Sahel and West Africa Program in Support of the Great Green Wall Initiative

TERRAFRICA
REGIONAL SUSTAINABLE LAND MANAGEMENT

THE WORLD BANK

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To Expand Sustainable Land and Water Management in Targeted Landscapes and Climate Vulnerable Areas

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ABBREVIATIONS

2iE	International Institute for Water and Environmental Engineering
AAP	Africa Action Plan
ACMAD	African Centre of Meteorological Applications for Development
AfDB	African Development Bank
AGRHYMET	Agro-Hydro-Météorological Center of the CILSS
APL	adaptable program loan
AU-NPCA	NEPAD Planning and Coordination Agency
CAS	Country Assistance Strategies
CBOs	community-based organizations
CEN□SAD	Community of Sahel□Saharan States
CFIP	Community and Private Forest Investment Project
CGIAR	Consultative Group on International Agricultural Research
CILSS	Interstate Committee for Drought Control in the Sahel
COMIFAC	Central African Forests Commission
CPS	Country Partnership Strategies
CSIFs	country SLM investment frameworks
DPL	Development Policy Loan
DRM	Disaster Risk Management
EC	European Commission
ECCAS	Economic Community of Central African States
ECOWAP	ECOWAS Agricultural Policy
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization
FIP	Forest Investment Program
GEB	Global environmental benefits
GGWI	Great Green Wall Initiative
HABP	Household Asset Building Program
ICPAC	IGAD Climate Prediction and Application Center
IDA	International Development Association
IDLM	Integrated Disaster and Land Management (Togo)
IEG	Independent Evaluation Group
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority on Development
IUCN	International Union of the Conservation of Nature
KPI	Key performance indicator
LADA	Land Degradation Assessment
LDPSP 2	Local Development Program Support Project 2
MDG	Millennium Development Goal
MRV	Measurement Reporting and Verification
NBA	Nile Basin Authority
NBSAP	National Biodiversity Strategies and Action Plans
NCOS	National Centers of Specialization
NEPAD	New Partnership for Africa's Development
NEWMAP	Nigeria Erosion and Watershed Management Project
NGO	Nongovernmental organization
NIPENR	National Investment Programme for Environment and Natural Resources
NPCA	NEPAD Planning and Coordinating Agency
NREG	Natural Resources and Environmental Governance
NRM	Natural Resource Management
OMVS	Senegal River Development Organization
OSS	Sahara and Sahel Observatory
PFD	Program Framework Document
PES	Payment for environmental services
PPCR	Pilot Program for Climate Resilience
PRSP	Poverty Reduction Strategy Paper
PSNP	Productive Safety Net Project
RECs	Regional Economic Communities
REDD	Reducing Emissions from Deforestation and Forest Degradation
RIAS	Regional Integration Assistance Strategy
R-PP	Readiness Preparation Proposal
SIP	Strategic Investment Program
STAP	Scientific and Technical Advisory Panel
UNCBD	United Nations Convention on Biological Diversity
UNEP	United Nations Environment Programme
WAAPP	West Africa Agriculture Productivity Project
WMO	World Meteorological Organization
WOCAT	World Overview of Conservation Approaches and Technologies
WRCC	Water Resources Coordination Center (ECOWAS)

Introduction

Sahelian Africa faces a persistent problem of variability in rainfall, which is the major driver of vulnerability in the region. Populations in the Sahel are among the poorest and most vulnerable to climatic variability and land degradation. They depend heavily on healthy ecosystems for rainfed agriculture, fisheries, and livestock management to sustain their livelihoods. These constitute the primary sectors of employment in the region and they generate at least 40 percent of the gross domestic product (GDP) in most of the countries. Furthermore, ecosystem services provide much needed livelihood products, such as fuelwood and bushmeat, among others. Unfortunately, increasing population pressures on food, fodder, and fuelwood in a vulnerable environment have deteriorating impacts on natural resources, notably vegetation cover. Climate variability along with frequent droughts and poorly managed land and water resources (surface and underground) have caused rivers and lakes to dry up and contribute to increased soil erosion.

Since the severe droughts of the 1970s and 1980s, which caused the loss of thousands of lives and forced hundreds of thousands to migrate, much knowledge has been gained by the communities and nations on strategies to cope with and mitigate environmental degradation and climate change. Although climate vulnerability is exacerbating land degradation trends, there is growing evidence across the region of successful sustainable land management innovations that protect fragile soils, improve productivity, and create income opportunities for the vast rural population. The challenge facing Sahelian and West African countries now is to harness these modest successes by working together to expand opportunities for the rural population in the context of sustainable development and food security. By linking national-level efforts across borders, countries will tackle policy, investment, and institutional barriers that exacerbate the effects of climate change and variability, leading to desertification and deterioration of the environment and natural resources and the risk of conflicts between communities.

This program supports the implementation of a country-driven vision for integrated natural resource management for sustainable and climate-resilient development in the Sahel region. The grant includes $80.4 million from the Global Environmental Facility (GEF) Trust Fund, $20.4 million from the Least Developed Countries Fund (LDCF), and $4.6 million from the Special Climate Change Fund (SCCF). The program builds on a series of World Bank investments amounting to $1.8 billion in cofinancing in 12 countries. The investments cover agriculture, food security, disaster risk management, rural development, and watershed management.

Each country will design a GEF project based on national-level priorities for GEF resources and, where LDCF and SCCF are utilized, in ac-

cordance with National Action Program of Adaptation to Climate Change (NAPA) priorities and National Communications. The discrete projects will directly address the priorities of the Climate Change Adaptation Program for LDCF and SCCF as well as the GEF land degradation, biodiversity, and climate change focal areas (FAs). The program will also leverage incentive financing from the Sustainable Forest Management (SFM) Program to increase focus on forest landscapes.

Part I: Programmatic Justification

A. Goal of the Program

Sahelian economies and livelihoods heavily depend on soil, water, and vegetation resources. The state of these resources has been steadily deteriorating as a result of expanding human settlement and demand for more food, fodder, fuelwood, and water. Frequent droughts accompanied by unplanned, unsustainable, and poorly managed use of land and water have, along with natural climate variability, caused the drying up of national and transboundary rivers and lakes, while wind and water erosion have removed valuable top soil.

Southern systems are connected across borders through migration, transhumance, and land-use change (for example, forest depletion in coastal West Africa affects rainfall in the Savannah and Sahel). Throughout the region, there is increasing understanding that degradation of land and water resources, as well as climate variability and change, transcend institutional and geographic boundaries. Certainly countries face shared challenges and can gain from a shared response. An umbrella program allows some level of interconnectivity across countries that could not be achieved through small, isolated projects.

The goal of the program is to expand sustainable land and water management (SLWM) in targeted landscapes and in climate vulnerable areas in West African and Sahelian countries. Key performance indicators (KPIs) for the program are:

1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, and protected areas [PAs])

2. Changes in vegetation cover in targeted areas, compared to baseline (hectares [ha])

3. Targeted institutions with increased adaptive capacity to reduce risks and response to climate variability, compared to baseline (#)

4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha)

The program will support the following activities:

- Expand investment SLWM technologies (see annex F for list and definition). This would help communities adapt production systems to climate variability and change, generate income and livelihoods, and secure global public goods such as retention of greenhouse gases (GHG), nitrogen fixation, groundwater recharge and biodiversity, and reduce impacts from erosion, drought, and flooding.

- Improve land-use planning, such as at watershed scale (for example, Nigeria) or local levels (for example, grazing reserves, conservation areas, and so forth). This would help manage trade-offs that occur between multiple uses, such as demand for rich floodplains for grazing or crops or woodlands' value for fuelwood versus watershed function and PAs.

- Improve and apply the information base: climate and water monitoring network improvements, ICT (information communication technology) innovations, institutional cooperation within and across countries, and evidence-based policy development.

This program is one of the contributions to the Great Green Wall Initiative. The vision of a great green wall was originally conceived by the former President of the Federal Republic of Nigeria, Chief Olusegun Obasanjo, and was then strongly supported by the President of Senegal, Abdoulaye Wade, initially with a limited vision related to tree planting. The vision has evolved into an integrated ecosystem management approach. Through efforts of several other leaders in the region, the new approach has been embraced by the Africa Union (AU) following adoption of the "Decision on the Implementation of the Green Wall for the Sahara Initiative" by the Assembly of the AU in January 2007. In June 2010, 11 countries signed a convention in Ndjamena, Chad, to create the Great Green Wall Agency and nominate a secretary to further develop the initiative. In February 2011, the GEF organized a ministerial consultation in Bonn, Germany, to agree on guidance on the priority areas to be addressed with the GEF resources. The African initiative is envisioned as a mosaic of land uses that are consistent with GEF's mandate under the FAs of land degradation, climate change mitigation, biodiversity and international waters, as defined by the GEF.

B. Description of the Consistency of the Program

B.1. The GEF/LDCF/SCCF Focal Area Strategies

The program will be developed using a multifocal area strategy to help ensure good integrated ecosystem management approaches that can help secure a robust mix of primary and secondary ecosystem services from the landscape mosaic while adapting to climate change and variability. It will address several of the GEF strategic goals, by supporting countries to:

- Conserve, sustainably use, and manage biodiversity, ecosystems, and natural resources globally, taking into account the anticipated impacts of climate change;
- Reduce climate risks via adapting to future climate change and current variability; and
- Build national and regional capacities and enabling conditions for intertwined global environmental protection and sustainable development.

The program is consistent with the GEF strategies for the following FAs: land degradation, climate change mitigation, biodiversity, and sustainable forest management.

The program will directly address land degradation challenges in the region by promoting community-based SLWM practices and building/supporting existing and effective enabling environments for SLWM to reduce pressure on natural resources from competing land uses (land degradation strategy 3 [LD-3]. In addition, by supporting low-carbon technologies, the program will support activities that will allow countries to follow a low-carbon development path, particularly in relation to renewable household energy alternatives (climate change mitigation strategy 3 [CCM-3]). Through several of its components related to land use and land-use change, the program will also promote restoration and enhancement of carbon stocks (CCM-5). The program will also aim at reducing pressures on forest resources through SLWM, generating sustainable flows of forest ecosystem services (SFM/Reducing Emissions from Deforestation and Forest Degradation [REDD+/-1. The program will be implemented following the landscape approach (promoted through the SFM strategy), which integrates people's livelihood objectives into the management of the different ecosystems within the landscape.

To improve ecosystem function and increase opportunities for improving livelihoods, the program will also contribute to the conservation of biodiversity in both national PA systems as well as production landscapes (biodiversity strategy 1 [BD-1] and BD-2). The biodiversity related activities are to support countries integration of biodiversity conservation and sustainable use into the key production sectors within the larger productive landscape (BD-2), often in association with agricultural project baselines. The program will also seek to improve sustainability of PA systems (BD-1) through expansion or rehabilitation of existing PAs, development of biological corridors, support to PA management as applicable, and development of close links between economic sectors and PAs.

The program has been designed to achieve synergies between FAs and it is likely to create precedence on how activities will be conducted across FAs. The program integrates FAs and adaptation windows to deliver a range of global benefits from landscapes, focusing mostly on production landscapes. The key performance indicators mentioned above are likewise integrated, borrowing from each FA, SFM, and adaptation windows. Key performance indicators 1 (area change in improved technology), 2 (area change in vegetation cover), and 4 (tC/ha) have relevance for the LD, SFM, BD, and CCM FAs. Discrete projects under the umbrella will report on all or a subset of these as well as on other lower-level indicators.

Finally, the program will include country-level projects that will incorporate activities to reduce vulnerability and increase the capacity to adapt to actual or potential impacts of climate variability. By doing so, the program will help meet the following LDCF/SCCF objectives:

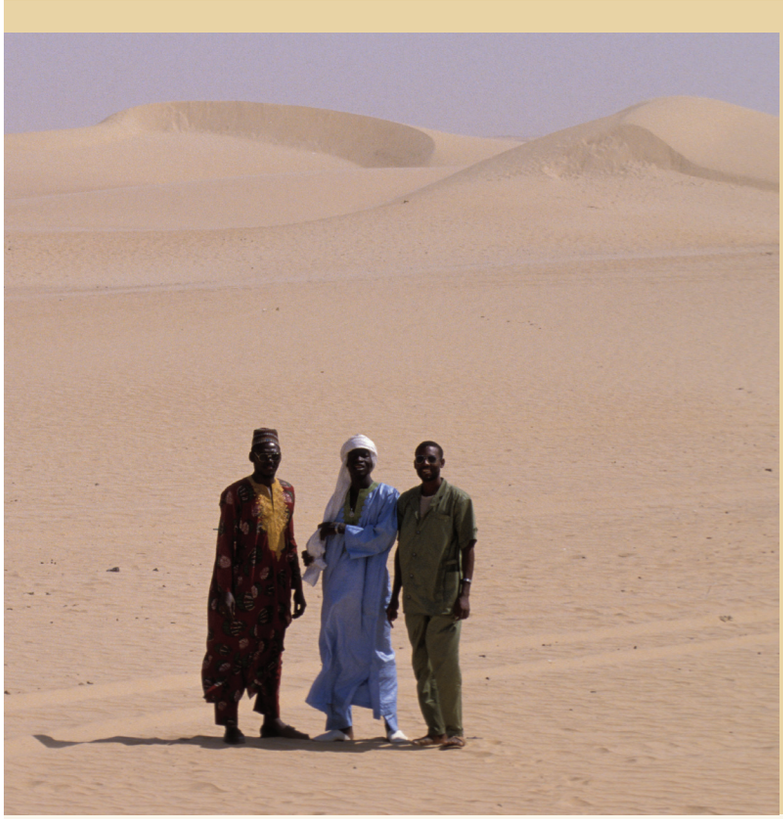
- CCA-1: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level
- CCA- 2: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional, and global levels

LDCF/SCCF resources will support countries in becoming climate resilient by promoting both immediate and longer-term adaptation measures in development policies, plans, programs, projects, and actions.

B.2. For Programs Funded from LDCF/SCCF: The LDCF/SCCF Eligibility Criteria and Priorities

The program fulfills the criteria and priorities required to obtain financing from the LDCF/SCCF. The strategy adopted for the program consists of a set of interrelated components plus additional adaptation measures (investments, institutional development, and information) that are needed to support the baseline projects given the presence of the challenges related to climate change. This design is thus consistent with the additional cost principle.

By using LDCF/SCCF funds to mainstream adaptation, the program will have a greater impact, take advantage of synergies, and achieve economies of scale. This proposal is consistent with the following eligibility criteria:



- *Country ownership*: All least-developed countries included in the program that will receive funds from the LDCF have submitted the NAPAs. See annex B with information for each of the participant countries. Projects submitted by Ghana and Nigeria—parties to the United Nations Framework Convention on Climate Change (UNFCCC)—will qualify for SCCF aiming to implement adaptation measures that increase resilience to climate change in a particular sector. Projects within the program are country driven, based on the NAPA process, and prepared with full involvement of relevant stakeholders.

- *Program and policy conformity*: National and regional projects included in the program will offer cross-sectoral solutions to urgent and immediate adaptation needs (*program conformity*) without replicating existent initiatives. They will be designed to address the additional costs of priority adaptation measures identified in the NAPAs (*program design*), and they will also promote the required capacity to continue with such solutions after project completion (*sustainability*).

- *Financing*: Proposed interventions within the program will need to ensure they are the cheapest and most effective way to achieve the intended results.

- *Institutional coordination and support*: Because the projects to be financed are part of a programmatic approach, it will be easier to link them with other similar projects within the program. The program will particularly focus on including projects that continue or upscale existing processes, implement priority activities that have not previously been sufficiently addressed, and do not duplicate current efforts.

- *Monitoring and evaluation*: Projects supported financially by the LDCF/SCCF funds will follow the program's overall monitoring and evaluation (M&E) procedures.

B.3. National Strategies and Plans or Reports and Assessments under Relevant Conventions

The program will reinforce the commitment of each of the participant countries to implement global and regional frameworks, such as the United Nations Convention to Combat Desertification (UNCCD), UNFCCC, Convention on Biological Diversity, the Africa Union's New Partnership for Africa's Development's Environment Action Plan (EAP) and its Comprehensive African Agricultural Development Program (CAADP). The program is consistent with the UNCCD 10-year strategic plan and framework for the implementation of its convention (2008–18), contributing to each of its four strategic objectives: (i) to improve the living conditions of affected populations; (ii) to improve the condition of affected ecosystems; (iii) to generate global benefits through effective implementation of the UNCCD; and (iv) to mobilize resources to support implementation of the UNCCD through building effective partnerships between national and international actors. The program's components also align to the strategic plan's operational objectives: (i) advocacy, awareness raising, and education; (ii) policy framework; (iii) science, technology, and knowledge; (iv) capacity building; and (v) financing and technology transfer.

National and regional projects will be consistent with the regional, subregional, and national action plans to combat desertification (RAP, SRAPs, and NAPs). Also, in relation to climate change, projects will address priority actions identified in the country's NAPAs. Regarding the Comprehensive Africa Agriculture Development Programme (CAADP), the program is particularly consistent and will support implementation of the pillar on SLWM and the closely related TerrAfrica program, both of which support SLM scale up.

The program is building on the knowledge generated by renowned regional organizations, such as the permanent Interstate Committee for Drought Control in the Sahel (CILSS), Agro-Hydro-Météorological Center of the CILSS (AGRHYMET), and Sahara and Sahel Observatory (OSS), that have decades of data and knowledge on the ecosystems covered by the program. These organizations will be associated with program implementation through a specific project.

The program will strengthen the implementation of existing continental frameworks and plans addressing land degradation and desertification as outlined in the Great Green Wall Initiative (GGWI) Action Plan developed in 2009. The proposed program is contributing to the priority areas of intervention included in the GGWI Action Plan. Aiming at continuing processes started with TerrAfrica's multiagency/GEF Strategic Investment Program (GEF-SIP) for SLM in sub-Saharan Africa, the proposed program is fully consistent with GEF-SIP's goal of supporting sub-Saharan countries in improving natural resource–based livelihoods by reducing land degradation.

The program is also consistent with the Africa Water Vision for 2025, which calls for "an Africa where there is an equitable and sustainable use and management of water resources for poverty alleviation, socioeconomic development, regional cooperation, and the environment."

The program will also consider the regional sectoral policies and strategies. For example, activities in West African countries will be consistent with the regional agricultural policy developed by the Economic Community of West African States (ECOWAS), the "West Africa Water Resources Policy," and the regional action plan for IWRM in West Africa.

Country-level projects will also be in line with strategies, priority activities, and needs identified in country-driven exercises, such as action plans related to the United Nations conventions. In ad-

dition, under TerrAfrica and often with GEF-SIP financing, several countries have already prepared or are in the process of preparing Country Sustainable Land Management Investment Frameworks to identify priority investments across sectors that will need additional support for continued implementation. The proposed program will not only be consistent, but will support the implementation of the priorities identified in the SLM investment frameworks.

C. Rationale of the Program and Description of Strategic Approach

The Region and Its Challenges

The Sahel is the semiarid transition region that lies between the arid Sahara desert and wetter regions of equatorial Africa. It extends from the Atlantic Ocean in the west to the Indian Ocean in the east. The Sahel's latitudinal limits fluctuate with rainfall patterns. Its vegetation cover is composed of bushes, grasses, and stunted trees that increase in density toward the south. Historically, the Sahel has had high rainfall variability and this is expected to increase, affecting the ability of its already stressed land and water resources to provide a secure stream of ecosystem services necessary for poverty alleviation, economic growth, and regional and global public environmental goods such as carbon accumulation in soil and biomass, groundwater recharge, the Eurasian-African flyway, and so on.

The Sahel is highly vulnerable to climate change because of its geographic location and the dependence of its population on rain-fed agriculture and transhumance systems. The agricultural sector employs more than 60 percent of the active population and accounts for 40 percent of the region's GDP. Main livelihood strategies in the region center on secondary services from land and water resources (food, fuel, fiber). Rainfall variability, land degradation (deforestation, continuous cropping, and overgrazing), and desertification are some of the factors that combine to make it one of the poorest and most environmentally insecure areas in the world (Kandji, Verchot, and Mackensen 2006).

