. Innovation: The GGW Regional Support Project represents an innovative collaboration between the GEF and the GCF to ensure that climate adaptation knowledge and innovative resilience measures are captured and documented across the Sahelian region and shared and disseminated to ensure synergies and scaling up of good practices, while avoiding duplication of efforts in implementation of NDCs and NAPs.

31. Sustainability: The knowledge outputs from the GGW RSP will support the design of solutions to meet the climate adaptations needs of communities in the GGW countries in future GEF and GCF projects, as well as other adaptation projects, and contribute to enhanced implementation of the NDCs and NAPs.

32. Potential for scaling up: Overall, the GGW RSP will support scaling up of efforts to investing in innovative adaptation and resilience measures by supporting pilot of innovations through small grants and capacity building. Moreover, as a program the GGW RSP has tremendous opportunity to scale up, not just organically but through strategic partnerships between the large number of GEF IAs and EAs that are already implementing stand-alone GEF projects in the GGW. In addition, the GGW RSP will share knowledge online through innovative digital solutions for easy access by adaptation entrepreneurs.

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- [1] Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal and Sudan.
- [2] The Great Green Wall (GGW) is an African-led movement with an epic ambition to grow an 8,000 km natural wonder of the world across the entire width of Africa. The goal is to restore 100 million hectares of degraded land, sequester 250 million tonnes of carbon and create 10 million green jobs in rural areas across the Sahel by 2030. For more information, see: <https://www.greatgreenwall.org/about-great-green-wall>
- [3] African Forestry and Wildlife Commission (2020), Twenty-second Session: Forests and Wildlife: Africa's diversity for shared prosperity and security, FAO, <http://www.fao.org/3/ca8011en/ca8011en.pdf>
- [4] IPCC (2021), AR6 Climate Change 2021: The Physical Science Basis, Sixth Assessment Report, <https://www.ipcc.ch/report/ar6/wg1/>
- [5] UNDP (2020), Human Development Report, <http://hdr.undp.org/en/content/latest-human-development-index-ranking>
- [6] IEP (2020), Global Peace Index Report 2020, Measuring Peace in a Complex World, <https://imctc.org/en/eLibrary/INTRReports/Pages/Reports15012021.aspx>
- [7] OECD/FAO (2016), "Agriculture in Sub-Saharan Africa: Prospects and challenges for the next decade", in *OECD-FAO Agricultural Outlook 2016-2025*, OECD Publishing, Paris, <http://www.fao.org/3/B0092E/B0092E.pdf>
- [8] IPCC (2021), AR6 Climate Change 2021: The Physical Science Basis, Sixth Assessment Report, <https://www.ipcc.ch/report/ar6/wg1/>
- [9] OXFAM, 2017. An Economy for the 99%. OXFAM Briefing Paper, January 2017. www.oxfam.org
- [10] USAID (2017), Climate Change Risk in West Africa Sahel.
- [11] IPCC 6th Report, 2021
- [12] Ibid.
- [13] S. Godfrey and F.A. Tunhuma (2020), The Climate Crisis: Climate Change Impacts, Trends and Vulnerabilities of Children in Sub Sahara Africa, UNICEF Eastern and Southern Africa Regional Office, Nairobi, September, https://reliefweb.int/sites/reliefweb.int/files/resources/73800_theclimatecrisisreportesawcarsep20.pdf
- [14] P. Gonzalez et al. (2012), "Tree density and species decline in the African Sahel attributable to climate", *Journal of Arid Environments* 78 (March).
- [15] IFAD (2021), IFAD Inclusive Financial Services Portfolio Stocktaking.
- [16] O. Hoegh-Guldberg et al. (2018), "Impacts of 1.5°C Global Warming on Natural and Human Systems", in *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways*, <https://www.ipcc.ch/sr15/chapter/chapter-3/>

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

1. The direct beneficiaries of the Regional Support Programme include: GEF Operational Focal Points, GCF National Designated Authorities, GGW National Focal Points and regional entities, Accredited Entities, country project teams and key country stakeholders implementing GEF, GCF and other country projects under the GGW Regional Support Programme. Indirect beneficiaries include the total number of beneficiaries reached by each of the GEF and GCF projects linked to the GGW RSP.