The interrelated set of problems associated with land degradation and climate variability facing the Sahel are well known. Livelihoods in the Sahel countries heavily depend on the soil, water, and vegetation resources. The state of these resources has been steadily deteriorating as a result of expanding human settlement and demand for more food and fuelwood. Frequent droughts accompanied by unplanned, unsustainable, and poorly managed use of land and water (surface and groundwater) have, along with natural variability, caused the drying up of national and transboundary rivers and lakes, while wind erosion has removed valuable top soil. As a result, the natural vegetation of most of the Sahel has been dramatically altered and the ecosystem degraded. Despite isolated land management bright spots in places such as Maradi, Niger, the net result has been less annual rainfall, more soil degradation, increased desertification, frequent crop failures, and low production of fodder and fuelwood. Many countries often see water availability as the most limiting development factor in the zone.

These challenges are set to become more entrenched with climate change. The Sahel's historically high degree of climate variability could increase. Higher and more variable temperatures can lead to higher land degradation rates, more frequent droughts and floods, changes in the pattern of seasonal wetlands, greater heat stress on livestock, changes in the length and duration of the growing season, and in crop quality and yields. Climate change will generally increase disaster risks, not only through increases in extreme weather events and sea-level rise, but also through increases in societal vulnerabilities to hazards arising from stresses on water availability, agriculture, and degrading ecosystems. Inadequate early warning systems, lack of prepa-

ration, and inadequate land-use planning have helped magnify hazard levels.

Ecosystem Interconnectivity and Link with Southern Systems

The proposed program will not only address the above mentioned challenges that affect the countries with Sahelian ecosystems that are part of the official Great Green Wall Initiative (Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, and Sudan), but also challenges related to the southern states in Nigeria and three additional West African countries (Benin, Togo, and Ghana) with important savannah and forest systems linked to the Sahel. The expansion of the intervention area will not only allow knowledge sharing among countries that share very similar issues, but will also consolidate and add value to the program because northern and southern ecosystems are interrelated (figure 1).

The Sahelian belt has important social, economic, and environmental links with systems to its south, including savannah, derived savannah, and forested systems. For example, the Niger and Volta basins are affected by actions in the Sahel, including siltation, transhumance, and outmigration, and by the Sahel's natural variability, including periodic droughts that are correlated with the southern El Nina oscillation (implying that improved informatics supported by this program can make a difference). In southeastern Nigeria, Anambra state—the self-proclaimed erosion capital of the country—emergency erosion management measures are being taken, but the scale of the problem overwhelms the efforts. To the west, the Black, White, and Red Volta rivers eventually feed into the world's largest reservoir in southern Ghana, inexorably linking the fates of people in Ghana with their neighbors in Burkina Faso, Togo, and Benin.

Wetlands in particular provide important biodiversity services, and these are linked across the Sahel, Savannah, and coastal forest systems in West Africa. Most African wetlands display richness in both number of species and endemism. It is believed by some authorities that wetland areas with the highest endemism and of most international significance in Africa are the Inner Niger Delta in Mali, the seasonally inundated floodplain of southern Chad and the northern Central African Republic, the Sudd region of southern Sudan, and coastal mangroves. A complex web of flyways connects these and other areas. The

Sahel wetlands of western Africa are concentrated mainly in the Senegal River Basin in Senegal and Mauritania, the Niger River Basin in Mali, and Lake Chad and the Logone and Chari rivers in Cameroon, Nigeria, and Chad. Because of their abundant food source and attractive habitats, they host numerous endemic and migratory waterfowl. For example, the floodplains of the Senegal, Niger, and Chad basins support over a million waterfowl, while the Djoudj National Bird Park, Senegal, and Diawling National Park, Mauritania, are havens for migratory birds in West Africa, providing habitat for over 3 million birds belonging to nearly 400 species. Some wetland areas are experiencing immense pressure from human activities, the most important being drainage for agriculture and settlement, as well as excessive exploitation by local communities and improperly planned or executed development activities.

Basin agencies, especially transboundary ones, have demonstrated capacity for innovation in Africa (for example, joint asset development and management in the Senegal's Senegal River Development Organization (OMVS), a shared sustainable development investment program in the Niger's Nile Basian Authority (NBA), partial cooperation on the Nile and Zambezi rivers, and more). However, technical and management capacity still require considerable improvement, as in the case of individual country water-related agencies. Instruments such as water rights and insurance are still being established. Water investments are inadequate given the needs, resulting in significant social, environmental, and economic distress. The case of Darfur illustrates how issues of climate and conflict combine to create complexities in water and land resources management.

Meanwhile, Sahelian herders follow their animals, mostly cattle, south into greener pastures, leading to greater conflict among water and land users in savannah and derived savannah areas. Often conflict is over use of high-productive areas, such as seasonal wetlands and floodplains. Human outmigration from the Sahel also can exacerbate resource use in southern zones; people continue to move into growing cities such as Dakar and Lagos, as well as dense rural areas such as Nigeria's Anambra state, which already faces a land shortage and severe land degradation.

Notably, there is little awareness of the impact that coastal forest can have on climate patterns and, ultimately, the land and water productivity of West Africa's drier interior. The Center for Global Change Science at the Massachusetts Institute of Technology in the late 1990s carried out research showing that the series of droughts in the 1970s and 1980s in West Africa may have been caused by the destruction of moist forest systems in countries such as Nigeria and Ghana. Further deforestation could eventually lead to a collapse of the West Africa monsoon.1 Rainforests help to generate rainfall elsewhere. Half or more of the rain falling on the forest quickly evaporates from the forest canopy, providing moisture in the air to form clouds that produce rainfall further downwind. In this way, West African coastal rainforests, which receive copious amounts of rain from

1. The model confirms an old theory, first developed 30 years ago by MIT's Jule Charney, that the loss of vegetation on the edge of the Sahara Desert in the West African interior could reduce rainfall. But the authors say this effect is much smaller than that of coastal deforestation.

winds coming off the Atlantic Ocean, have helped to maintain rainfall in the drier lands of the interior. At the beginning of the 20th century, the West African coastal rainforests covered around 500,000 square kilometers. Since then, up to 90 percent have disappeared to make way for human activity. Overgrazing, expansion of arable land, and the substantial growth of the timber industry are the main reasons for the disappearance of these coastal rainforests. As the forests are removed or degraded, evaporation is reduced, which affects rainfall in drought-prone interior areas. In addition, more of the rain falling on coastal regions percolates into soils—leading to greater water erosion in derived savannah and humid forest areas.

Although some of the problems are shared across Sahelian and savannah systems, investment and policy solutions need to be reinforced by mutual learning, responsive institutions, and information tools across geographic, institutional, and disciplinary boundaries. Currently, these are in short supply. Examples of needs abound: hydromet networks that meet World Meteorological Organization (WMO) density standards, drought early warning systems that inform community decisions, and other resource monitoring tools and geoinformatics to guide investment; robust farmer-to-farmer learning networks; extension and private service providers able to provide climate-resilient advice and inputs; and mechanisms for sector coordination.

Program Rationale—Support and Scaling Up Existing Processes

The program will address these challenges by supporting country, regional, and sector plans for improving land productivity, ecosystem function, and climate adaptation. The program will support the implementation of the GGWI, which was established to strengthen the implementation of existing continental frameworks and addresses land degradation from Senegal on the Atlantic coast to Djibouti on the Red Sea. Originally the concept of the GGWI was limited to a tree planting initiative,[2] but it then evolved to the promotion of SLM as a more ecologically appropriate, socioeconomically sustainable, and holistic approach at the landscape level to directly benefit local land and water users (farmers, agropastoralists, and mobile pastoralists). The GGWI plans to conduct a set of interrelated interventions in well-delineated regions of Sahelian countries with the aim of achieving: (i) Natural resource conservation, development, and management; (ii) strengthening infrastructure; and (iii) improving the populations living conditions. The vision was originally conceived by the former President of the Federal Republic of Nigeria, Chief Olusegun Obasanjo, who proposed it to the Community of Sahel–Saharan States (CEN–SAD) Conference of Leaders and Heads of State of June 2005 in Ouagadougou, Burkina Faso, and subsequently to the Fifth Ordinary Summit of the African Union in July 2005 in Sirte, Libya. The vision was then endorsed in 2007 by the African Union, followed by the adoption of a plan of action in 2009. Commitment toward the implementation of the GGWI was reconfirmed during the Expert and Ministerial Consultation on the Great Green Wall, which was held in February 2011 in Bonn, Germany. A declaration was signed at the ministerial level confirming country priorities and partners strategic engagement (see ministerial declaration in annex E).

The proposed program, along with the GGWI, establishes close links with the ongoing TerrAfrica program, in which the Africa Union's New Partnership for Africa's Development (NEPAD) Planning and Coordination Agency (AU-NPCA), UNCCD bodies, the World Bank, GEF, all Sahelian countries, and others are partners. In these countries, the TerrAfrica program and its World Bank–led GEF-SIP umbrella for SLM are already providing financial and nonfinancial

2. As originally envisaged, the Green Wall was defined as a strip of forest about 15 kilometers (9 miles) wide on average and more than 7,775 kilometers (4,831 miles) long. The purpose of the wall is to counter soil erosion, slow wind speeds, and stop the encroaching desert. Most actors are now promoting a broader landscape approach.

support to improve practice, policy, and planning among sectors, stakeholders, and countries. The European Union is likewise providing support to both the GGWI and TerrAfrica, and emphasizes, along with others, that it is important to ensure that all investments and programs are aligned to help address the already fragmented knowledge, institutions, and financing related to SLM in the countries.

The program will develop activities in nine countries that are part of the GGWI: Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, and Sudan. In addition, considering the links described above, the similar interests, the World Bank's capacity to follow up on the on-ground activities, and the potential to consolidate and generate large-scale sustainable transformations, the program will expand its activities to an additional three countries: Benin, Togo, and Ghana.

Individually, each of the countries in the region has achieved some policy and technical results from SLWM. However, these results are isolated and/or need continuance. For example, farmer-led agroforestry and water and soil management innovations in Burkina Faso and Niger have achieved a "re-greening" process that has reversed desertification and improved local livelihoods. This farmer-managed natural regeneration experience has been able to transform approximately 5 million hectares of land into productive agroforestry systems. Other positive experiences ready for upscaling are no tillage and agroforestry in Nigeria, and gulley remediation in Ethiopia. However, these experiences alone can not address the bigger picture of land degradation and climate variability. In relation to climate change, some of the countries are already implementing projects to enhance adaptive capacity and resilience to climate change in specific sectors such as agriculture. In addition, some countries are already working across sectors to prioritize and implement investments in SLM. Under the TerrAfrica platform, and with support from the Bank-led GEF-SIP umbrella, enabling environments for SLM have begun to improve through the creation of national, multisector investment platforms in countries such as Burkina Faso, Ethiopia, Mali, Mauritania, Niger, and Nigeria. Several countries have already prepared or are in the process of preparing country SLM investment frameworks (CSIFs)[3] to identify priority investments across sectors that need support for future implementation.

The program will target some of the common barriers that have been identified regarding SLWM implementation and scale up. These are barriers are commonly grouped as knowledge and technical barriers, policy and institutional barriers, and economic and financial barriers.

Knowledge and Technological Barriers

Although a wealth of information exists on successful SLWM technologies and approaches, and the TerrAfrica platform has accomplished important advances, there is insufficient sharing of knowledge and experiences at local, national, and regional levels within West Africa and the Sahel region, including among researchers, project staff, and policy makers. Knowledge regarding SLWM and adaptation to climate change is fragmented and generally insufficiently linked to the policy formulation and implementation process. Knowledge gaps are still present, such as on methods for payment for environmental services (PES) and evidence-based adaptation options. In addition, knowledge bases are not readily accessible to all stakeholders. Finally, M&E systems for land degradation and its impacts are still weak.

At the local level (farmers, communities and local extension officers, and nongovernmental organizations [NGOs]), there is still lack of capacity and experience with SLWM and climate change adaptation. Whereas local resource users often

3. Among the participant countries, Ethiopia, Ghana, Mali, Mauritania, Niger, Nigeria, and Togo have or are preparing CSIFs. Burkina Faso and Senegal are involved in dialogue to prepare CSIFs.

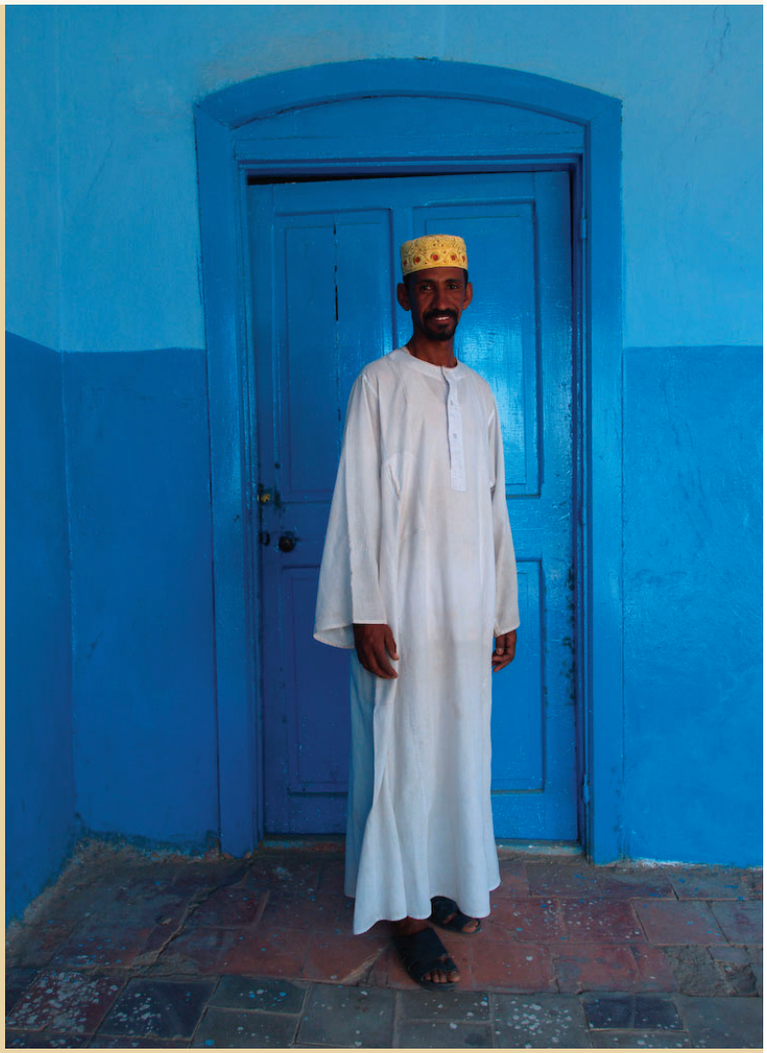
have detailed knowledge of their resource including spatial variations, and understand how their environment has changed over time, they often lack strategic knowledge that would allow them to increase production and conserve their natural resource base while taking into consideration increased population pressures, climate change, actual and potential impacts, and increased land degradation. In addition, support and advisory services are largely ineffective because of the lack of financial resources, inadequate training and capacities at local levels, and insufficient access to new technologies and approaches.

Policy and Institutional Barriers

While there are many achievements, climate change mitigation/adaptation issues still need to be mainstreamed into sectoral frameworks, plans and policies (agriculture, livestock, forestry, water, land), and Poverty Reduction Strategy Paper (PRSP) budget processes. There is also weak institutional capacity for policy design, development, and implementation.

In addition, with a varied degree of maturity, commitment, policies, and actions to combat land degradation are included in national and regional strategies, action plans, post-Rio UN convention documents, and in the CAADP. In general, most countries have carefully analyzed and described the causes and impacts of land degradation, but they have often not succeeded in agreeing to the concrete actions to be taken to support the uptake of SLWM. Specifically, actions often lacking include: (i) promotion of well-tested SLWM techniques on a large scale; (ii) testing of new techniques; and (iii) the creation of an enabling environment in which resource users have the right incentives to adopt SLWM.

Local governments as well as communities often lack the capacity, resources, and information access to manage their land resources, which severely restricts their effectiveness. In addition,



land resource users often do not have enough long-term security over the resource they depend upon, nor do they have sufficient consultative mechanisms. This restricts their feeling of ownership over the resource and limits their interest in investing in SLWM, which would result in production increases for the medium or long term.

Economic and Financial Barriers

Available financial resources are not sufficient to address the multi-dimensional challenge of land degradation and climate change. In addition, still inappropriate economic and pricing policies have resulted in unsustainable pressures on natural

resources, while effective incentives for SLWM (return on investment, compensation for resource nonuse, and upfront investment support for returns deferred in the longer term) have not been developed and/or are very insufficiently applied.

Poverty is still forcing many resource users to embark on short-term coping strategies rather than long-term investment in land and resources. In addition, rapid population growth is forcing land and ecosystem users to continuously increase pressure on local resources at the expense of the regenerative capacities of vegetation and land resources. Because of poverty, many resource users do not have the means to investing in enhancing their natural resource base and increasing their income in a sustainable manner.

Table 1 includes a further description of the barriers highlighting examples of the significance to the program, and examples of the links between such barriers and the GEF FAs and adaptation windows.

Approach for the Program

The multi-dimensional challenge of land degradation and climate variability and change requires an integrated solution that is better tackled by several countries together. The proposed program will contribute to this integrated by promoting, through individual but related projects, SLWM activities (see note 5 for definition) following an approach that accounts for social, economic, institutional, and policy needs for sustainable ecosystem management at scale. This approach targets the mosaic of production systems, PAs, habitats, and natural assets that together form the region's rural landscape. This approach not only embraces ecosystem principles, but also the connectivity between the ecosystems.

The program will use and adapt an approach incorporated under the GEF funded "Colombia National Protected Areas Trust Fund Project," implemented by the World Bank, called the "mosaics approach," which links biodiversity with agriculture and development projects. The program will also work on agrobiodiversity, learning lessons from a global project developed by the United Nations Environment Programme (UNEP), "In-situ Conservation of Wild Crop Relatives through Enhanced Information Management and Field Application," which links agriculture, food security, and biodiversity. In addition, this program will build on the wealth of experiences of GEF projects related to conservation trust funds.[4]

The concept of mosaic approach encompasses a fluid and organic understanding of landscape-level ecosystem processes and management requirements within and beyond the PAs themselves. In the context of this national project, mosaics are defined as "networks of protected areas and complementary landscapes that include combinations of national parks or reserve, production landscapes, and collectively-owned community territories."[5] The mosaic approach builds upon existing social and institutional arrangements to ensure that conservation and local benefit objectives are both met in a way that can be socially sustained."[6] Even though the interventions within the proposed support program will be not circumscribed to PAs, this definition can be incorporated for the wider landscape mosaic.

The approach—based on time-honored traditions in the Sahel (such as transhumance or fallows) but informed by modern science and tools—would address the above mentioned barriers and deliver intertwined local, regional, and global economic, conservation, and climate benefits from the region's ecosystems. Supporting multisectoral activities in the landscape mosaics, located within one or more countries, will emphasize the need to integrate different management and conservation strategies while promoting sustainable

4. These approaches are described in the articles published as part of the celebration of the International Year of Biodiversity and will be adapted to the Sahel conditions (http://www.thegef.org/gef/2010IYB).
5. See http://www.thegef.org/gef/2010IYB.
6. Ibid.