2. Regional Steering Committee (RSC): Given the geographical and thematic scope of the different components, a joint inter-ministerial decision will establish the Regional Steering Committee (RSC) and specify its composition, mandate and functioning. The nomination of members to the RSC will be done by each NEE in compliance with the GEF and GCF Gender Policy. The RSC will provide oversight, direction and guidance for the programme's implementation and in particular, approve the programme's AWPBs and its periodic progress reports. It will designate the key partners to be part of the National Project Steering Committee key stakeholders. These includes the NEEs, their respective ministries of agriculture and forestry and representatives of MFIs, FOs, cooperatives and MSMEs, relevant regional institutions and private sector entities. Any recommendation or measures adopted by the RSC are subject to final approval by the National Executing Entity, represented by its ministry of economy and finance. The PMU for components 1 and 2 will be supported by the IFAD Country Offices, which will be able to provide or call upon expertise in knowledge management, innovations and digital transformations, if necessary. Project component 3 could be executed and coordinated by a different entity, such as ICRISAT or another CGIAR with presence in the GGW and expertise in implementing adaptation innovations in the agricultural sector.

3. Country Coordination Committees are composed of NDAs, GGW Focal Points, GEF Focal Points, Adaptation Focal Points, UNCCD, CBD and UNFCCC Focal Points, relevant sectoral ministries and relevant AEs. Building on relevant platforms wherever possible, committees are responsible for coordinating the alignment of GCF work programmes, the LDCF, and GEF STAR allocations and prioritizing GGW investments at the country level. The Country Coordination Committees will also be responsible for the coordination of the activities reported to the GGW Accelerator to ensure transparent and comprehensive exchange of information and reporting. Countries may decide to invite additional stakeholders to take part in the Country Coordination Committee.

4. The stakeholder consultation process started with a high-level political event (Sept 2020) for the launch of the UNCCD report on GGW, where the GGW regional support programme was requested by countries. During the elaboration of the GCF RSP (January-Oct 2021) the following partners involved in the GGW Initiative have been consulted through multiple meetings/calls: the national focal points of the GGW, the GCF NDAs, UNCCD, the GCF, the GEF

Secretariat, the GGW agency, the African Union, and multiple GCF AEs and GEF agencies or partners (FAO, WB, UNDP, WFP, IUCN, AFD, OSS, CILSS, WMO, and the private sector (WEF). Moreover, the GEF MSP GGW project by UNEP was consulted. This project will build on these consultations and work jointly with the GCF to engage them on the topics identified in Table 4. The PPG phase of the project will consult further with all groups of stakeholders, but will have a strong focus on consulting with regional organisations, such as Regional organisations, such as the Pan Africa Agency for the GGW (PAAGWW), CILSS and Agrhymet as well as the CGIARs to identify a suitable executing agency for Component 3 of the project.

Table 4. Key project stakeholders.

Stakeholder	Topics of engagement	Form and frequency of engagement
Finance system actors: Central banks, insurances and regulators in each programme country	Project training and technical capacity	Technical capacity and business development trainings, round table and events Semi-annual/As necessary
Attijariwafa bank, AfDB , Islamic Development Bank	Cofinancing and strategic partnership to crowd in resources	Strategic partnership and cofinancing
Farmer organisations	Project training and technical capacity	Technical training, loans administration Continuous
Cooperatives	Project training and technical capacity	Technical training, loans administration Continuous
Micro Small Medium Enterprises (MSMEs)	Project training and technical capacity	Technical training, loans administration Continuous
Women and youth organisations	Project training and technical capacity	Technical training, loans administration Continuous
UNCCD & GGW FPs, and LDCF and GEF OFPs of participating GGW countries.	Policy dialogue and coordination	Policy dialogue and coordination Continuous
Regional organisations, such as the Pan Africa Agency for the GGW (PAAGWW), CILSS, Agrhymet, etc. as well as the CGIAR	Project training and technical capacity	Technical training, regional coordination and knowledge exchange