Table 1. Program Barriers	
Examples of significance to the program	**Examples of links with FAs and adaptation windows**
Knowledge and information barriers	
Informatics are weak, or not often sufficiently informing investment and policy in the region, and are insufficient to fully underpin landscape planning. Hydromet networks are insufficiently dense, economics of NRM, such as ecosystem valuation is rare, monitoring of the natural resource base is weak (with some exceptions such as Dakar's Centre du Suivi Ecologique), dynamic watershed information systems are rare. A range of knowledge bases exists, but the bases are fragmented and insufficiently linked to the policy formulation and implementation process. Consequently, there is often insufficient consideration of past experiences in the formulation of projects, programs, and sector strategies. The fragmentation and isolation of knowledge bases has a number of causes. First, knowledge institutes are often faced with a shortage of funds that prevents them from maintaining and updating databases and publishing results. Second, there is a question of system design. Many systems follow a compartmental approach, covering specific sectors or areas. Third, databases and systems are not "live": feedback to and from the lower level is not foreseen. Existing knowledge bases are generally fed in a unidirectional mode: grassroots and remote sensing information are analyzed by experts, elaborated, and eventually stored. None of these systems has been engineered in a way that provides for updating protocols based on information that originates from local levels (FAO 2006). Farmers themselves are repositories of information of which land management technologies work, where, and under what conditions, but this information is not often transferred to new settings (Critchley 2010). Poor resource monitoring dominates the region: although Terrastat provides a partial update, adequate, long-term data on natural resource status in sub-Saharan Africa is missing (the current Land Degradation Assessment in Drylands [LADA] project would partially fill this gap). With respect to forest resources, there is a lack of monitoring of the actual extent of forest degradation. The FAO Forest Resources Inventories are based on information submitted by countries themselves, information that is often not accurate. For rangelands, there is still a controversy on how the impacts of overgrazing and climate variation can be separated and adequately monitored. Whereas reliable information is lacking at the regional scale, at the local scale the information shortage is even higher. Local resources monitoring is normally conducted on an ad hoc basis, usually with funding from specific projects or programs of limited duration. In addition, coverage is also very limited. Furthermore, a sectoral approach prevails, while multi-disciplinary capacity is lacking or inadequate and the use of different scales, formats, and mapping techniques often makes it difficult to compare or integrate results (FAO 2006).	Investments, policy, ecosystem management, and land-use plans (priorities that cut across each FA and the adaptation windows) must be underpinned by targeted quantitative evidence that is generated and put into use by the participating countries themselves. The GEF climate change and SFM FAs, for example, prioritize carbon monitoring. The GEF biodiversity and land degradation FAs prioritize ecosystem monitoring, valuation tools, and landscape approaches. And the adaptation windows prioritize the ability to monitor climate variables for impact. Scaling up improved technology will improve ecosystem function and deliver global and local benefits to all FAs and adaptation windows. For example, locally appropriate agroforestry can provide biodiversity value, soil structure and carbon, biomass carbon, water retention and filtering, riverbank stabilization, income, food, fodder, medicine, pest control, and building materials. All GEF FAs and adaptation windows require robust monitoring arrangements on complex environmental impact indicators that can be difficult for sub-Saharan countries to follow through on, especially with the usually small project M&E budgets.
Policy and institutional barriers	
Extension services in the participating countries are weak, whether in the public or private sector. Rural people have limited access to information on natural resource management, except from one another (World Bank 2009). Regional institutions could add greater value to countries if they were more equipped to respond to country demand for improved analytical and advisory services. There is a lack of integration across sectors at the national level, including across GEF FAs and windows, as well as among the UNCCD, the United Nations Convention on Biological Diversity (UNCBD), and the UNFCCC—although the three conventions do share some priority actions, especially on land use and management, which are fundamental core development issues for Africa.	Promotion of technology on the ground requires working through public and credible private institutions that can work with rural people on protecting natural resources and deploying improved technologies. This improves sustainability postproject. All GEF FAs and adaptation windows emphasize the need for stronger institutions. Regional institutions are critical for facilitating multicountry efforts, and can lower transaction costs for individual countries to access information and advisory services.

continued on next page

Table 1 continued

Examples of significance to the program	Examples of links with FAs and adaptaion windiows
Resource tenure policies are fragmented, weak, or missing. With weak tenure comes low levels of investment in the resource and a perverse incentive to exceed sustainable use.	Better integration of the GEF windows would have a greater transformative effect at country level and encourage improved landscape planning that would generate benefits across themes.
Economic and financial barriers	
There is insufficient understanding of the economic and financial aspects of SLWM. Whereas most agriculture-oriented SLWM techniques lead to enhanced crop production, farmers are not always convinced of the benefit-cost ratio of these techniques, which hampers the uptake of SLWM practices. In addition, governments are often uncertain about the economic implications of SLWM, which lowers their interest in supporting the large-scale investments required for countrywide scale-up (FAO 2006). There have been a handful of economic analyses that have been filling this gap. Where knowledge of costs and benefits exist, financial support and other complementary measures need to be put in place to promote greater adoption. For example, 2011 research by the World Bank in Nigeria shows that, while some integrated soil fertility approaches are both more profitable and have greater environmental benefits than inorganic fertilizer, adoption rates remain low, perhaps due to a policy that subsidizes only inorganic fertilizer. Part of the problem in addressing poor natural resource management in Africa is poverty. Greater financial resources will be made available through farm credit, payments for environmental services, grants and trusts for parkland and community conservation areas, and so forth.	The biodiversity FA clearly prioritizes economic valuation of ecosystems, while the Scientific and Technical Advisory Panel (STAP) review highlighted the fact that rural people require additional financial resources to scale up improved landscape management technologies.

Source: Compiled by author.

use of natural resources, increasing opportunities for improvement in local livelihoods and adaptation to climate change. The geographical scope of the intervention can be national as an overall contribution to the greening of the country and to the GGWI.

Regarding interventions in PAs and learning from the GEF project "Colombia National Protected Areas Trust Fund Project," the program will employ a novel approach to strengthen the management of protected areas from the "outside-in." By recognizing the biophysical and socioeconomic milieu that PAs are part of, PA administrations will turn a potential management problem into an opportunity to sustain PAs for the long term.[7]

In addition, the proposed program will be broader in thematic and geographic scope than GGWI, but by supporting GGWI, it will reinforce the initiative and contribute to the expected effects and impacts defined in the 2009 action plan for the GGWI:

- Slowing soil erosion: the presence of vegetal cover slows wind speed and favors rainwater infiltration;
- Degraded soil restructuring: an increase in organic matter of vegetal and animal origin entails soil restructuring;
- Higher reforestation rate in countries crossed by GGWI: to restore ecoclimatic balances and biodiversity;
- Revival, development, and diversification of

7. "Protected areas around the world do not exist as isolated islands of tranquility where centuries of evolutionary processes continue uninterrupted by humans. Rather, they are often found in mixed-use landscapes where natural resources are intensively managed for satisfying human needs such as food, water, fuel, and wood. Protected area administrations are thus challenged to manage protected areas to achieve their conservation objectives while land-use and management actions taken outside the park borders can often work at cross-purposes to their conservation goals" (http://www.thegef.org/gef/2010IYB).

agriculture and stockbreeding, both in terms of vegetal and animal production volumes and size of the active population employed in these subsectors;

- Vegetal and animal biodiversity restoration, conservation, and development: deferred grazing and other privately owned wooded areas contribute to natural vegetation regeneration and return of wildlife (birds, small game, snakes, and the like);
- Increasing coverage of local needs in forest products: especially firewood, lumber, and also ligneous and nonligneous products (gum, resins, roots, leaves, barks, fruits, pharmacopeia, and the like);
- Improved living standard and health: due to noticeable improvement in nutrition, living environment, and more easily available household needs (water, energy, social infrastructures, and so forth);
- Reversal of rural migration phenomenon: gradually, "ecological migrants" and the bones and sinews looking for employment will repopulate these zones that have been rehabilitated by GGWI proximity; and
- Control of water resources: through water retention pond, artificial lakes, and hydraulic schemes that will contribute to enhanced production systems.

Besides the above effects and impacts, the program will also contribute to reducing emissions of carbon and other GHGs and enhancing sequestration for climate change mitigation.

At the institutional level, the program will rely on the commitment for collaborative action that the participant countries have expressed for the GGWI. The program was built based on TerrAfrica heritage and the GEF-SIP results and principles, while also taking advantage of the collaborative approach and regional multisector partnership that is in place under the TerrAfrica platform, which all participant countries are implementing. By building on this integrated programmatic approach, each country will benefit from lessons learned in various projects, programs, and countries and will also have the opportunity to put in place and scale up already identified priorities. The program will become a key activity within the TerrAfrica multipartner platform while supporting GGWI implementation.

During program design, the World Bank included consideration of key technical comments provided at the Expert and Ministerial Consultation on the GGWI that was held in Bonn in February 2011. Some of these key considerations referred to:

- Taking advantage of existing work and lessons learned in the region;
- Addressing the land degradation and climate change challenges with an holistic approach;
- Considering the pastoralist issues in the Sahel; the need for political and legislative framework to facilitate mainstreaming of successful interventions;
- Following an integrated ecosystem management approach; and
- Integration of interventions at regional level (annex E).

Program Design

The program will offer a menu of interrelated activities included in the components described below. The participant countries will formulate projects (both at national and regional levels) that will include all or some of the components according to their particular conditions, previous experiences, identified priorities, and unique time frames. As a result of ongoing dialogues and preparation activities in countries, quantitative targets and spatial coverage will be defined for each project. Project designs under the program

will accommodate drier and wetter futures within project lifespans given this natural range of historic variability.[8]

The common goal of such projects would be the promotion of SLWM and biodiversity conservation practices to address land degradation and climate variability in their areas of intervention. The components and subcomponents are discussed in the following sections.

Institutions, Information, and Policy

Policy and institutional strengthening: Improving enabling environments to scale up SLWM in West Africa and the Sahelian belt and build national and local level capacities to implement, harmonize, and coordinate investments, policies, and information.

Knowledge management and monitoring: Generation and exchange of knowledge that is effectively used for policy formulation and enforcement, and technical implementation. Assessment of results and progress will be part of the information to be gathered in a timely manner toward learning objectives. In addition, tools for monitoring landscape mosaics deployed, such as remote sensing, ICT, and innovative data and information systems. The subcomponent will also include outreach and communications including creating public awareness for collective action as well as the creation of a program-specific Web site to facilitate access and sharing of relevant information. Tools, documents, and practical information will be shared with the TerrAfrica's regional SLM Knowledge Base. M&E will take place at three levels: (i) project level, (ii) the higher program level, and (iii) the still higher level of general government capacity to monitor natural assets. Because the program does not have a separate M&E or project management component, this first component includes M&E outputs that are intended to track the ability of the discrete projects in the program to deliver data and information up to program-level reporting mechanisms. These activities will be carried out within each discrete project as well as through the program's regional project, across other program components.

Investment in SLWM and Biodiversity Conservation

SLWM practices: Scale up best-fit SLWM practices in degraded areas (agricultural zones, forests, pastoral, areas and wetlands). These practices could include soil conservation techniques, cover crops and intercropping, grazing land rotations and corridors, water harvesting, small irrigation, and so on. Sustainable forest management activities at national and local level will include, among others: forest regulatory frameworks; promotion of good management practices in community and smallholder forestry; sustainable harvest technologies for timber and nontimber products; forest management planning; payment for environmental services and other market-based mechanisms using economic valuation tools, activities to increase ecological connectivity and improve forest biodiversity values at landscape level, including for agricultural activities (buffer zone management, corridors between PAs), agricultural technologies to reduce pressure on forest resources). These practices would be based on participatory land- and water-use planning approaches to address specific livelihoods needs and priorities at the local level. This in turn could be accompanied by larger-scale planning (watersheds, basins, ecosystems) to secure a range of ecosystem services in the landscape mosaic. Discrete projects will identify these activities during their preparation so that technologies will be locally appropriate. Annex F summarizes a definition of SLWM practices and technologies to be promoted by the program (additional information about technologies to be promoted under the program can be found in the recently published book, *Sustainable Land Management in Practice—Guidelines and*

8. In West Africa, global circulation models are not in agreement as to whether the Sahel will have a drier or wetter future. This uncertainty rises the farther north one travels from humid areas into the Sahel, which could experience a rise or a decline in rainfall of +/-50 percent. The countries will consider current observed range of rainfall variability until better science becomes available.

Best Practices for Sub-Saharan Africa [TerrAfrica 2011]).[9]

*Biodiversity conservation measures: S*upport for biodiversity conservation in the landscape mosaic including (i) PAs and (ii) production systems affected by land degradation and climate variability. Individual projects will develop biodiversity components detailing the areas covered, any policies supported, financing mechanisms developed, etc.

Recognizing that PAs are important cornerstone for any landscape based approach, the project will seek to expand existing PAs, develop biological corridors, support PA management as applicable and develop close linkages between economic sectors and PAs. Additional biodiversity measures in productive landscapes will be addressed such as the establishing establish conservation set asides along erosion-prone waterways and vegetation corridors. The projects could also work on agrobiodiversity, and in particular in the conservation of crop wild relatives (CWR) that are described in the 2010 IYB GEF Article *Food for the Future: Conserving Crop Wild Relatives* as *"*key genetic material to improve the

9. See also TerrAfrica's (2009, 72–73) *Country Support Tool*, which defines SLWM technologies according to the World Overview of Conservation Approaches and Technologies (WOCAT) nomenclature and TerrAfrica (2011).

nutritional quality of crops, enhance productivity, and provide cultivated varieties with resistance to pests and diseases […] the conservation of crop wild relatives has become even more critical during a period of climate change." Experience was based on the UNEP project on CWR, and similar to some components of the Ghana NSBCP Project, implemented by the World Bank.

Alternative livelihoods in conservation mosaics: Community-based sustainable activities that shift productive practices leading to land degradation and desertification while generating alternative sources of income.

Innovations and Economics

Payment for ecosystem services (PES): Implement pilot PES schemes as an incentive mechanism to sustain SLWM implementation. PES is a tool that has proven to be very successful in Latin America for tipping the balance for the adoption of better SWLM practices, natural resource management, biodiversity conservation, and carbon sequestration. The methodologies used will follow lessons learned from the many GEF projects in Latin America.

Ecotourism: Development of ecotourism and related activities to generate both environmental benefits and contribute to local livelihoods.

In line with the program's integrated ecosystem approach, the program will also identify ways to support the creation of new financial mechanisms (especially under the innovation and economics component) and the development of a regional framework (especially under the institution, information, and policy component) for managing the interconnections between conservation and a productive economic sectors to ensure sustainability.

Mitigation and Adaptation to Climate Change

Adaptation: Increase adaptive capacity and reduce vulnerability of rural communities by adjusting production practices. Activities will include capacity building to implement climate risk management responses; developing climate change vulnerability maps; incorporating climate parameters into civil works planning and design; agricultural measures to promote food security; insurance schemes to reduce climate induced damages; and priority technical measures such as introducing heat-resistant plant varieties, improving small-scale, climate-resilient irrigation techniques, improvement of food and seed storage capacities, and developing livestock feed, among others.

Disaster risk management: Support community-based activities to prevent and mitigate the impacts of disasters, including reducing vulnerability and encouraging community participation in flood management. Activities will include supporting early warning systems.

Mitigation: Improve carbon accumulation in biomass and soil and reduce unsustainable land-use change that leads to emissions. This subcomponent also includes supporting the implementation of renewable household energy alternatives, resulting in reduced GHG emissions from charcoal production and use. This support will include technical and institutional capacity building in addition to technology transfer. Low-carbon technologies in the energy sector that are closely linked to land-use decisions include, among others, efficient cook stoves, biogas digesters, and small/micro hydropower as well as land degradation reduction measures to reduce sedimentation loading into reservoirs. These examples of energy technologies[10] reduce pressure on forest and woodlands by reducing demand for fuelwood and reducing GHG emissions and indoor air pollution by switching fuel to cleaner options.

10. Annex C includes a brief description of preliminary projects determined by each of the participant countries at the conceptualization stage, as well as regional projects. These priorities took into consideration the existing and planned investments, partnership framework for future support, and existing implementing capacity.

To scale up SLWM and adaptation measures, the program and its projects will follow the coherent theory of change (that defines how the change will occur, in what sequence, and with what effects) adapted from the theory developed by TerrAfrica:

- Partners support West Africa and the Sahel countries' leadership and actions to improve alliances and enabling environments for SLWM and adaptation (governance, institutions, policy, and so forth), which then…
- Contribute to improved incentives and therefore more knowledge and financing are unlocked, which then…
- Contribute to greater technology uptake and better land-use planning, which then…
- Drive SLWM and adaptation scale-up beyond current isolated experiences, which then…
- Contributes to sustainably secure ecosystem services (more food, more fiber, increased water flow, increased income and income sources, more carbon storage, greater biodiversity, and less impact and vulnerability from climate risk/variability), while helping manage trade-offs between land uses (such as controlling agricultural extensification into woodlands).

D. The Value Added of the Program

A programmatic approach that addresses regional multisectoral challenges affecting national and transboundary ecosystems offers multiple benefits and added value compared to isolated projects. As mentioned in the "GEF-5 Programming Document" (GEF 2010), programmatic approaches to natural resources would be the appropriate modality to trigger transformational changes and to more strongly link GEF investments to large-scale impacts. Four main interrelated areas of added value have been identified.

Regional interconnectivity: As developed in section C of this paper, ecosystems are connected across borders through migration, transhumance, and land-use change, for example, forest depletion in coastal West Africa affects rainfall in the Savannah and Sahel. Throughout the region, there is increasing understanding that degradation of land and water resources, as well as climate variability and change, transcend institutional and geographic boundaries. The program and its related regional projects will be instrumental in supporting the participating countries in strengthening their understanding of this interconnectivity. The regional project will also play a

role in disseminating best practices and encouraging experience sharing.

More visibility and knowledge sharing: A programmatic approach will help ensure that each participating country/project will benefit—at formulation and implementation stages—from the knowledge and lessons learned that would be regularly disseminated among stakeholders. This will improve impact at the regional scale and increase possibilities for replication among and within countries. The program will utilize and expand the knowledge base and network of experts created under the TerrAfrica platform. Also, the programmatic approach will provide improved monitoring and benchmarking, aligning key indicators and systems that will permit better comparison, evaluation, and monitoring across countries as well as increasing countries' knowledge on what works, where, and why. The program would bring greater scope of action and visibility for West Africa and Sahelian countries and for the GEF to catalyze action on the ground around a common front.

Strengthened institutions and policies: A programmatic approach will facilitate harmonization of policies and regulations across the region

as well as improve cost-effectiveness. In addition, the approach will allow the expansion and scaling-up of national interests, considering land and water landscape mosaics that extend beyond borders and embrace different ecosystems. The approach will also improve opportunities to scale up global environmental benefits across the region. Finally, a programmatic approach will ensure greater coherence in the formulation of national and regional projects, promoting greater synergies in implementation.

Lower costs, higher investment: A programmatic approach will ensure that transaction costs related to project approval could be centralized under the program's umbrella. Also, the alignment of stakeholders under an umbrella program reduces the drain on country resources and can increase the impact of each stakeholder's direct efforts. Offering a multifocal investment program will allow countries to have more reliable financing for SLWM and thus longer-term planning and consistency in implementation. A multisectoral program with enhanced accountability and oversight will be more attractive for potential additional donors, thus potentially increasing the availability of cofinancing. Finally, a programmatic approach will facilitate the blending of funding from different FAs, which in turn will generate results at a larger scale.

E. The Associated Program and the Problem Addressed

Annex C and D include descriptions of the associated or baseline projects that would be able to blend, partially blend, or go in parallel with the program. The baseline projects total $1.775 billion. These discrete projects are still scattered in different countries and address issues related to rural development, agriculture, economic growth, disaster risk management, and rural livelihoods. While the baseline program will provide important socioeconomic benefits through development, agriculture and energy initiatives, there is considerable scope for further increasing the overall catalytic potential of the baseline through support from the GEF for the production of global public goods.

The program is using as a baseline multiple projects that, only if considered all together, can form the puzzle of sustainable landscape management. Each baseline project is a piece of the puzzle: that is, with agriculture projects working in the agricultural productive landscape; forest projects in the forested areas; watershed projects in the watershed, and the GEF interfacing with all for the generation of global public goods.

Local, national, and global benefits could be achieved if these projects are integrated and enhanced within a programmatic approach that will secure ecosystem services at different scales by establishing integrated natural resources management and adaptation to climate change.

In addition, the achievements made so far with the GEF, the World Bank, and other agencies in support of the challenges regarding land degradation and climate change need to be further consolidated. The proposed program offers the opportunity to do so within a multifocal perspective and under a regional umbrella. Some specific investment plans await implementation, such as the national and regional action plans for the GGWI and the SLM investment frameworks. Integrating the baseline projects under a programmatic approach and supporting the implementation of key regional and national action plans will have a higher transformational impact and political visibility for the region as well as facilitate the integration of the GWWI principles.

F. Incremental/Additional Cost Reasoning

Description of the Incremental or Additional Activities Requested for GEF/LDCF/SCCF Financing and the Associated Global Environmental Benefits or Associated Adaptation Benefits to Be Delivered by the Project

The program is using as baseline multiple projects that only if considered all together, can build the puzzle of sustainable landscape management. Each baseline project is a piece of the puzzle, that is, with agriculture projects working in the agriculture landscape; forest projects in the forested areas; watershed projects in the watershed, and the GEF in the interface of all this for the generation of global public goods.

Also, the business as usual scenario considers national and regional action plans that are consistent with the program's goal, but are in need of further implementation. Under this baseline scenario, the emerging momentum for the West Africa and Sahel countries to tackle the problem of land degradation and climate change and variability would probably be critically reduced, and the gap between the efforts to address the challenges and the scale of the problem would continue to exist. Single-sector approaches, isolated projects, and individual institutions can not sufficiently address the multidisciplinary challenges posed by land degradation and climate change.

Incremental Value Added by GEF Funding

The proposed program is playing a role in the GEF longer-term programmatic effort on the highly vulnerable West Africa–Sahel region. As outlined in previous sections, this program is one of the numerous contributions to GGWI implementation. This effort will add to the overall financing picture for scaling up SLWM and adaptation measures to deliver local, national, regional, and global benefits across GEF FAs. By pooling together diverse financial resources, plus those of the participant countries themselves, the program, through an integrated ecosystem approach will help countries to better integrate land, water, carbon, and adaptation management while creating opportunities to improve local livelihoods and secure ecosystem services at national, regional, and global levels. The program takes a multifocal integrated approach that is truly innovative from past GEF experiences' perspectives and from the experience of major environmental conventions.

The GEF increment would center on securing ecosystem services from the landscape mosaic by promoting the uptake of SLWM practices and approaches that have global environmental benefits. These include soil and water conserving practices such as shelterbelts, multipurpose trees on production land, small-scale irrigation, and water harvesting. Complementary approaches could include, among others, large-scale watershed planning or smaller-scale community land-use planning to address open access of fuelwood and livestock; biological corridor development and management; and ecotourism development.

Global Environmental Benefits Delivered by the Program

The program, designed within the multiple interlinked GEF FAs in a large geographical area, can help secure multiple global environmental benefits (GEBs). The resulting GEBs could include sustainable management of natural resources (land, water, and vegetation) on up to 2 million hectares of croplands, rangelands, and dryland forest ecosystems per country; protection of threatened dryland biodiversity, protection against erosion and desertification; and the potential for sequestering 0.5 to 3.1 million tons of carbon per year. These benefits could also contribute to increased resilience of the regions' ecosystems and human livelihoods to climate change and variability.

Additional Value and Adaptation Benefits Generated by the Program

The program will incorporate initiatives that have been identified as priority in country-driven exercises, such as the NAPA, given the presence of the challenges related to climate change and variability. These initiatives will aim at increasing adaptive capacity and resilience to climate change and reducing vulnerability.

LDCF and SCCF resources will address key vulnerabilities to be identified in the baseline projects, which will generally coincide with what has been clarified in most of the country's NAPAs, and seek to bring substantial resilience and co-benefits. Key vulnerabilities include those with the largest negative potential for the countries'

economies and the stability of its critical ecosystems. For example, impacts on agriculture have a significant weight because of the sector's share in the countries' GDP, and relevance given the nature of the program and the baseline projects. Some of the actions to address vulnerabilities in the countries would include: a) activities to reduce knowledge gaps, such as identification of the effects of increased rainfall variability, increased soil temperatures and evaporation rates on surface soil layer, better plans for responses, and identification of impacts on agriculture and forests; b) policy decisions (institutional gaps), such as the incorporation of adaptation issues in agricultural and forestry policies; and c) investments to reduce vulnerabilities in the relevant sectors (technical gaps).

The program covers multiple adaptation benefits according to the specific project. Some of the benefits include: protection of livelihoods from the effects of climate change on water and land resources; improved adaptive response to water scarcity through irrigation and water-saving techniques; mainstreaming climate change considerations into sectoral investment plans and policies regarding water- and land-use management; enhanced disaster risk management capacity in a changing climate; improved understanding of climate change implications for different sectors; increased knowledge dissemination and awareness regarding the causes and impacts of climate change as well as suggested mitigation/adaptation measures; and increased technical capacity to implement adaptation-oriented measures.

G. The Socioeconomic Benefits

By promoting SLWM and providing opportunities for livelihood improvement, the program will help improve the living conditions of the inhabitants of this African region, which are among the poorest of the poor on the continent. Considering the population living in the Sahel–Saharan zone, it is estimated that over 30 percent of the population (the majority of which lives in rural areas) lives in absolute poverty. The people in these rural areas are mostly subsistence farmers

and herders and are highly vulnerable to shocks from myriad adverse events. Based on the 2010 UNDP Human Development Index (HDI) for 169 countries, the potential participant countries rank fairly low globally: Benin 134, Burkina Faso 161, Chad 163, Ethiopia 157, Ghana 130, Mali 160, Mauritania 136, Niger 167, Nigeria 142, Senegal 144, Sudan 154, and Togo 139. The program is expected to make a positive impact in the agricultural sector by establishing SLWM practices. On average among the participant countries, agriculture accounts for 34 percent of national GDP. The program will also help countries' progress in achieving several of the Millennium Development Goals (MDGs). In general, offering options for livelihood improvement will help break the vicious cycle of poverty and land degradation, because the poor and hungry are forced to overexploit natural resources to meet their immediate needs for survival.

The program will increase opportunities for livelihood improvement and provide concrete benefits to smallholder farmers and pastoralists, both men and women. The implementation of SLWM practices can potentially offer an array of advantages to local communities, such as greater yields, improved soil fertility, fodder availability, as well as shorter wood collection time for women (walking longer distances to find wood allows women less time for other productive tasks and child-rearing responsibilities). Local communities will benefit from increased production and access to forest products, especially firewood, lumber and ligneous and nonligneous products such as gum, resins, roots, leaves, barks, fruits, and pharmacopeia. In addition, the implementation of SLWM practices will enable farmers and communities to adapt and become more resilient to climate change by increasing food production, enhancing food security, and restoring productive natural resources.

Some of the program's activities will also become new sources of employment and stable incomes for local communities, including young people who are increasingly tempted by rural exodus and migration. In addition, the program will include in its components activities for building the capacity of rural local and community institutions, including women's and youth associations. Engaging local communities in the program's on-ground activities will also help build social capital in the region and increase communities' confidence that sustainable management of their natural resources is a long-term strategy that will increase options for livelihood improvement. Social capital will also be strengthened through the involvement of local, grassroot, and traditional organizations as well as NGOs with expertise in the areas of intervention.

Projects to be included under the umbrella program will be encouraged to reflect needs and enhance both women's and men's contributions during design, implementation, and M&E. Women will be the main beneficiaries of several of the projects under the umbrella program because it will involve initiatives and products that particularly concern women, such as the use of nontimber forest products (for example, wild plants for food and medicines as well as shea tree products for cosmetics), efficient cooking stoves (which have the potential of reducing work load and health hazards), and some income-generating activities (especially if the income will help meet family and household needs).

Several of the program's outcomes related to community-based ecotourism, alternative livelihood options, and payment for ecosystem services aim at offering new and sustainable sources of income for local communities. To facilitate conditions for gender equity, outcomes related to information management, capacity building, technology transfer, financial assistance, and policy development will promote whenever possible the participation of women and vulnerable groups. To achieve this, the program will consider appropriate tools and mechanisms for accessing communities, considering their high illiteracy rates (often higher for women). Also, the design of incentive

mechanisms for SLWM implementation should consider the different needs and interests of women and men, as well as help secure short- and long-term economic and social benefits for all participating groups.

H. The Type of Financing

Justification of the Type of Financing Support Provided with GEF/LDCF/SCCF Resources

The program will receive support from multiple financing sources, including the GEF trust fund and LDCF/SCCF funds. As indicated above, there is scope to fund additional activities beyond the baseline investments, and while the GEF/LDCF/SCCF grant financing is small in comparison to the baseline program, it has the power to generate large-scale impacts at local, national, and global levels.

Each country will implement national projects using all or part of the FA allocations as well as complementary approaches, such as the LDCF or SCCF for adaptation. In addition, some countries focusing on forest management for multiple global benefits can take advantage of incentive financing under the GEF Sustainable Forest Management Program. For the regional Knowledge Management, Monitoring, and Evaluation Project (described in annex C), funds will come from the land degradation and climate change mitigation set-asides, because the needs cannot be met by country allocations alone. This project will contribute to knowledge transfer, broadening GEF's catalytic role and maximizing the impacts of country projects.

Large-scale transformative impacts will be possible by pooling together financial resources from different sources and strategically integrating them.

To implement the program components, the program will finance:

- Minor works for watershed management and adaptation;
- Goods as inputs for implementation of SLWM technologies and for biodiversity conservation;
- Technical assistance at ministerial and farmer levels;
- Technical services to produce maps and to implement the M&E system;

- Workshops for participation, consultations, and learning, and
- Incremental operational costs.

I. The Risks

Because the program will be one of the TerrAfrica programs under GEF-5, some of the mitigation measures for potential risks are already in place. For example, locating the program within existing implementation structures reinforces African leadership and advocacy on the agenda. Also, coordination of national and regional activities will be facilitated by the collaborative approach and regional multisector partnership that the TerrAfrica platform has set up. Despite the above, the program overall risk rating is substantial, but with the proposed measures such risk can be reduced to moderate. A preliminary assessment of potential risks is shown in table 2. Each country-level or regional project to be financed within the program will need to indicate the existent and potential risks and the measures to mitigate them.

J. The Institutional Structure

The program's implementation arrangements don't intend to duplicate existing structures, but rather are based on existing African mechanisms, programs, and arrangements. The program will therefore not require, create, or result in parallel implementation structures. The program will be implemented via a portfolio of national and regional projects. Therefore, there will be two levels of implementation: regional and national execution.

National execution: The program will be implemented through various specific projects on the national level depending on specific identified priorities, absorptive capacity, and discrete investment operations. Each country will choose the agencies responsible for project implementation. Forest agencies, agriculture ministries, rural development ministries, and ministries of planning are possible agencies to be involved. In addition, extensive coordination will be established with other agencies working in the countries in similar initiatives such as the African Development Bank (AfDB), the International Fund for Agricultural Development (IFAD), and other UN agencies. This coordination will avoid replication of activities and promote exchange of experiences and knowledge. Because the proposed program should focus heavily on public goods derived from SLWM and adaptation to climate change interventions, it will require extension and other advisory services on the ground. Coordination committees at the national level will play an important role in advising individual projects to ensure they contribute to the common program goal and are aligned with national priorities and plans. Indeed, some countries have already established coordination committees that coordinate all SLM investments in the country, including activities related to mitigation and adaptation to climate change.

Regional implementation: To maximize synergies, the program will work under the TerrAfrica platform for coordination and cooperation activities at the regional level. In addition, regional institutions and authorities,[11] such as the African Union NEPAD Planning and Coordinating Agency AU/NPCA and the Pan-Africa Agency of the GGWI, as well as centers of excellence[12] and research will play a key role as partners for coordination and execution of regional projects and activities. Overall, the program will rely on existing regional public and private organizations to coordinate and implement regional or multicountry operations designed to complement countries' agendas (through advocacy, policy dialogues, or operational alliances) or address challenges in transboundary ecosystems. These regional organizations have accumulated significant experiences in controlling and reversing desertification trends. Some of these organizations are imple-

11. Such as the Economic Community of West African States—Water Resources Coordination Center (ECOWAS-WRCC), the Community of Sahel-Saharan State (CEN-SAD), CILSS, and the Intergovernmental Authority on Development.
12. Such as the Sahara and Sahel Observatory, 2iE, and Rural Hub.

Table 2. Assessment of Potential Risks and Mitigation Measures

Critical risks	Risk level	Proposed measures
Climate change may undermine the gains of management practices	S	The program will include initiatives to mitigate and reduce vulnerability to the impacts of climate change in SLWM.
Political instability	S	A regional program will be able to buffer impacts of political instability, because some shared initiatives would be able to continue to work from countries not suffering from such risk.
Overlapping mandates between government and regional institutions	S	The program will work with individual governments under the TerrAfrica platform using the CSIF as a tool for coordination. Also, a technical committee under the leadership of the AU will be established to facilitate coordination among stakeholders.
Insufficient alignment and mobilization of resources: countries and donors may not sufficiently work together to ensure alignment and mobilize cofinancing.	M	The TerrAfrica platform, NEPAD/AU leadership, and convening power of the various partners will strengthen alignment. The existing high level of political commitment to implement the GWWI will also strengthen alignment.
Resource tenure policies are fragmented, weak, or missing. Weak tenure can lead to low levels of investment in the resource and a perverse incentive to exceed sustainable use.	S	The program will develop a range of incentive mechanisms, delivered through community structures and consistent with traditional land tenure systems. The projects will pursue different design strategies such as working in areas with clear resource tenure, promoting community-driven development, raising institutional and community capacity to carry out land capability mapping and land-use planning, promoting natural resource rights, and so on. Lastly, the World Bank's social safeguards include tenure and land-use issues, which will also help reduce risks. Each project will face unique circumstances that will inform the risk mitigation strategy.
Inaccessible or inappropriate scientific methods and tools might lead to unsustainable outputs and outcome	M	The preparation of each discrete project will apply scientific methods and tools appropriate for project circumstances. Also, each project's M&E will, in line with World Bank policy, focus on the given project's direct sphere of control.
Weak local technical and management capacity to support projects' formulation and implementation	M	Regional projects will be open to build local capacities when required. Events for exchange of experiences among institutions will provide important input for those institutions in charge of the formulation and implementation of new projects.
Low community demand to implement or sustain SLWM technologies	M	The program will particularly focus on local benefits (besides national and global benefits) in the selection of activities. Participatory land and watershed planning exercises will build local awareness and establish required incentives. The projects will also be encouraged to have the flexibility to focus on a smaller range of more readily accepted technologies, if necessary.

Source: Author's compilation.

Note: H = high; S = substantial; M = moderate; and L = low.

menting subregional action programs under the UNCCD process, which will ensure the coordination with this program's activities. Regional program activities on information and institutions will benefit from the direct and indirect involvement of key SRAP facilitators including ECOWAS/CILSS for West Africa, the Intergovernmental Authority on Development (IGAD) for eastern Africa, the Economic Community of Central African States (ECCAS) and the Central African Forests Commission (COMIFAC).

The program will be a TerrAfrica program under GEF-5, and the World Bank will coordinate with the TerrAfrica partners.

The program will form a Technical Committee composed of experts from participating countries, the Africa Union Commission, the CEN-SAD General Secretariat, relevant regional economic communities (RECs), technical institutions (such as OSS and CILSS), and development partners as relevant. The committee will meet twice per year and provide technical oversight for on-ground implementation and advice on needed policy orientation so that activities remain consistent with the national and regional action plans and investment frameworks. The committee will be advisory in nature, not an executive body. If needed, a subcommittee may be constituted for closer and more frequent follow-up of program implementation. The Technical Committee will become a subgroup of TerrAfrica Executive Committee.

Regarding M&E at the program level, a selected regional center of excellence will synthesize, aggregate, and report annually on the program's progress using indicators designed to measure

accomplishment of the outcomes and outputs in the program's results framework. The M&E system at program level will be conducted based on national level information coming from the countries. The design will guarantee that the information from the different projects will be used at the program level for learning and knowledge management. Involvement of regional scientific institutions will be key to facilitate the monitoring and modeling of the ecosystem services and impacts. Results from the program's M&E will also contribute to the REDD+'s reference scenarios.

The institutional structure for the project level M&E will be designed accordingly by each implementing agency. However, the M&E system need to be consistent with the program-level M&E system so that comparable inputs from the projects can be input at the program level as well. During the design stage of each project as well as for the regional knowledge management and M&E project, a theory of change baseline values and realistic targets will be established by a key set of stakeholders for each project's results and outcomes. Each project will monitor GEF tracking tools for the FAs triggered at year 0, mid-term, and final year.

K. Key Stakeholders

Because of its large scale, the program will involve numerous stakeholders at regional, national, and local level. Some of the national and local stakeholders will be defined in each particular project under the umbrella program. However, key stakeholders already identified for the program are:

- *National governments:* The West Africa and Sahel countries' governments will be in charge of the design and implementation of the national projects.
- *AfDB, bilateral agencies (such as France, the European Commission, Norway, the Netherlands, Germany, the United States), and UN agencies (IFAD, UNEP, UNDP, and FAO):* The World Bank will work with these institutions under the TerrAfrica platform for coordination and implementation of the program.
- *NEPAD Planning and Coordinating Agency (AU/NPCA):* Created as a technical body of the African Union (replacing the NEPAD Secretariat). It will have an important role in policy dialogue and advocacy and support for leveraging cofinancing as well as in learning exchange, peer review, and mentoring.
- *Pan-African Agency of the GGWI:* Created in June 2010 to coordinate, monitor, and evaluate activities relating to the GGWI and mobilize the necessary resources. The agency's main roles will be political coordination, advocacy, and knowledge management.
- *Regional research institutes and centers of excellence:* These organizations (such as: OSS,[13] CILSS,[14] Agrhymet,[15] African Centre of Meteorological Applications for Development (ACMAD),[16] International Institute for Water and Environmental Engineering (2iE),[17]

13. The OSS, an international organization based in Tunis, was founded in 1992 to improve early warning and monitoring systems for agriculture, food security, and drought in Africa. The OSS community includes 22 member countries including four subregional organizations representing West Africa (CILSS and Côte d'Ivoire), East Africa (IGAD) and North Africa (AMU and the Arab Republic of Egypt), a subregional organization covering the whole circum-Sahara (CEN-SAD), and regional organizations as well as organizations part of the United Nations System and Civil Society.
14. The CILSS mandate is to invest in research for food security and the fight against the effects of drought and desertification for a new ecological balance in the Sahel. It is an international organization of nine countries in the Sahel (including Burkina Faso, Cape Verde, The Gambia, Guinea Bissau, Mali, Mauritania, Niger, Senegal, and Chad). CILSS is based in Ouagadougou, Burkina Faso.
15. AGRHYMET, based in Niamey, Niger, is a specialized center in the CILSS for training and research in the fields of agronomy, hydrology, and meteorology. AGRHYMET helps build African capacities in the fields of food security and natural resources management. Courses in AGRHYMET are recognized by the African Council for Higher Education and cover a wide range of fields (climate change, sustainable land management, natural resource management, and hydrology). In addition, the center also provides continuing education in various aspects of natural resource management.
16. ACMAD, the African Centre of Meteorological Applications for Development, is based in Niamey, Niger. ACMAD disseminates products on a regular basis to African countries for a continent-wide weather and climate watch, including early warning information and short- and long-term forecasts.
17. 2ie, created in 1970 by 14 countries, among which are Benin, Burkina Faso, Cameroon, Chad, Mali, Mauritania, Niger, Sen-

and Rural Hub[18]) will play a key role as partners for execution of regional activities as well as program M&E. CILSS for example, will be responsible for the Regional Knowledge Management compilation and dissemination component, in close collaboration with CGIAR Centers such as International Centre for Research in Agroforestry (ICRAF) and International Institute of Tropical Agriculture (IITA). Agrhymet will be responsible for providing accurate methereo forecast to the countries of the Program. This center will work in close collaboration with IGAD Climate Prediction and Application Center (ICPAC),[19] based in Nairobi. The OSS will be responsible for aggregating country M&E project data into regional M&E data in order to monitor the indicators of the program presented in the PDF results framework.