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

1. Women are increasingly and disproportionately affected by climate change. In the GGW countries, women play a central role in feeding their families and ensuring other basic needs (water, fuel for firewood, etc.). This responsibility has become harder to assume because of declining crop yields due to climate change (primarily higher temperatures and unpredictable rainfall patterns). The programme will increase opportunities for livelihood improvement and provide concrete benefits to smallholder farmers and pastoralists, both men and women through small innovation grants. The implementation of targeted activities can potentially offer an array of advantages to local communities, such as greater yields, improved soil fertility, fodder availability, as well as shorter wood and water collection time for women, freeing up their time so they may engage in other productive tasks.
2. Through its focus on knowledge sharing and capacity building, this programme will support the access to technology and information that hamper women's capacity to manage current climate risks and adapt their livelihoods to long-term climate change trends. 50 per cent of small grants are to be granted to women-led MSMEs, cooperatives and FOs. The other 50 per cent will be dedicated to Men of which 50% will be youth-led MSMEs, cooperatives and FOs in which young women participate. Specific actions will be developed to strengthen the technical and managerial capacities of women aimed at providing them with appropriate tools for identifying and developing bankable business plans and improving their level of financial education. Gender-disaggregated data will be assessed against the appropriate indicator to measure women's enhanced access to knowledge and innovation grants. The project intends to close the gender gap, as women represent 60 to 70 per cent of the work force and do not have access to knowledge and capacity.
3. The PPG phase of the project will undertake a thorough gender analysis of adaptation and resilience measures in the GGW and develop a gender action plan for closing the gender gap with a focus on innovations and digital transformations.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

1. Private sector organisations will be actively involved due to the strategic nature of their activities in relation to natural resources management and agriculture. The project is a key opportunity to build the capacities of private sector actors and raise their awareness about innovative climate change adaptation and resilience measures. The agricultural sector offers considerable opportunities for mobilizing private investment for green businesses in the following areas: sustainable livestock production, sustainable horticulture production (tomato), sustainable tree crop production (mango, cashew), NTFPs (shea), sustainable cereal production (rice, millet), sustainable cassava production and sustainable groundnut production. 1. The GGW RSP targets directly the private sector and will provide capacity building of smallholders, cooperatives, MSMEs to support technology transfer and adaptation. During the PPG phase, an analysis and plan for awareness raising and engagement of private sector stakeholders, including multinationals, will be developed that integrate technology transfer and approaches to climate risk and climate resilience in their activities across all GGW countries. Synergies will also be established with the GCF RSP and its digital marketplace.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

1. The risks to the GGW RSP are summarised in the table below:

Table 4. Risk analysis.

Risk	Level	Mitigation measure
Political conflict and insecurity in the Sahel	M	Digital transformation technologies will be identified by the project that will facilitate knowledge exchange and learning even in an insecure environment. Innovation grants will be selected based on a range of criteria, including the security at proposed field sites.
Limited capacity of national and regional institutions to engage, synthesize and share knowledge	L	The project aims to strengthen the capacities of national and regional institutions and staff in knowledge management through training.
COVID-19 effects on countries socioeconomic situation and outlook	L	<p>All countries are affected by COVID-19 and have put into place some specific measures to address the impacts of the pandemic. Capacity development and production of knowledge management materials will be conducted in small groups or through virtually connected teams to reduce COVID-19 infection risks. Digital knowledge platforms will facilitate interactions among project partners.</p> <p>The focus on adaptation in GGW agricultural productive systems provides opportunities for building the resilience of the communities and also building back better through promotion of green jobs to reduce the impact of loss of income due to the pandemic.</p>
Negative climate change impacts from increasing temperatures and decreasing rainfall in the GGW on agricultural productivity and livelihoods	M	Climate projections indicate that precipitation levels will continue to decrease, while temperatures are expected to increase between 1 and 1.7°C for the 2021-2050 period. The climate

on agricultural productivity and livelihoods

between 1 and 1.72 C for the 2031-2050 period. The climate models produced using the IFAD Climate Adaptation in Rural Development Assessment Tool indicated that the production of the main crops in the targeted countries will be severely affected by future climate change: average millet production is predicted to decrease by 10 percent, groundnut by 11 percent, and rice by 8 percent over the next 20 years. Climate change also has far-reaching implications for national and regional economic, political and social stability and security in the GGW area, which will increasingly transcend the capacity of each country to manage these issues alone.