- *Regional economic communities:* The RECs (including ECOWAS,[20] CEN-SAD,[21] the Common Market for Eastern and Southern Africa [COMESA],[22] and IGAD[23]) will participate in regional projects to help establish knowledge support systems and to ensure inclusion of some principles of SLWM and climate change adaptation in the region's economic planning.

- *Regional IUCN (International Union of the Conservation of Nature):* The Regional IUCN office in Burkina Faso has been leading work on transboundary biodiversity in the region and biological/wildlife corridors. The Regional IUCN office will be responsible for preparation of Transboundary Biodiversity Management Plans for the program.

- *Local communities/organizations:* Considering the program focus on on-ground activity, community-based organizations will be key stakeholders. These organizations will vary depending on the particular country and region of intervention, but will involve different civil society organizations starting with grass root, traditional organizations, village committees, farmer organizations or cooperatives, women associations to NGOs with a broader level of intervention. Details will depend on each country's project, but overall these organizations will be in charge of on-ground implementation activities. Involvement of NGOs or commercial organizations, chambers, committees, or federations will be considered to support community engagement and/or specific technical activities if, for example, there are specific extension activities (such as introduction of new livelihood alternatives or land management tools) in which they have proven expertise in the area of intervention. Local communities will consist mainly of primary producers (men and women): farmers, herdsmen, coalmen, gum, honey and resin harvesters, healers, hunters, wood carvers, and so forth.

- *Local governments:* In some countries, such as Burkina Faso, local governments will play a role in the projects as key decision makers regarding natural resources management.

- *Private sector:* The private sector will play an important role in some of the projects, particularly tourism activities as well as SFM-related activities, such as payment for environmental services.

egal and Togo, has officially been recognized as a Regional Center of Excellence in the field of water and environment.

18. The Rural Hub's goal is to assist West and Central African stakeholders in promoting coherence in rural development programs worldwide.
19. ICPAC works closely with East Africa countries on predictions of climate risks and their environment impacts.
20. Among the potential participant countries, Benin, Burkina Faso, Ghana, Mali, Niger, Nigeria, Senegal, and Togo are some of ECOWAS members. The ECOWAS Water Resources Coordination Center (WRCC) will also participate in the project, because it is the ECOWAS area that assists member countries with water-related issues.
21. Among CEN-SAD members, Benin, Burkina Faso, Chad, Ghana, Mali, Niger, Nigeria, Senegal, Sudan, and Togo are present.
22. Ethiopia and Sudan are member countries of COMESA.
23. Ethiopia and Sudan are member countries of IGAD. Projects in these countries may also involve IGAD's Climate Prediction and Applications Centre (ICPAC), as a stakeholder. The ICPAC mission is to provide timely climate early warning information and support specific sector applications to enable the region cope with various risks associated with extreme climate variability and change.

L. The Cofinancing Amount

Cofinancing Amount GEF Agency Is Bringing to the Project

The overall financing package estimates a potential baseline cofinancing, with blended, partially blended, and parallel projects totalling $1.735 billion. The financing sources for these projects are the World Bank's International Development Association (IDA) and other trust funds: Forest Investment Program, GFDRR, FCPF, and PPCR. Annex C includes a list of the potential projects that will cofinance the proposed program. In addition, each country will provide precise co-financing sources and amounts during project preparation.

M. The Program and the GEF Agency

How Does the Program Fit into the World Bank's Program and the World Bank Staff Capacity in the Country to Follow Up Program Implementation?

The program is consistent with the World Bank's Strategy for Africa released in March 2011, *Africa's Future and the World Bank's Support to It.* The strategy, which builds on lessons learned from the Africa Action Plan (AAP) and the recent Independent Evaluation Group (IEG) evaluation of the AAP, provides the framework in which to embed country strategies. Within its second pillar, Vulnerability and Resilience, the World Bank will harness its comparative advantage in building resilience to address (through financial support, knowledge, global experience, and technical assistance) the cumulative effects of several shocks such as food shortages and climate change. In particular, the strategy establishes that the World Bank will provide knowledge, finance, advocacy, and convening power in helping countries adapt to climate change.

The program will make a contribution to each of the World Bank Africa Regional Climate Change Strategy's four pillars: (i) making adaptation and climate risk management a core developmental component, with a particular focus on sustainable water resources, land, and forest management and increased agricultural productivity, among others; (ii) taking advantage of mitigation opportunities through access to carbon finance

against land-use changes and avoided deforestation, promoting clean energy sources and energy efficiency, and adopting cost-effective clean coal energy generation and reduced gas flaring; (iii) focusing on knowledge and capacity development by improving weather forecasting, water resources monitoring, land-use information, improving disaster preparedness, investing in appropriate technology development, and strengthening capacity for planning, coordination, participation, and consultation; and (iv) scaling up financing opportunities.

Also in 2008, the World Bank completed a Regional Integration Assistance Strategy (RIAS) for sub-Saharan Africa to help leverage increased benefits for the region through investments in cross-border integration and collaboration. The program will contribute to the RIAS and particularly to its third pillar, which aims at coordinated investments in support of regional public goods by focusing on shared water resources, climate change, emergency response, and agricultural productivity among others. The RIAS acknowledges that regional integration and cooperation contribute to an improved and more sustainable management of shared natural resources and can more effectively address regional commons, such as climate change.

At the national level, a number of World Bank Country Assistance Strategies (CASs) and Country Partnership Strategies (CPSs) have identified integrated natural resources management as an important aspect of a country's economy and development.

World Bank staff will have ample capacity to follow-up on program activities at the regional and national level. The Bank is already engaged with different countries in several SLWM-related activities and adaptation to climate change, which will become integrated under the programmatic approach. The Bank will also be able to draw upon regional and global experience in integrated natural resources management, scaling-up of SLWM technologies, promoting sustainable forest management and conservation of biodiversity, and piloting payment for environmental services and ecotourism activities as well as adaptation measures.

Part II: 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 letters for qualifying GEF agency and for program coordination agency with this template.

Name	Position	Ministry	Date (mm/dd/yyyy)
Delphin AIDJI	Secrétaire Général Adjoint du Ministère	Ministère de l'Environnement et de la Protection de la Nature, Benin	05/05/2011
Mamadou HONADIA	Permanent Secretary	Permanent Secretariat for the National Council for Environment and Sustainable Development, Burkina Faso	05/09/2011
Gaourang MAMADI N'GARKELO	Directeur de Cabinet du Ministre de L'Environnement	Ministere de l'Environnement, de la Qualité de vie et des Parcs Nationaux, Chad	03/29/2011
Tewolde Berhan Gebre EGZIABHER	Director General	Environmental Protection Authority, Ethiopia	05/20/2011
Raymond BABA-NAWO	Technical Director, Ghana Environmental Conventions Coordination Authority	Ministry of Environment, Science and Technology, Ghana	03/23/2011
Alamir Sinna TOURE	Ingénieur des Eaux et Forêts	Agence de l'Environnement et du Développement Durable, Mali	04/18/2011
Mohamed Yahya LAFDAL	Directeur de la Programmation, de la Coordination Intersectorielle et de la Coopération (DPCIC)	Ministère Délégué Auprès du Premier Ministre Chargé de l'Environnement, Mauritanie	05/19/2011
Zouladaini MALAM GATA	Commissioner in Charge of Development	Ministère de l'Economie et des Finance, Niger	05/17/2011
Jaji OLABISI BOLANLE	Director	Federal Ministry of Environment Policy Analysis, Monitoring and Inspectorate Department, Nigeria	3/22/2011
Ndiaye Cheikh SYLLA	Directeur Environnement et Etablissement Classés, Point Focal UNFCCC	Ministry of Environment, Senegal	05/16/2011

Name	Position	Ministry	Date (mm/dd/yyyy)
Elfadil ALI ADAM	Undersecretary	Ministry of Environment and Physical Development, Sudan	03/31/2011
Djiwonou FOLLY	Ingénieur des Travaux des Eaux et Forets	Ministère de l'Environnement et des Ressources, Togo	3/28/2011

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.

Agency coordinator, agency name	Signature	DATE (MM/dd/yyyy)	Project contact person	Telephone	Email address
Karin Shepardson, GEF Agency Executive Coordinator		March 25, 2011	Paola Agostini, Regional Coordinator, Africa Region	(202) 473-7620	pagostini@worldbank.org

Annexes

Annex A. Program Identification

Program title	Sahel and West Africa Program in Support of the Great Green Wall Initiative		
Country(ies):	Benin, Burkina Faso, Chad, Ethiopia, Ghana, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, and Togo	GEF program ID: [a]	
Lead GEF agency:	World Bank	GEF agency program ID:	P125210
Other GEF agenc(ies):	(select) (select) (select)	Submission date:	May 20, 2011
Other executing partner(s):	Governments of participating countries, Regional Centers of Excellence	Program duration(months)	96
GEF focal area (s):	Multifocal area	Agency fee ($):	8,060,741

a. Program ID number will be assigned by GEFSEC.

Focal Area Strategy Framework					
FA objectives	Expected FA outcomes	Expected FA outputs	Type of trust fund	Indicative financing ($)	Indicative cofinancing ($)
LD-3	Enhanced cross-sector enabling environment for integrated landscape management	Integrated land management plans developed and implemented	GEF	12,000,000	250,000,000
LD-3	Integrated landscape management practices adopted by local communities	Information on INRM technologies and good practice guidelines disseminated	GEF	18,583,333	570,000,000
CCA-1 (select)	Reduced vulnerability to climate change in development sectors	Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	LDCF	6,666,667	93,000,000
CCA-1	Reduced vulnerability to climate change in development sectors	Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	SCCF	2,083,333	7,000,000
CCA-2 (select)	Strengthening adaptive capacity to reduce risks to climate-induced economic losses	Adaptive capacity of national and regional centers and networks strengthened to rapidly respond to extreme weather events	LDCF	6,666,667	168,000,000

continued on next page

Focal Area Strategy Framework					
FA objectives	**Expected FA outcomes**	**Expected FA outputs**	**Type of trust fund**	**Indicative financing ($)**	**Indicative cofinancing ($)**
CCA-2 (select)	Strengthening adaptive capacity to reduce risks to climate-induced economic losses	Adaptive capacity of national and regional centers and networks strengthened to rapidly respond to extreme weather events	SCCF (select)	2,083,333	7,000,000
CCM-3	Investment in renewable energy technologies increased	Electricity and heat produced from renewable sources	GEF	2,291,667	4,000,000
CCM-5	Restoration and enhancement of carbon stocks in forests and nonforest lands, including peatland (hectares)	Forest and nonforest lands under good management practices	GEF	7,250,000	84,000,000
BD-1	Improved management effectiveness of existing and new PAs	New PAs (number) and coverage (hectares) of unprotected ecosystems	GEF	6,033,333	55,000,000
BD-2	Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	National and subnational land-use plans (number) that incorporate biodiversity and ecosystem service valuation	GEF	11,608,333	190,000,000
SFM/REDD-1	Good management practices applied in existing forests	Forest area (hectares) under sustainable management, separated by forest type	GEF	15,416,667	312,000,000
			Subtotal:	90,683,333	1,740,000,000
			Program management cost[a]	10,075,926	70,000,000
			Total program costs	100,759,259	1,810,000,000

Note: Refer to GEF-5 Template Reference Guide posted on the GEF Web site for description of the FA Results Framework when filling in table A. Note that the multitrust fund for CCA-1 and CCA-2 refers to LDCF and SCCF.
a. This is the cost associated with the unit executing the project on the ground and could be financed out of trust fund or cofinancing sources.

Program Result Framework

Program goal: Expanding SLWM in targeted landscapes and in climate vulnerable areas in Sahel and West Africa.

Program component	Grant type/ TF type	Expected outcomes	Expected outputs	Indicative financing/ cofinancing ($)
1. Institutions, information, and policy	Technical assistance/ GEF	Policies, institutions, and financing for scaling up SLWM and other adaptive responses improved by countries and regional level	Basin, watershed, and/or land-use plans developed (including production lands and/or PAs) (number) (BD-1, BD-2, CCM-5, SFM-1, LD-3)	13,602,500/ 261,000,000
			Capacity development programs and training events developed and delivered (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1)	
			Country level sector, national plans, or frameworks including SLWM and adaptation measures (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1, CCA-1, CCA-2)	
			Country SLM Investment Frameworks (being updated or under implementation) (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1, CCA-1, CCA-2)	
			Participating countries with improved scores on the survey: Composite Index for the SLWM Enabling Environment (number)(BD-1, BD-2, CCM-5, LD-3, SFM-1)	
			Capacity support programs and events developed and delivered (country, regional) (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1, CCA-1, CCA-2)	
		Knowledge generated and disseminated in countries on SLWM and other adaptive responses	Knowledge products developed and disseminated (country, regional) (number by targeted population) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1, CCA-1, CCA-2)	
			Country-level comprehensive SLWM information systems operational for monitoring landscape mosaics (remote sensing, ICT, databases, knowledge bases, and so forth) (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1)	
			One regional comprehensive SLWM information system operational for monitoring landscape mosaics (remote sensing, ICT, databases, knowledge bases, and so forth) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1)	
			Cost-effective regional and project-level M&E systems operational (including development benchmarks among country projects) (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1, CCA-1, CCA-2)	
			Countries with improved scores on GEF-5 FA tracking tools (when finalized) (number) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1)	
			Projects in the program portfolio with satisfactory supervision reports (percentage) (BD-1, BD-2, CCM-3, CCM-5, LD-3, SFM-1, CCA-1, CCA-2)	

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Program Result Framework (*continued*)

Program component	Grant type/ TF type	Expected outcomes	Expected outputs	Indicative financing/ cofinancing ($)
2. Investment in SLWM and biodiversity	Inv /GEF	More secure provision of services from the landscape mosaic in targeted areas, including livelihoods, genetic resources, soil health, and water resources	Hectares with SLWM practices (reported by land use: crop, range, forest, PAs) (BD-1, BD-2, CCM-5, LD-3, SFM-1)	37,352,465/ 870,000,000
			Land users adopting SLWM practices (numbers reported by land use: crop, range, forest, PAs, and by gender) (BD-1, BD-2, CCM-5, LD-3, SFM-1)	
			Land users receiving advisory services on SLWM practices (numbers reported by land use: crop, range, forest, PAs, and by gender) (BD-1, BD-2, CCM-5, LD-3, SFM-1)	
		Biodiversity conservation integrated into landscape management	Landscape management plans incorporating biodiversity conservation measures (number and by type of landscape: productive landscape, PA, and so forth) (BD-1, BD-2)	
			Conservation set-asides along vulnerable areas (BD-1, BD-2)	
			SLWM activities integrating biodiversity conservation (habitat rehabilitation, crop diversity, preservation breeding grounds, protection migration corridors, and so forth) (BD-1, BD-2)	
3. Innovations and economics	Inv/GEF	Payment for ecosystem services adopted as an incentive mechanism to implement SLWM	Land users receiving advisory services on PES schemes, including capacity to value and market environmental services (number reported by gender) (BD-1, BD-2, LD-3, SFM-1)	12,695,667/ 174,000,000
			Decision makers and technical staff trained on PES including methods of valuation as well as implications of different payment schemes (BD-1, BD-2, LD-3, SFM-1)	
			Areas under payment for ecosystem services schemes (hectares) (BD-1, BD-2, LD-3, SFM-1)	
			Community organizations trained in public use management and ecotourism good practices (number) (BD-1, BD-2, LD-3, SFM-1)	
		Increase in community-based ecotourism activities	Targeted areas with ecotourism facilities constructed and in operation by local communities. (number) (BD-1, BD-2, LD-3, SFM-1)	
4. Mitigation and adaptation to climate change				
4.1 Adaptation to climate change	Inv/LDCF	Strengthened adaptive capacity to actual or potential climate change risks	Participating countries with plans and strategic interventions to manage climate risks to SLWM (number) (CCA-1, CCA-2)	13,326,148/ 261,000,000
			National and local officers trained on integration of climate change adaptation into sectoral planning (number by gender) (CCA-1, CCA-2)	
			Technology-based adaptation options tested (number) (CCA-1, CCA-2)	

Program component	Grant type/ TF type	Expected outcomes	Expected outputs	Indicative financing/ cofinancing ($)
4.1 Adaptation to climate change (*continued*)			Traditional SLWM knowledge suitable for climate change adaptation strengthened/ restored (CCA-1, CCA-2)	
			Early warning and disaster preparedness systems in target vulnerable areas established (number) (CCA-1, CCA-2)	
			Capacity support programs and events to implement disaster response plans (number) (CCA-1, CCA-2)	
4.2. Adaptation to climate change	Inv, TA/SCCF	Strengthened adaptive capacity to actual or potential climate change risks	National and local officers trained on integration of climate change adaptation into sectoral planning (number by gender) (CCA-1, CCA-2)	4,166,667/ 14,000,000
			Technology-based adaptation options tested (number) (CCA-1, CCA-2)	
4.3 Mitigation	Inv, TA/GEF	Mitigation opportunities identified and implemented	Forest lands under SLWM practices (hectares by forest type) (BD-1, BD-2, CCM-5, LD-3, SFM-1)	9,539,886/ 160,000,000
			Households incorporating renewable energy alternatives to traditional approaches (number by country) (CCM-3)	
			Households receiving advisory services on renewable energy alternatives to traditional approaches (number by gender) (CCM-3)	
			Subtotal:	90,683,333/ 1,740,000,000
			Program management cost[a]	10,075,926/ 70,000,000
			Total program costs	100,759,259/ 1,810,000,000

Note: For each expected output, a reference to the FA objectives that it contributes to has been included.

a. Same as footnote 3.

Cofinancing for the Program by Source and by Name, If Available ($)

Sources of cofinancing	Name of cofinancier (if known)	Type of cofinancing	Amount ($)
GEF agency	World Bank	Soft loan	1,735,000,000
National government	Governments of participating countries	In-kind	60,000,000
Other multilateral agency(ies)	European Union	Grant	15,000,000
(select)		(select)	
Total cofinancing			1,810,000,000

GEF/LDCF/SCCF Resources Requested by Agency, Focal Area, and Country

GEF agency	Type of TF	Focal area	Country name/ global	Program amount ($) (a)	Agency fee ($) (b)[a]	Total c = a + b ($)
WB	GEF	Land degradation	Benin	3,240,740.74	259,259.26	3,500,000.00
WB	GEF	Biodiversity	Benin	925,925.93	74,074.07	1,000,000.00
WB	GEF	SFM—multifocal	Benin	1,388,888.89	111,111.11	1,500,000.00
WB	GEF	Land degradation	Burkina Faso	2,777,777.78	222,222.22	3,000,000.00
WB	GEF	Biodiversity	Burkina Faso	1,388,888.89	111,111.11	1,500,000.00
WB	GEF	Climate change	Burkina Faso	1,388,888.89	111,111.11	1,500,000.00
WB	GEF	SFM—multifocal	Burkina Faso	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Land degradation	Chad	2,314,814.81	185,185.19	2,500,000.00
WB	GEF	Biodiversity	Chad	1,388,888.89	111,111.11	1,500,000.00
WB	GEF	SFM—multifocal	Chad	925,925.93	74,074.07	1,000,000.00
WB	LDCF		Chad	4,629,629.63	370,370.37	5,000,000.00
WB	GEF	Land degradation	Ethiopia	2,777,777.78	222,222.22	3,000,000.00
WB	GEF	Biodiversity	Ethiopia	2,777,777.78	222,222.22	3,000,000.00
WB	GEF	Climate change	Ethiopia	925,925.93	74,074.07	1,000,000.00

GEF agency	Type of TF	Focal area	Country name/ global	Program amount ($) (a)	Agency fee ($) (b)[a]	Total c = a + b ($)
WB	GEF	SFM—multifocal	Ethiopia	1,851,851.85	148,148.15	2,000,000.00
WB	LDCF		Ethiopia	4,629,629.63	370,370.37	5,000,000.00
WB	GEF	Land degradation	Ghana	2,777,777.78	222,222.22	3,000,000.00
WB	GEF	Biodiversity	Ghana	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Climate change	Ghana	2,268,518.52	181,481.48	2,450,000.00
WB	GEF	SFM—multifocal	Ghana	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Land degradation	Mali	1,888,888.89	151,111.11	2,040,000.00
WB	GEF	Biodiversity	Mali	1,444,444.44	115,555.56	1,560,000.00
WB	GEF	Climate change	Mali	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	SFM—multifocal	Mali	1,388,888.89	111,111.11	1,500,000.00
WB	LDCF		Mali	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Land degradation	Mauritania	3,703,703.70	296,296.30	4,000,000.00
WB	GEF	Biodiversity	Mauritania	2,194,444.44	175,555.56	2,370,000.00
WB	GEF	SFM—multifocal	Mauritania	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Land degradation	Niger	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Biodiversity	Niger	814,814.81	65,185.19	880,000.00
WB	GEF	Climate change	Niger	925,925.93	74,074.07	1,000,000.00
WB	GEF	SFM—multifocal	Niger	925,925.93	74,074.07	1,000,000.00
WB	GEF	Land degradation	Nigeria	555,555.56	44,444.44	600,000.00
WB	GEF	Biodiversity	Nigeria	2,481,481.48	198,518.52	2,680,000.00
WB	GEF	SFM—multifocal	Nigeria	925,925.93	74,074.07	1,000,000.00
WB	SCCF		Nigeria	4,629,629.63	370,370.37	5,000,000.00
WB	GEF	Land degradation	Senegal	3,240,740.74	259,259.26	3,500,000.00
WB	GEF	Climate change	Senegal	1,388,888.89	111,111.11	1,500,000.00
WB	GEF	SFM—multifocal	Senegal	1,388,888.89	111,111.11	1,500,000.00
WB	GEF	Land degradation	Sudan	2,472,222.22	197,777.78	2,670,000.00
WB	GEF	Biodiversity	Sudan	3,407,407.41	272,592.59	3,680,000.00
WB	GEF	SFM—multifocal	Sudan	1,851,851.85	148,148.15	2,000,000.00
WB	GEF	Land degrada-tion	Togo	3,601,851.85	288,148.15	3,890,000.00
WB	GEF	Biodiversity	Togo	925,925.93	74,074.07	1,000,000.00
WB	GEF	SFM—multifocal	Togo	925,925.93	74,074.07	1,000,000.00
WB	LDCF		Togo	3,703,703.70	296,296.30	4,000,000.00

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GEF agency	Type of TF	Focal area	Country name/ global	Program amount ($) (a)	Agency fee ($) (b)[a]	Total c = a + b ($)
WB	GEF	Land degradation (FAS)	Regional	2,777,777.78	222,222.22	3,000,000.00
WB	GEF	Climate change (FAS)	Regional	1,851,851.85	148,148.15	2,000,000.00
			Total grant resources	100,759,259.26	8,060,740.74	108,820,000.00

Source: Author's compilation.
Note: In cases of a single FA, single country, single GEF agency project, and single trust fund project, there is no need to provide information for this table. For Chad and Togo, considering these countries are STAR flexible, resources were moved from the CC FA to the BD and LD FA and to the LD FA, respectively.
a. Please indicate fees related to this project.

Annex B. Program Framework Document

Sahel and West Africa Program in Support of the Great Green Wall Initiative

Ratification of Countries to Conventions and Submission to Specific Action Plans

Country	Ratification CBD	Ratification UNCCD	Ratification UNFCCC	Submission NAP	Submission NAPA
Benin	Jun 1994	Aug 1996	Jun 1994	2000	Jan 2008
Burkina Faso	Sep 1993	Jan 1996	Sep 1993	2000	Dec 2007
Chad	June 1994	Sep 1996	Jun 1994	2000	Feb 2010
Ethiopia	Apr 1994	Jun 1997	Apr 1994	2000	Jun 2007
Ghana	Aug 1994	Dec 1996	Sep 1995	2002	NA
Mali	Mar 1995	Oct 1995	Dec 1994	2000	Dec 2007
Mauritania	Aug 1996	Aug 1996	Jan 1994	2002	Nov 2004
Niger	July 1995	Jan 1996	Jul 1995	2000	Jul 2006
Nigeria	Aug 1994	Jul 1997	Aug 1994	2001	NA
Senegal	Oct 1994	Jul 1995	Oct 1994	2000	Nov 2006
Sudan	Oct 1995	Nov 1995	Nov 1993	2002	Jun 2007
Togo	Oct 1995 (acceptance)	Oct 1995 (acceptance)	Mar 1995	2002	Sep 2009

Source: Author's compilation.
Note: NA = not applicable.

Annex C. Preliminary Project Summaries

1. Benin

Project name	Sustainable Land and Biodiversity Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline projects** The baseline projects in Benin are the West Africa Agriculture Productivity Project (WAAPP) ($10M) and the Urban Environment and Disaster Management Project ($10M). The WAAPP is a 10-year Adaptable Program Loan (APL) aimed at generating and enhancing agricultural productivity and competitiveness while promoting regional integration, through four (4) components: (i) enabling conditions for subregional cooperation in the generation, dissemination, and adoption of agricultural technologies; (ii) strengthening national centers of specialization and strengthening of the research system; (iii) support to demand-driven technology generation, dissemination, and adoption; and (iv) project coordination, management, and monitoring and evaluation. The new phase of the project will incorporate activities including research and extension to support agricultural production and inputs and seed acquisition to boost the country's top agricultural commodity priority. For Benin, the project will support the strengthening of the National Centers of Specialization for maize. The *Benin Emergency Urban Environment Project* aims to improve infrastructure and mitigate the negative environmental impact of floods and increase Benin's level of preparedness for future flooding. There are five components to the project: (i) drainage improvement and rehabilitation; (ii) municipal solid waste management; (iii) improved wastewater management and sanitation; (iv) flooding and disaster risk preparedness and management; and (v) project management. Estimated baseline financing (before GEF): $20 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and biodiversity FAs will be partially blended with the WAAPP and associated with the Emergency Environment Project (in flood prone suburban areas) to jointly promote SLWM and ecosystem services production. Through the development of SLWM practices, the GEF increment will be able to ensure sustainability in the agricultural practices and technologies to be promoted with the WAAPP (component 3). Investments for SLWM (including appropriate sustainable agricultural technologies, as well as sustainable harvesting technologies for timber and nontimber products) and biodiversity conservation will also reduce pressures on forest resources and by doing so will contribute to one of the objectives of the sustainable forest management GEF FA.

Project name	Sustainable Land and Biodiversity Management Project
GEF/LDCF or SCCF alternative (*continued*)	The Protected Areas Fund will also be supported, building the multiple GEF experiences and on the country needs for a social, financial, and environmentally sustainable tool for PA management. The project will also pilot community-based activities to mitigate the impact of flooding, such as: river bank restoration and protection, canal maintenance, pond construction and maintenance, small-scale reforestation, tree nursery site establishment, and tree planting. The GEF increment will take into account the close interconnectivity between flood risks, land degradation, and ecosystem services from PAs and productive landscapes. Other sustainable land management practices to be considered are: no-till, agroforestry, integrated soil fertility, cover crops, rotational grazing, water harvesting, and many others, coupled with broader landscape planning In addition, the GEF will enable the exchange of experiences within the countries that participate in the WAAPP (Benin, Togo, and Niger), and also to the other countries in the Sahel region that share similar challenges. Incremental GEF financing/additional LDCF/SCCF: $6 million Land degradation FA: $3.5 million Biodiversity FA: $1 million Climate change mitigation FA: none Sustainable forest management bonus: $1.5 million LDCF: None SCCF: None *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#)
Implementing body (if known)	The Ministry of Environment (tbc)

2. Burkina Faso

Project name	Sustainable Land and Forestry Management Project
Parent project description (IDA, TF, and so forth)	*Component 1:* Assessment and diagnostic studies. This will involve, among other things: - Integration of available knowledge of forest situations and trends into political strategies and practices; - Evaluation of carbon stock in forest formation and agroforestry (baseline study) and assessment of the carbon sequestration potentials of local forest landscapes (according to Measurement Reporting and Verification (MRV) and within the REDD+ context); - Evaluation of the potential of key wood and nonwood products (such as shea/*karite* and Arabic gum); - Socioeconomic assessments of poverty levels and characteristics within vulnerable communities that are dependent on forest products for their subsistence; - Institutional support to national research institutions; and - Private sector involvement and added value. *Component 2:* Investments in commune and private forest management. This will involve: - Adequate support to the leadership of local governments in environmental planning in general, and in forest management in particular; - Adequate support to the private sector in forest management; - Demarcation and sustainable management of regional and subregional forests and the implementation of community-based forest projects (including income-generating activities) through appropriate financing mechanisms; - Planning of alternative land uses in selected areas, including demarcation of residential areas as well areas reserved for conservation and production (including hunting zones) and land management initiatives; and - Implementation of a range of private initiatives aimed at promoting and disseminating sustainable practices of natural resource management (including tree farming, forestry, and livestock; soil erosion mitigation; physical soil and water conservation; combination of engineering, biological, and community-centered low-tech measures; and the like). *Component 3:* Capacity building. This will involve: - Support to the administrative, institutional, and technical measures aimed at empowering local governments, civil society organizations, and private stakeholders; - Improving local governments' environmental planning instruments; - Provision of technical training to local stakeholders (including women's groups) on issues related to sustainable forest management; - Scaling up best experiences of "comanagement" of forest resources (involving local elected authorities, user groups, and deconcentrated line departments); and - Establishment of a comprehensive communication strategy and action plan.

Project name	Sustainable Land and Forestry Management Project
	Component 4: Project management. This component aims to support central and local government institutions in this project's implementation. In addition, an integrated *Regional Natural Resource Management Project* is currently under preparation for several countries including Burkina-Faso ($12 million). This project, which is still under development, will seek to: (i) enhance natural resource management capacities of the countries, building on lessons learned and exchange of experiences; (ii) pilot natural resource management initiatives; and (iii) strengthen governance for natural resources management. The project will include development of intersectoral coordination mechanisms (agriculture, livestock, forestry, water, transport, and so forth) for planning and information exchange, and development and application of monitoring tools to measure the outcomes and transformational impacts of planned activities. Also, a *Disaster Management Project* ($5 million) will be part of the country's baseline. This project aims at strategically mainstreaming disaster risk management into national development strategies and support implementation in targeted areas of the priorities identified in the country's program related to knowledge and capacity enhancement for disaster risk management, policy and institutional capacity, awareness and communication, disaster monitoring, and early warning and disaster preparedness and recovery. Estimated baseline financing (before GEF): $44 Million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation, climate change mitigation, and biodiversity FAs will be blended with the CFIP and associated with the other two baseline projects to promote on-ground investments in SLWM practices and biodiversity conservation measures, particularly in fragile lands and areas prone to the negative effects of climate change and variability. The GEF will pilot innovations and SFM tools such as payment for environmental and ecosystem services provided by local communities (with a scheme of "safety nets" to household to reduce the pressure on forest resources). Actions that will strengthen SFM efforts in the area of climate change mitigation will also contribute to restoration and enhancement of carbon stocks in the forest areas of intervention. In addition, the GEF alternative will support the preparation and implementation of PA management plans as well as the establishment of wildlife corridors. Incremental GEF/Additional LDCF/SCCF financing: $8 million Land degradation FA: $3 million Biodiversity FA: $1.5 million Climate change mitigation FA: $1.5 million Sustainable forest management bonus: $2 million SCCF: None LDCF: None *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include (check those that apply): KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#) KPI 4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha)
Implementing body (if known)	Ministry of Environment and Sustainable Development

3. Chad

Project name	Sustainable Land and Water Management Project
Parent project description (IDA)	**Description of baseline projects** The baseline projects in Chad are: the Local Development Program Support Project 2 and the Agricultural Productivity Project ($30 million). *Local Development Program Support Project 2* (LDPSP 2, $30 million). The project aims to achieve: (i) improved access to basic infrastructure and social services in targeted districts and (ii) improved planning, management, and monitoring by local communities and communes of decentralized investments. There are two technical components: (i) capacity building of local communities and communes[a] and support to decentralization and (ii) decentralized financing of microprojects. The objective of component 1 is to support the development of improved technical and fiduciary skills needed at the different decentralized levels and in the national institutions responsible for decentralization. Component 2 will support targeted financing of demand-driven microprojects based on LDPSP and annual investment plans. The microprojects, to be financed through a matching grant mechanism, will promote access to basic socioeconomic services, income-generating activities, and sustainable natural resources management through the adoption of innovative technologies. The project will channel funds to communes and local communities to finance: (i) socioeconomic infrastructure microprojects (education, health, water facilities, and so forth); (ii) environmental and natural resources management microprojects (acacia plantations, sustainable land management, Sahelian gardens, and so forth); and (iii) rural income-generating microprojects (small-scale irrigation, agricultural equipment, drying facilities, small transformation and storage facilities, and so forth). Besides the LDPSP 2, the World Bank will prepare a new *Agricultural Productivity Project* for Chad. The objective is to tap the significant agriculture potential in the southern part of the country (Sudanian and Sahelian zones) to reduce food insecurity and household vulnerability, increase agricultural incomes, and consequently strengthen the diversification of the Chadian rural economy. The operation will use a demand-driven approach that supports local communities, and is expected to focus on agricultural-livestock links and resource management (land and water). As preparation is just starting, the two projects will be able to blend as they can be formulated jointly, establishing better synergies. Estimated baseline financing by IDA (before GEF): $60 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** The proposed GEF project will be partially blended with LDPSP 2 and associated with the Agricultural Productivity Project and is intended to generate global environmental benefits (biodiversity conservation in watersheds, enhancement of carbon stocks in forests, protection against erosion, and more) through targeted investments. Funds from GEF FAs will incorporate planning process, appropriate management and sustainable technologies, and community and government capacity building. This will help ensure sustainability of the development microprojects as well as the agriculture and livestock practices and technologies promoted in the baseline.

a. In Chad, the term “communes” refers to urban communities, while for rural entities the term “rural communities” tends to be used.

Project name	Sustainable Land and Water Management Project
GEF/LDCF or SCCF alternative	Details will be determined during project formulation, but it is expected that the funds will support: - Sustainable land management interventions for agricultural systems; - Creation and management of PAs in watersheds; - Creation and management of nurseries; - Management of humid and gallery forests; - Information, education, and communication for communities in the context of GGWI. This will add value to the technical skills enhanced at the different decentralized levels through LDPSP 2; and - Development of institutional and legal framework for implementation of GGWI. *Linking with LDCF/SCCF* LDCF resources will also be deployed to cover some of the additional costs to improve the climate resilience of government and community livelihood investments, including the infrastructure and civil works promoted with LDPSP 2. The resources will implement related priorities identified in the National Action Plan for Adaptation (NAPA) such as retention of surface water for agriculture and feeding of livestock; diversification and intensification of cultures in Sudanese and Sahelian areas; improvement of information, education, and communication on adaptation to climate change; food bank for livestock; and construction of infrastructure for the defense and conservation of soils as a means to develop agricultural activities. During project preparation, the specific NAPA priority(ies) to be supported in association with the baseline will be identified. Activities will contribute to both objectives: CCA-1 and CCA-2. Incremental GEF financing/additional LDCF/SCCF: $10 million Land degradation FA: $2.5 million Biodiversity FA: $1.5 million Climate change mitigation FA: None Sustainable forest management bonus: $1 million LDCF: $5 million SCCF: None *Note*: These amounts include the fee to be paid to the agency. In addition, as Chad is a STAR flexible country, resources from the CC FA were moved to both BD and LD FAs.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the following KPIs aggregated at portfolio program level: KPI 1. Area with SLWM practices, compared to baselines of individual projects (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover, compared to baselines of individual projects KPI 3. Number of targeted institutions with increased adaptive capacity to reduce risks and response to climate variability, compared to baselines of individual projects KPI 4. Change in carbon accumulation rates, compared to baselines of individual projects (tC/ha)
Implementing body (if known)	Ministry of Environment and Fisheries/Ministère de l'Environnement et des Ressources Halieutiques

4. Ethiopia

Project name	Sustainable Land and Biodiversity Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline projects** Policy dialogue is centered on the following priority investments that overall help reinforce the landscape approach, moving from agricultural land to the forest land and to the drylands. The baseline projects are: the Agriculture Growth Project, the Productive Safety Net Project, the Pastoral Community Development Project, the Forest Carbon Partnership, and the Sustainable Land Management Project II. *Agriculture Growth Project* ($150 million IDA). The objective is to increase agricultural productivity and market access for key crop and livestock products in targeted woredas with increased participation of women and youth. There are three components to the project: (i) agricultural production and commercialization; (ii) small-scale rural infrastructure development and management; and, (iii) *Agriculture Growth Project* (AGP) management and monitoring and evaluation. *Productive Safety Net Project* (PSNP, APL III, $450 million IDA). The objective is to improve the effectiveness and efficiency of the PSNP and related Household Asset Building Program (HABP) for chronically food insecure households in rural Ethiopia. There are four components: - Safety net grants will provide cash and in-kind transfers to chronically food insecure households through labor-intensive public works that provide transfers to able-bodied households and direct support that provides transfers to labor-poor households; - Drought risk financing, which aims to provide timely resources for transitory food insecurity in response to shocks within the existing program areas; - Institutional support for the PSNP; and - Support to the HABP. *Pastoral Community Development Project* ($56 million IDA). The project objectives are to increase the resilience of Ethiopian pastoralists to external shocks and improve the livelihoods of beneficiary communities, thereby contributing to overall poverty alleviation in Ethiopia. There are four components to the project: (i) sustainable livelihood enhancement; (ii) pastoral risk management to improve the existing pastoral early warning system; (iii) participatory learning and knowledge management; and (iv) project management. *Forest Carbon Partnership* ($3.6M). The purpose will be to develop the plan for Ethiopia to get ready for REDD (Reducing Emissions from Deforestation and Forest Degradation) implementation. This will include actions toward key outputs such as: - Awareness raised on REDD+; - Individual and institutional capacity built to support REDD+; - Participation enhanced in decision making and action; - More in-depth analysis of REDD+ issues; - Field-tested, REDD+ supported experimental strategies/pilots to address deforestation and degradation; - Enabling environment including appropriate institutions and policies; - Benefit-sharing mechanisms identified and/or established; - Reference scenario of carbon stock; and - REDD+ monitoring and evaluation systems. *Sustainable Land Management Project II* ($100 million IDA). The development objectives of the proposed project will be similar to the first project, which aimed to reduce land degradation in agricultural landscapes and improve the agricultural productivity of smallholder farmers. The project will be developed through three components: (i) investment in small infrastructure for watershed management; (ii) rural land certification and administration; and (iii) project management. Estimated baseline financing (before GEF): $759.6 million

Project name	Sustainable Land and Biodiversity Management Project
GEF/LDCF or SCCF alternative	**Description of GEF alternative** The GEF resources will be blended with the Sustainable Land Management Project II project and associated with the other baseline projects. GEF resources from the multiple FAs will build on the extensive baseline to generate local, national, and global environmental benefits by promoting the uptake of sustainable land-use management and biodiversity conservation practices by agropastoral communities to reduce land degradation and support sustainable development and enhanced livelihoods. The investment will build on the achievements of various successful projects to address balancing community-driven initiatives with the need for safeguarding biodiversity, enhancement carbon stocks in forest and nonforest lands, and other ecosystem services at appropriate scales. Actions developed within the project will also contribute to the country's readiness to implement REDD+ in terms of enabling environment as well as on-the-ground activities. The baseline projects and the GEF project will form the pieces of a puzzle to address landscape mangement issues. GEF will complement by addressing the interphase between agriculture land, pastoral land, and forest land in an integrated ecosystem approach that generates global benefits. Some of the activities to be developed to generate local, national, and global benefits will be: **(i)** Vegetative measures such as agroforestry, natural forest regeneration, woodlots, and cover cropping; **(ii)** Land-use planning, including grazing corridors; **(iii)** Additional sustainable measures, such as contour farming and small terraces, microirrigation, conservation set-asides along vulnerable areas, among others; **(iv)** Diversified application of renewable energy, particularly through the use of biofuel and biogas; and **(v)** Community-based alternative livelihood options that reduce pressure on natural resources. Incentive mechanisms such as payment for environmental services will be piloted to contribute to the enabling environment for the application of SLWM. These practices would be based on participatory land- and water-use planning approaches to address specific livelihoods needs and priorities at the local level as well as within the wider landscape mosaic. *Linking with LDCF/SCCF* LDCF resources will also be deployed to cover some of the additional costs of improving the climate resilience of the baseline projects, including promotion of small-scale rural infrastructure and public works. This will also complement and add value to the pastoral early warning system established in the Pastoral Community Development Project. The resources will cover some of the priorities identified in the National Action Plan for Adaptation (NAPA): strengthening/enhancing drought and flood early warning systems; development of small-scale irrigation and water-harvesting schemes in arid, semiarid, and dry subhumid areas; improving/enhancing rangeland resource management practices in the pastoral areas; promotion of on farm and homestead forestry and agroforestry practices in arid, semiarid and dry subhumid parts of Ethiopia. During project preparation, the specific NAPA priority(ies) to be supported in association with the baseline will be identified. Activities in the project will contribute to both objectives CCA-1 and CCA-2 and will address some of the causes for vulnerability to climate variability and change identified in the NAPA, such as the very high dependence on rain-fed agriculture, underdevelopment of water resources, low adaptive capacity, and lack of awareness.