To mitigate these risks, this project will support exchange of knowledge and best practices on adaptation in the agricultural sector to reduce the vulnerability of the GGW population to impacts of climate change. It will give them access to new knowledge tools and technologies for climate-smart agriculture and other resilient practices and support implementation and scaling up of innovative practices through innovation grants that will strengthen the resilience of local livelihoods.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

1. The Pan Africa Agency for the GGW (PAAGWW) created in 2010 is responsible for the coordination and monitoring of the implementation of the GGW and for the mobilization of necessary resources in relation with the AU and the Member States. At the national level, Member States have created National GGW Agencies or focal points to supervise and coordinate the implementation of national GGW priority actions. In September 2020, at the online meeting of the GGW Ministers organized by the UNCDD, the GGW countries invited the GCF and the other international entities to boost their support for the GGW initiative. In response to this invitation, in January 2021, during the One Planet Summit, development partners committed to support the GGW objectives in the eleven GGW countries through the launch of a Great Green Wall Accelerator to facilitate and strengthen the coordination and collaboration of donors and stakeholders involved in the GGWI and better monitor and measure the impact of their actions. The GGW Accelerator will be coordinated through the PAAGGW, with initial support from UNCCD.

2. The Regional Support Programme Unit will include a Regional Knowledge Management Specialist in charge of coordinating the activities at regional level. Co-financing from the GCF to the RSP will provide for a Knowledge Management Specialist in each country to be hosted by the NDA. Coordination will take place with relevant adaptation projects in the GEF as well as GCF portfolios in the GGW, as discussed under the Baseline section, in particular the UNEP/GEF project on “Harnessing the GGWI for a Sustainable and Resilient Sahel” that is developing a longer-term vision design a program with potential to mobilize larger investments in GEF-8.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

- UNFCCC National Determined Contribution
- UNFCCC Technology Needs Assessment
- UNCCD Reporting
- National Adaptation Programme of Action Update
- Others

1. The GGW participating countries are all parties to the UNFCCC and have signed and ratified the Kyoto Protocol. By ratifying the UNFCCC, these countries have committed to implementing measures to adapt to climate change and reporting on their NDCs. This programme will contribute to the implementation of objectives of the three Rio conventions ratified by all countries, including the UNFCCC, CBD and UNCCD, as well as the Paris Climate Agreement, the SDGs and the Sendai Framework for Disaster Risk Reduction.

2. The GGW RSP is fully aligned with the countries' national development plans and their national commitments on climate mitigation and adaptation included in their NAPAs, National Climate Change Policies and Strategies, NDCs, National Communications (NCs), SDGs and National Strategies for Disaster Risk Reduction.

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

1. All GEF projects have KM strategies and activities in place and have allocated the financial and human resources to achieve the proposed results. The support for knowledge management provided by the Regional Support Programme aims at creating the necessary bridges between all these project-specific KM strategies and resources, and create a structured framework to ensure that project specific information and knowledge is properly captured and shared systematically with other GEF as well as GCF projects, IAs and GGW countries. The Regional Support Programme will provide support at two levels.
2. Regional level: structure, streamline, analyze and disseminate knowledge generated by adaptation projects across the GGW countries through a strategy, knowledge center, specific knowledge and communication products and the organization of events. In addition, synergies with the GGW Accelerator, GCF Regional Support Programme and AF will be created at regional level for specific activities.
3. Country level: facilitate and support GGW projects in sharing the knowledge generated by each project and fostering linkages and learning based on past and present projects in the country. GEF support will ensure the sharing of climate change adaptation knowledge through different channels, such as knowledge products and peer-based knowledge exchange.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF

CEO Endorsement/Approval MTR

TE

Low

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

1. The environmental risk rating is low and climate risk rating moderate/substantial. The Environmental and Climate Risk Assessment Checklist is attached as annex D. A more detailed environmental and social assessment will be conducted during project preparation and mitigation measures identified and incorporated into the project design.

Supporting Documents

Upload available ESS supporting documents.

Title**Submitted**

GEF_IFAD_FSP_GGW_SECAP ESC Screening

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name

Position

Ministry

Date

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