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Project name	Sustainable Land and Biodiversity Management Project
GEF/LDCF or SCCF alternative (*continued*)	Finally, the vulnerability assessment carried out under NAPA indicated that the most vulnerable sectors to climate variability and change are: agriculture, water, and human health. It was also indicated that in terms of livelihood approach, smallholder, rain-fed farmers and pastoralists are found to be the most vulnerable. The project in Ethiopia will act on two of the three sectors (agriculture and water) and will consider rain-fed farmers and pastoralists as its main beneficiaries. The project will support the implementation of the Ethiopia Strategic Investment Framework developed with the support of TerrAfrica. The overall development objective is to improve the livelihoods and economic well-being of the country's farmers, herders, and forest resource users by scaling up SLM practices with proven potential to restore, sustain, and enhance the productivity of Ethiopia's land resources. Incremental GEF financing/additional LDCF/SCCF: $14 million Land degradation FA: $3 million Biodiversity FA: $3 million Climate change mitigation FA: $1 million Sustainable forest management bonus: $2 million LDCF: $5 million SCCF: None *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#) KPI 4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha)
Implementing body (if known)	The Ministry of Environment (tbc).

5. Ghana

Project name	Sustainable Land and Biodiversity Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline projects** The baseline projects for Ghana are: Agriculture Development Policy Loan, Community Based Rural Development Project, Forest Carbon Partnership, Forest Investment Program (FIP), and Natural Resource and Environmental Governance Development Policy Loan (DPL). *Agriculture DPL* ($50 million IDA). The objective is to contribute to the poverty reduction efforts in Ghana through improvement of soil and water management. Specifically, the project aims to scale up the implementation of the Africa Action Plan in priority areas: (i) strengthening the private sector; (ii) economic empowerment of women; (iii) skills Development for increased competitiveness; and (iv) agricultural productivity enhancement. *Community-Based Rural Development Project* (CBRDP, $82 million IDA). The objective is to strengthen the capacity of rural communities to enhance their quality of life by improving their productive assets, rural infrastructure, and access to key support services from private and public sources. An additional credit is being negotiated to help finance the costs associated with scaling up the CBRDP to reconstruct public goods in the flood-affected regions of the north, and extend support for decentralized service provision through the financing of basic public infrastructure by local level government authorities. *Forest Carbon Partnership* ($3.6 million). The funds will help Ghana prepare to reduce emissions from deforestation and forest degradation (REDD) and become "ready" for the implementation of an international mechanism for REDD. This Readiness Preparation Proposal (R-PP) implementation phase will be divided in three steps: **(i)** *Analysis, preparation and consultation*—analysis of REDD+ policy, legal and technical requirements, setting of the reference emissions Level, confirmation of institutional roles, responsibilities and oversight for REDD+, establishment of the entity responsible for MRV, selection of potential pilots/demonstration activities, continued consultation, information sharing and awareness raising, and finalization of REDD+ strategy; **(ii)** *Piloting and testing*—initial capacity building for pilots, establishment of pilots/demonstration activities, establishment of carbon accounting registry, testing of carbon measurement, accounting and MRV procedures, consultation around demonstrations and pilots, consultation on potential REDD+ policies, decisions and actions, and training needs analysis for full REDD+ implementation; and **(iii)** *Becoming ready*—approval of any new legislation and legal texts, finalized financing mechanisms, procedures, audit and controls, finalized operating procedures for MRV entity, recruitment of staff, training and capacity building on the development and technical aspects of REDD+, and operational plan to scale up REDD+. *Forest Investment Program* (FIP, $30 million). FIP will fund investments for the implementation of Ghana's REDD+ strategy aiming at promoting innovative and replicable transformational approaches and incentive mechanisms to reduce GHG emissions from deforestation and forest degradation and generating sustainable development cobenefits in poverty reduction and biodiversity protection by tapping into forest sector potential. The project will include a mix of activities, including, but not limited to, knowledge generation and sharing, private sector engagement, use of country systems, civil society engagement, and technical assistance. Such activities will be consistent with the REDD readiness activities identified by the government in the R-PP. *Natural Resource and Environmental Governance DPL* ($10 million IDA). The challenge of the Ghana Natural Resources and Environmental Governance (NREG) Program was to improve transparency in systems and procedures for natural resource management, which could lead to more effective forest law enforcement, improved collection of revenues in the mining and forestry sectors, and the mainstreaming of environment and climate change into economic planning and development. Achievements demonstrated in the initial years of policy reforms and institutional capacity building in the forestry and mining sectors would be scaled up based on a review of results. Estimated baseline financing (before GEF): $175.6 million

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Project name	Sustainable Land and Biodiversity Management Project
GEF/LDCF or SCCF alternative	**Description of GEF alternative** The GEF resources will be blended with the FIP and associated with the Agriculture DPL, CBRDP, the Forest Carbon Partnership, and the Natural Resource and Environmental Governance DPL. GEF resources from multiple FAs will build on the extensive baseline to generate local, national, and global environmental benefits (including reducing land degradation, conserving biodiversity, and reducing vulnerability to climate change) following an integrated landscape approach. The baseline: agriculture in fertile areas, small infrastructure works in forests, and an enabling environment for strengthening the governance over natural resources management will be integrated with the GEF project through the implementation of SLWM and biodiversity conservation targeted investments, coordinated planning, and dialogue. Some of the activities to be detailed in the future project formulation are: **(i)** Vegetative measures such as agroforestry, natural forest regeneration, woodlots, and cover cropping; **(ii)** Land-use planning, including grazing corridors; **(iii)** Additional sustainable measures such as contour farming and small terraces, micro-irrigation, and conservation set-asides along vulnerable areas among others; and **(iv)** Conflict resolution and incentive mechanisms to address the challenges from farmers and pastoralists competing for natural resources between in the context of providing opportunities for livelihood improvement. The project will support strengthening the enabling environment for SLWM and biodiversity conservation practices as well as on-ground activities in the selected landscapes. Advances at the policy level achieved through the NREG will contribute to the enabling environment for this project. SLWM practices will contribute to enhancing carbon stocks in forests and nonforest lands located in the north of the country, complementing activities developed in the south by the FIP. Key stakeholders in the project's on-ground investments will be the village communities (and where several villages are involved, unit committees), community environment management committees, and water user groups. These organizations will contribute identifying and putting in place community infrastructure investments, prioritizing SLWM and biodiversity conservation interventions, and establishing the incentive frameworks for adoption of SLWM technologies by individual farmers. SLWM agreements will be developed with farmer groups (usually at hoc groupings of 15 to 20 farmers, formed around interest in specific extension capacity) that will then be responsible for coordinating the activities of their members. In addition, an integrated SLWM M&E and knowledge management information system, backstopped by and linked to the regional level, will be established to support the implementation activities of a variety of actors. A wealth of information and knowledge on REDD+ in Ghana has been identified, but consolidation of the knowledge produced is needed. The overall program's knowledge management system will be a key tool to address this issue not only for Ghana's benefit, but also for all other participating countries. Finally, the project will contribute directly to the goal of Ghana's Country Strategic Investment Framework (CSIF) for SLM, which is to support country priorities in improving natural resource–based livelihoods by reducing land degradation, in line with MDGs 1 and 7. The objective of the CSIF is to mainstream and scale up SLM in the development framework of Ghana at all levels to improve the governance of land management decisions, secure ecosystem services, and improve rural livelihoods. The achievement of this objective involves long-term integrated strategies that focus simultaneously, in affected areas, on improved land productivity and the rehabilitation, conservation, and sustainable management of land and water resources, leading to improved living conditions in particular at the community level. Incremental GEF financing/additional LDCF/SCCF: $9.45 million Land degradation FA: $3 million Biodiversity FA: $2 million Climate change mitigation FA: $2.45 million Sustainable forest management bonus: $2 million LDCF: Not eligible SCCF: None *Note*: These amounts include the fee to be paid to the agency.

Project name	Sustainable Land and Biodiversity Management Project
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs to be aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#)
Implementing body (if known)	The Ministry of Environment (tbc)

6. Mali

Project name	Sustainable Land and Biodiversity Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline projects** The baseline projects for Mali are: the Program for Scaling Up Renewable Energy, the Disaster Risk Management Project, and the Regional Natural Resource Management Project. *Program for Scaling Up Renewable Energy* (SREP, $30 million). This project aims to design and start up the SREP investment plan for Mali. The SREP will capitalize on the existing National Strategy for the Development of Renewable Energies and support its implementation. The SREP will focus on several activities, such as (not exhaustive): rural electrification, household energy, and the promotion of biofuels. During the preliminary stages, a need for special emphasis on private sector involvement and the necessary changes in legislation/regulation to encourage private investments was identified. *Disaster Risk Management Project* ($5 million from GFDDR). The project will support implementation of the Comprehensive Disaster Risk Management and Climate Adaptation Program for Mali prepared in 2009 in consultation with the government and development partners. The project will include the following activities: **(i)** Strengthening of the disaster risk reduction and management institutional framework; **(ii)** Systematically raising the awareness of the public and stakeholders for information advocacy and technical capacity building; **(iii)** Strengthening key institutions' material and technical capacities; **(iv)** Integration of disaster risk management and reduction of and adaptation to climate change in primary and secondary school curriculum; **(v)** Strengthening post-emergency assessment and recovery implementation system; **(vi)** Development of a national policy, strategy, and action plan for disaster and risk management and reduction; **(vii)** Implementation of a pilot project for vulnerable communities' protection through integrated disaster risk management (floods, drought, locust invasion, and bush fires); and **(viii)** Strengthening disaster risk management and the reduction financing mechanism. *Regional Natural Resource Management Project* ($12 million). The project, which is still under development, will seek to: (i) enhance natural resource management capacities of the countries, building on lessons learned and exchange of experiences; (ii) pilot natural resource management initiatives; and (iii) strengthen governance for natural resources management. The project will include development of intersectoral coordination mechanisms (agriculture, livestock, forestry, water, transport, and so forth) for planning and information exchange and development and application of monitoring tools to measure the outcomes and transformational impacts of planned activities. Estimated baseline financing (before GEF): $47 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources will complement with the existing baselines and, in particular, will blend with the regional NRM project emphasizing support to the development of community-based livelihoods, such as ecotourism, to catalyze the scaling-up of improved NRM in Mali. This is a multisectoral (energy, forest, and agriculture) and multifocal area (land degradation, biodiversity, and climate change mitigation) project that will also assist local people in adapting to the predicted impacts of climate change in Mali and also promote technologies that reduce pressure on natural resources. Integrated landscape management, erosion control, and SLM will provide direct transformational benefits to the Disaster Risk Management Project and the Renewable Energy Project. There will be four components: *Component 1: Institutions, information, and policy*. This component will support scaling up of good practices demonstrated on the ground through institutional strengthening and catalyzing, understanding that SLM/NRM are intersectoral, win-win issues at both national and local (decentralized authority) levels.

Project name	Sustainable Land and Biodiversity Management Project
GEF/LDCF or SCCF alternative (*continued*)	*Component 2: Investment in SLWM and biodiversity-based livelihoods*. In targeted areas, in particular near PAs, ecotourism will be developed and supported by inventories in PA; comanagement plans for PA; ecotourism infrastructure; development and implementation of comanagement plans; and advocacy and communication. The project will also work in agrobiodiversity and in particular in the conservation of crop wild relatives to contribute to food security, enhance productivity, and improving the nutritional quality of crops. This component will draw in particular from land degradation and biodiversity FAs as well as from the SFM. *Component 3: Promote integrated landscape management through local-level generation of renewable energy and planning of sustainable plantations for fuelwood*; *Jatropha curcas L*. will be promoted through plantation, local-level processing and electricity generation systems for ecotourism and local people. This component will draw in particular from the climate change mitigation FA and will directly contribute to the Disaster Risk Management Project through erosion control and to the Renewable Energy Project through promotion of integrated landscape management practices adopted by local communities. *Component 4: Project coordination, monitoring and evaluation*. This component will support government at local and national levels in implementing, monitoring, and evaluating this project as well as strategic communications and documentation. *Linking with LDCF/SCCF* LDCF funds will help the baseline projects to become resilient to climate change and complement activities developed through the Disaster Risk Management Project. The project will help improve food security by promoting agrobiodiversity activities and conservation of crop wild relatives. Also, the resources will consider some of the top priorities included in the NAPA such as the promotion of fodder stock for livestock; elaboration of a technological training package for the general population with simple climate change adaptation practices; sensitization and organization of the population for the preservation of natural resources (elaboration of local conventions on reforestation and agroforestry); promotion of income-generating activities; and development of mutual assistance. During project preparation, the specific NAPA priority(ies) to be supported in association with the baseline will be identified. Activities will contribute to both objectives: CCA-1 and CCA-2. The program will promote coordination with other organizations implementing related initiatives. For the case of Mali, coordination will be explored with UNDP and FAO, who are involved in other projects related to the agricultural sector that are being implemented. Mali, as the other countries in the program, will benefit from an operational SLM platform that provides an additional coordination mechanism among partners. The project will contribute directly to the CSIF SLM in Mali that was developed with the support of TerrAfrica. The CSIF has two distinct objectives: (i) amplify the good practices of SLM to fight against the degradation of the land and the loss of the biodiversity and to adapt to climate change and (ii) reinforce the technical and financial institutional capacities of actors concerned with the integration of SLM into the development policies of the country. During the preparation of the project documents, country-driven consultation processes will take place to define intervention priority areas. Incremental GEF financing/additional LDCF/SCCF: $9.1 million Land degradation FA: $2.04 million Biodiversity FA: $1.56 million Climate change mitigation FA: $2 million Sustainable forest management bonus: $1.5 million LDCF: $2 million SCCF: None *Note*: These amounts include the fee to be paid to the agency.

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Project name	Sustainable Land and Biodiversity Management Project
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs to be aggregated at portfolio program level. The KPIs include (check those that apply): KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#) KPI 4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha)
Implementing body (if known)	The government at national and local levels

7. Mauritania

Project name	Sustainable Land and Water Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline project** The baseline projects for Mauritania are: Integrated Development Project for Irrigated Agriculture APL #3, the Community-Based Rural Development II, and the Regional Natural Resource Management Project. *Integrated Development Project for Irrigated Agriculture APL #3* ($10 million). The project aims to promote the sustainable increase of agricultural productivity and income in a rural environment, improve food security, and reduce poverty—all within the context of integrating the management of natural resources. The new phase will retain components from previous phases: (1) continue development of key incentive measures, (2) increase sustainable irrigation schemes, and (3) intensify agricultural diversification for targeted actors engaged in irrigated agriculture. *Community-Based Rural Development (CBRD) II* ($10 million). The CBRD II is being formulated to consolidate and scale up previous achievements toward improving the living conditions of village communities in terms of sustainable income increases, access to basic socioeconomic services, and improved natural resource management practices. The project plans to achieve its objective through capacity building (targeting village communities, rural municipalities, and suppliers of support services to communities) and investments in economic, social, and environmental subprojects implemented by these communities. *Regional Natural Resource Management Project* ($12 million for Mauritania). This project is currently under preparation for Burkina-Faso, Mali, Mauritania, Niger, and Senegal and seeks to: (i) enhance natural resource management capacities of the countries, building on lessons learned and exchange of experiences; (ii) pilot natural resource management initiatives; and (iii) strengthen governance for natural resources management. The project will include development of intersectoral coordination mechanisms (agriculture, livestock, forestry, water, transport, and so forth) for planning and information exchange and development and application of monitoring tools to measure the outcomes and transformational impacts of planned activities. Achieving improvements in management capacities will help with securing ecosystem services, which will indeed contribute to higher productivity and increased options for livelihood improvement. Estimated baseline financing (before GEF): $32 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and biodiversity FAs will be associated with the baseline projects (Integrated Development Project for Irrigated Agriculture APL and CBRD II) and will be blended with the Natural Resources Management Project to jointly promote SLWM and ecosystems services production. The GEF project will help address the key institutional, policy, and technological barriers to SLWM identified by the country. Enabling environments for SLWM practices with biodiversity considerations will ensure the sustainability of the agricultural practices and alternative livelihood options promoted in the baseline projects as well as consistency and coordination in natural resources management. The resources will also support investments for the implementation of watershed management plans as well as for agroforestry, natural forest regeneration, and other sustainable community and smallholder forestry management practices; green belt and dune stabilization; and wind break in the Senegal valley to protect the agricultural perimeters, among others.

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Project name	Sustainable Land and Water Management Project
GEF/LDCF or SCCF alternative (*continued*)	These activities will be directly integrated into the bottom-up decision-making process that has been embodied in the CBRD. The implementation of interventions prioritized at local and community levels will continue proving the potential for generating global environmental benefits such as increased vegetation cover, reduced land degradation, climate change mitigation, and biodiversity conservation in dry lands. *Linking with LDCF/SCCF* LDCF resources will also be deployed to cover some of the additional costs of improving the climate resilience of government and community livelihood investments. The resources will be focused at reinforcing adaptive capacities to manage impacts from sea level rise, flooding, and sand dune encroachment threats. This will be achieved by developing tools for improving planning, policy, and practice for monitoring and mitigating the effects of sea level rise and dune encroachment on targeted areas. Three components have been already identified: (i) monitoring, land-use planning, and information support; (ii) sand dune and land degradation control; and (iii) project management and monitoring. These resources will be consistent with some of what has been prioritized in the National Action Plan for Adaptation (NAPA), particularly: reorganization of the communities adversely affected by climate change, participatory reforestation for energy and agroforestry in agricultural zones, restoration and integrated management of the lowlands and wetlands, and improvement of knowledge about, and sustainable management of, forest resources. During project preparation, the specific NAPA priority(ies) to be supported in association with the baseline will be identified. Activities will contribute to both objectives: CCA-1 and CCA-2. The summary of vulnerability studies developed for the NAPA revealed that all the vital sectors of the economy are affected by the weather variability phenomena and climate change. The socioeconomic consequences are all the more dramatic given that they affect communities that live mainly on natural resources. The project will act on several of the sectors such as agriculture, water, and forestry and will benefit communities whose livelihoods depend on their natural resources. Finally, all the above activities will support the implementation of the CSIF developed with the support of TerrAfrica. Incremental GEF financing/additional LDCF/SCCF: $8.37 million Land degradation FA: $4 million Biodiversity FA: $2.37 million Climate change mitigation FA: None Sustainable forest management bonus: $2 million LDCF: None SCCF: None *Note*: These amounts include the fee to be paid to the agency. Mauritania is a flexible country; thus, it was possible to transfer resources from the FAs.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, wetlands, forest, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#)
Implementing body (if known)	The Ministry of Environment (tbc)

8. Niger

Project name	Sustainable Land and Water Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline projects** The baseline for the project in Niger are the following projects: the West Africa Agriculture Productivity Project, the Pilot Program for Climate Resilience, and the Regional Natural Resources Management Project. *West Africa Agriculture Productivity Project* (WAAPP/1C, $10 million IDA). The objective is to generate and accelerate the adoption of improved technologies in the participating countries' top agricultural commodity priorities areas that are aligned with the subregion's top agricultural commodity priorities, as outlined in the ECOWAP. The project has four components: **(i)** Enabling conditions for subregional cooperation in the generation, dissemination, and adoption of agricultural technologies to allow ECOWAS member countries to benefit from those technologies; **(ii)** National Centers of Specialization (NCOS)—for Niger, the new project will expand the range of commodities to include livestock; **(iii)** Support for demand-driven technology generation and adoption; and **(iv)** Project coordination, management, and monitoring and evaluation. *Pilot Program for Climate Resilience* (PPCR $63 million CIF). Niger's PPCR investment strategy involves mainstreaming climate resilience into development strategies; expanding sustainable land management initiatives and integrating them into planning and budgeting processes; updating the quality of weather and climate information and making it publicly available; and improving monitoring and evaluation methodologies. *Regional Natural Resources Management Project* ($12 million IDA). A regional integrated Natural Resource Management Project is currently under preparation for Burkina-Faso, Mali, Mauritania, Niger, and Senegal. The project, which is still under development, will seek to: (i) enhance natural resource management capacities of the countries, building on lessons learned and exchange of experiences; (ii) pilot natural resource management initiatives; and (iii) strengthen governance for natural resources management. The project will include development of intersectoral coordination mechanisms (agriculture, livestock, forestry, water, transport, and so forth) for planning and information exchange and development and application of monitoring tools to measure the outcomes and transformational impacts of planned activities. Estimated baseline financing (before GEF): $85 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and climate change FAs will be associated with WAAP/1c Project and the Pilot Program for Climate Resilience and blended with the Regional Natural Resources Management Project. This coordination will jointly help secure the supporting and regulating ecosystem services that are critical for sustaining productivity increases in the priority agroecological zones targeted in the baseline project. With the implementation of SLWM (that contributes to enhancement of carbon stocks in dryland forest and nonforest lands, among others) and biodiversity conservation practices, the project will add to the pieces of a landscape mosaic that the baseline is already offering and that relate to agricultural productivity, climate resilience in agriculture, and natural resources management.

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Project name	Sustainable Land and Water Management Project
GEF/LDCF or SCCF alternative (*continued*)	The project will develop incentive structures for promoting on-ground SLWM practices designed for farmer groups (men and women) and based on their needs. Promoting alternative livelihoods and small-scale income diversification that reduces pressure on the natural resources, including forests, will become part of the incentive structure. In addition, the project will support natural habitat and wildlife management activities focused on maintaining and enhancing key habitat values as part of the broader landscape mosaic approach. The project will facilitate investment in climate resilient SLWM through a strengthened enabling environment (for example, strengthening knowledge management and M&E systems and their use, enhancing inter- and intrasectoral cooperation, policies, and regulatory frameworks for SLWM, and so forth). GEF funding will also provide high quality technical assistance and the capacity strengthening of SLWM implementers and service providers in agroecological techniques and principles as well as in the development of SLWM agreements with local farmers. All the above activities will support the implementation of the CSIF that was developed with support of the TerrAfrica–GEF/SIP program. The overall objective is to sustainably reduce land degradation and thus help reduce poverty through the establishment of a national strategic framework that will prioritize, plan, and guide the implementation of current and future SLM investments for both public and private sector and all local to national stakeholders. Incremental GEF financing /additional LDCF/SCCF: $4.88 million Land degradation FA: $2 million Biodiversity FA: $0.88M Climate change mitigation FA: $1 million Sustainable forest management bonus: $1 million LDCF: None SCCF: None *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#) KPI 4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC/ha)
Implementing body (if known)	The Ministry of Environment (tbc)

9. Nigeria

Project name	Nigeria Erosion and Watershed Management Project (NEWMAP)
Parent project description (IDA, TF, and so forth)	**Description of baseline project** NEWMAP's objective is to restore degraded lands and reduce longer-term erosion vulnerability in targeted areas. This multisectoral project is expected to support a transformation in how Nigerians relate to their land. To respond to the president of Nigeria's request to the World Bank to help address severe erosion in southeastern Nigeria, the project would take a comprehensive watershed management approach coupled with an investment focus on gully erosion prevention and rehabilitation in derived savannah and forested areas. Also, via a cross-state learning element, the project will be dynamic, visible, active, transparent, push for reforms, and provide a framework for action that could be rolled out nationwide. There are three components: *Component 1:* Investment in soil erosion management. Component 1 aims to support on-the-ground interventions to address, prevent, and reverse land degradation. A strategic combination of engineering, biological, and community-centered low-tech measures would be deployed to stabilize severe erosion sites and prevent emerging erosion problems early on when intervention costs are low. Accordingly, interventions will include structural, vegetative, and adaptive natural resource–based livelihood measures, coupled with microcatchment planning where necessary. *Component 2:* Watershed planning and institutional and information development. This component would address longer-term sustainability by strengthening the enabling environment to address erosion and watershed degradation problems in a comprehensive manner across sectors and states. The component would support modernization and coordination of the many institutions involved in planning, management, assessment, enforcement, and monitoring of watershed- and erosion-related activities from subwatershed to basin scales. To reinforce good design and prioritization of investment, the component would also support improvements in the policy environment, data modernization, development and application of analytical and monitoring tools, and diagnoses of watershed problems. *Component 3:* Project management. This component aims to support the government at federal and state levels to implement this project. This will include support for project management, including fiduciary aspects (procurement, financial management, and environmental and social safeguards), project M&E, strategic communications, and documentation. Estimated baseline financing (before GEF): $400 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and biodiversity FAs will be blended into NEWMAP to promote vegetative land management practices, such as by establishing conservation set-asides along erosion-prone waterways and vegetation corridors. Technical assistance on geo-informatics, monitoring, and land-use planning will also be provided at local and national scales—with important lessons and tools that can be transferred to northern states on the front line of Sahelian land degradation. The work also includes development of coordination mechanisms for watershed planning and information exchange; development and application of monitoring tools to measure the flow of ecosystem services in watersheds and land-use systems; and piloting innovations in environmental financing and ecosystem services such as payments for environmental services. With regard to the SFM window, the project would contribute to the protection of existing forest resources important for reducing erosion impacts through activities such as watershed scale planning, vegetation corridors, and afforestation measures.

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Project name	Nigeria Erosion and Watershed Management Project (NEWMAP)
GEF/LDCF or SCCF alternative (*continued*)	*Linking with LDCF/SCCF* SCCF resources will also be deployed to cover some of the additional costs of improving the climate resilience of civil works susceptible to or contributing to erosion. This includes incorporating climate parameters into civil works planning and design and targeting investment add-ons to civil structures that accommodate greater climate variability than baseline investments would otherwise. According to the vulnerability assessment of Nigeria's UNFCCC National Communications: > As a consequence of climate change, some areas will start receiving heavier and steadier rainfall and such areas will inevitably begin to experience increased rainfall-induced erosion. These are extremely serious situations given that soil erosion is already of catastrophic proportions in Nigeria whether viewed as gullying or sheet erosion, while floods annually ravage many parts of the country during the rainy season. For example, it is estimated that in Abia, Anambra and Imo States located in the south-eastern part of Nigeria, there are no fewer than 600 gully erosion sites. As a result of widespread reduction of vegetation cover, all parts of the country are vulnerable to soil erosion resulting from climate change either in terms of removal of soil by wind and rain or deposition of same in low-lying and down-wind locations. Priority actions in Nigeria's UNFCCC National Communications include: establishment of mechanical and engineering structures (for example, check dams, storm diversion channels, bench terraces, or contour bunds) as well as biological measures (for example, cover cropping, mulching, contour cultivation, or minimum or zero tilling) that could reduce soil erosion. It is important to note that these types of actions also appear in other national plans (National Action Plan, National Biodiversity Strategies and Action Plans (NBSAP), SLM Investment Framework, and National Agriculture Strategy), reinforcing the idea of an integrated, holistic response to erosion targeted by the baseline project. Incremental GEF financing/additional LDCF/SCCF: $9.28 million Land degradation FA: $0.6 million Biodiversity FA: $2.68 million Climate change mitigation FA: None Sustainable forest management bonus: $1 million SCCF: $5 million LDCF: Not eligible *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include (check those that apply): KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (hectares) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#)
Implementing body (if known)	The federal government and participating state governments

10. Senegal

Project name	Senegal Community-Based Project
Parent project description (IDA, TF, and so forth)	**Description of baseline project** The baseline projects for Senegal are: the Second Sustainable and Participatory Energy Management Project and the Regional Natural Resource Management Project ($12M). *Second Sustainable and Participatory Energy Management Project* (PROGEDE II, $15 million). PROGEDE II aims to help increase the availability of diversified household fuels in a sustainable and gender equitable way, and to help increase the income of participating communities while preserving the forest ecosystems. There are four components: **(i)** Institutional reforms of the charcoal value chain **(ii)** Sustainable wood fuels supply management **(iii)** Promotion and diversification of modern household energy **(iv)** Institutional arrangements for project implementation *Component 1* will address the political economy and equity issues (income and decision making), particularly in the (supplying) regions, and in the country as a whole. It will support central and decentralized government, local government, as well as communities for a full implementation of the reform. *Component 2* will finance technical assistance, logistical support, and equipment to central and decentralized forestry services, communities, and local collectivities, including community-based organizations (CBOs) and NGOs involved in forest and natural resource management and biodiversity and environmental and social protection activities. *Component 3* will finance technical assistance, logistical means, and equipment for the Directorate of Petroleum Products and Household Energy and private entrepreneurs to support massive production and dissemination of improved stoves and alternative fuelwood. *Component 4* will support government institutions and community organizations in playing their rightful roles in scaling up the program; hence, consultants will play a more catalytic, supportive, and advisory role. **Other associated project** The integrated *Natural Resource Management Project* ($12 million) with regional IDA is currently under preparation for Burkina Faso, Mali, Mauritania, Niger, and Senegal. This project will seek to enhance countries' natural resource management capacities, building on lessons learned and the exchange of experiences. Estimated baseline financing (before GEF): $27 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and climate change mitigation FAs will be blended with the PROGEDE II in order to jointly promote community based sustainable land and energy management. Climate change mitigation measures will derive from restoration and enhancement of carbon stocks in forests and other vegetative cover within Component 2 PROGEDE II (GEF Objective CCM5) and from promotion of low carbon energy within Component 3 of PROGEDE II (GEF Objective CCM3). Sustainable land management (SLM) measures will focus on integrated landscape management practices adopted by local communities through, among other things, promotion of best practices within Component 2 of PROGEDE II (GEF Objective LD-3). The project aims to consolidate local support of the Great Green Wall and Ecovillage Initiatives by generating climate resilient livelihoods for local communities in targeted areas. Specific attention will be provided to ensure sustainability of the project results. Following a similar approach, activities planned with the GEF resources will be added to the Clean Development Mechanism. When relevant, specific activities will be implemented by civil society organizations. The GEF-related reporting requirements will also be facilitated.

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Project name	Senegal Community-Based Project
GEF/LDCF or SCCF alternative (*continued*)	Incremental GEF financing/additional LDCF/SCCF: $6.5 million Land degradation FA: $3.5 million Biodiversity FA: None Climate change mitigation FA: $1.5 million Sustainable forest management bonus: $1.5 million LDCF: None SCCF: None *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 4. Change in carbon accumulation rates in biomass and soil, compared to baseline (tC)
Implementing body (if known)	The Ministry of Environment

11. Sudan

Project name	Sustainable Land and Biodiversity Management Project
Parent project description (IDA, TF, and so forth)	**Description of baseline project** The baseline project in Sudan is the *Improving Agricultural Support Services in the Traditional Rain-Fed Farming Areas* ($20 million) that is financed by the Multidonor Trust Fund. The project's objective is to improve delivery and access to agricultural support services in the traditional rain-fed farming areas to achieve sector strategy objectives for poverty reduction and the sustainable improvement of household food security. The project depends on scaling up current tested and successful technologies, rural credit initiatives, agricultural marketing, and other supporting services in the context of existing sector development policies and strategies. The project strategy for development of agricultural support services provision is to focus on traditional, small agropastoral farmers, benefiting from the previous lessons learned, maximizing community participation, relevant institutions, and capacity building for targeted beneficiaries. The project is structured around a number of diversified and integrated activities/interventions that are designed to provide crop and livestock producers with sustainable support services. The project's four components are: (i) capacity building for public and private sector agricultural services providers; (ii) technology development and extension; (iii) promotion of investment in community-based agricultural services; and (iv) project management. Estimated baseline financing (before GEF): $20 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and biodiversity FAs will be blended with the baseline project to achieve global environmental benefits from the agricultural support services. The project will facilitate a variety of SLWM practices such as soil conservation techniques, crop management, agroforestry practices, water harvesting, and improved livestock management activities. Community-based natural regeneration will also be supported to help reduce land degradation in the targeted areas. The project will address several aspects of the landscape mosaic and will not only act in agricultural areas, but will also promote biodiversity conservation measures and sustainable forest management practices in adjacent areas that provide environmental benefits (increasing productivity, increasing food security, providing local energy sources, providing local fresh and clean water, among others) for these rain-fed agricultural areas. The project will be incremental to the baseline activities, but the financial resources will not be part of the multitrust fund that finances the baseline. The GEF will be treated as a Sector Investment Loan. Incremental GEF financing/additional LDCF/SCCF: $8.35 million Land degradation FA: $2.67 million Biodiversity FA: $3.68 million Climate change mitigation FA: None Sustainable forest management bonus: $2 million LDCF: None SCCF: None *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the Support Program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#)
Implementing body (if known)	The Ministry of Environment (tbc)

12. Togo

Project name	Togo Integrated Disaster and Land Management
Parent project description (IDA, TF, and so forth)	The combined GEF resources will be associated with three projects: The Agricultural Sector Support Project (PASA, $37 million), the West Africa Agricultural Productivity Program Project (WAAPP, $10 million), and the Integrated Disaster and Land Management Project (IDLM, $7.8 million). The GEF resources will be fully blended with the latter to take advantage of a joint implementation unit within the Ministry of Environment and Forest Resources. **Description of baseline project** Integrated Disaster and Land Management (IDLM)—Disaster Risk Management (DRM) activities. The objective of IDLM is to reduce the risk of flooding and land degradation in targeted rural and urban areas. IDLM has four components: **(i)** Institutional and capacity building; **(ii)** Support to local development activities; **(iii)** Support the development of knowledge and monitoring systems; and **(iv)** Awareness and communication. *Component 1* addresses flood risk management and preparedness. DRM activities will focus on training and equipment that will be provided to key national, and regional, local, and community actors engaged in flood prevention, mitigation, preparedness, response, and recovery. *Component 2* will pilot community-based activities to mitigate impacts of flooding, such as: river bank restoration and protection; canal maintenance; pond construction and maintenance; small-scale reforestation; tree nursery site establishment; and tree planting. *Component 3* will support the identification of appropriate disaster mitigation investments and the development of a comprehensive early warning system; a shared working plan; and a coordinated approach to better forecast floods in rural and urban areas. *Component 4* will support information campaigns on risk and prevention of flooding. General awareness campaigns on prevention and mitigation measures will target relevant agencies and general public. **Description of other associated projects** *Agricultural Sector Support Project* (PASA, $37 million). PASA's objectives are to rehabilitate and reinforce productive capacities among targeted beneficiaries across selected value chains and foster an enabling institutional environment for the development of the agricultural sector. PASA has three components: **(i)** Promotion of strategic food crop, export crop, and freshwater fish production; **(ii)** Recovery of the livestock subsector; and **(iii)** Support for capacity building and sector coordination. The PASA aims at increasing the production of strategic crops such as cotton, coffee, cocoa, rice and corn; crops that put high demands on soil and water. *West Africa Agricultural Productivity Program Project's* (WAAPP, $10 million) objective is to generate and accelerate the adoption of improved technologies in the participating countries' top agricultural commodity priority areas that are aligned with the subregion's top agricultural commodity priorities. WAAP has four components:

Project name	Togo Integrated Disaster and Land Management
Parent project description (IDA, TF, and so forth) (*continued*)	**(i)** Enabling conditions for subregional cooperation in the generation, dissemination, and adoption of agricultural technologies; **(ii)** Strengthening national centers of specialization and strengthening of the research system—for Togo this component will focus on strengthening capacities for adaptive research and technology transfer; **(iii)** Support to demand-driven technology generation, dissemination, and adoption; and **(iv)** Project coordination, management, and M&E. Estimated baseline/associated financing (before GEF): $54.8 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and biodiversity FAs will be blended with the DRM activities and will provide an ecological support to strategic food crop supported by the PASA and the WAAPP. GEF resources will help scaling up integrated landscape approaches (FA objective LD3) through strengthened capacity on sustainable land management (IDLM component 1, PASA component 3, WAAP component 2) through dissemination of information on integrated natural resources management technologies and good practices (IDLM components 2 and 4; PASA component 1; WAAPP component 1) and through the development of integrated natural resources management tools and methodologies (IDLM components 2 and 3; PASA component 1; WAAPP component 3). It is expected that carbon benefits from SFM funds will be generated from avoided deforestation and natural regeneration in rehabilitated PAs (BD2, SFM 1) with community participation (IDLM components 1, 2, and 4). *Linking with LDCF/SCCF* LDCF resources will contribute to increase adaptive capacity (FA objective CCA-2) by implementing adaptation and risk reduction awareness activities at local level (IDLM components 1, 2, and 4; PASA component 1; WAAP components 2 and 3) in both agricultural practices and flood prevention work. The project will directly support the implementation of priority 1 and 2 projects as defined in the National Adaptation Programs of Action of Togo (adaptation of the agricultural production systems and flood early warning system). The project will also support Togo's country strategic investment framework for SLM that was developed in 2010, the National Investment Programme for Environment and Natural Resources (NIPENR). The proposed project is fully integrated within the NIPENR, contributing directly to four out of the six subprograms. These four subprograms are: **(i)** Institutional, legal, financial, and technical capacity building in the area of sustainable environmental and natural resource management; **(ii)** Support for the implementation and dissemination of best practices in environmental and natural resource management in rural areas; **(iii)** Attenuating the effects of climate change, disaster management, and risk prevention; and **(iv)** Drawing up and putting into practice a system of knowledge acquisition and management, M&E, and development of a communication strategy to support the development of environmental and natural resources management.

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Project name	Togo Integrated Disaster and Land Management
GEF/LDCF or SCCF alternative (*continued*)	Given the focus of the project to on the ground activity, community-based organizations will be essential. In Togo, communities establish Village Development Committees though out the territory. Another key player will be the Agency for support to grass root initiatives (AGAIB), whose board comprises representatives of NGOs, government, and civil society. Given the blending with the agricultural project, key organizations that could participate are: Coffee & Cocoa Value Chains Coordination Committee, the Coffee and Cocoa Interprofessional Board, the Togo Cereal Producer Organization, the Togo Federation of Coffee & Cocoa Producers' Groups Unions, the Business Services & Producer Organizations, the Togo Federation of Cotton Producers' Groups, the New Togo Cotton Company and the Enterprises Territories and Development NGO. In the forest/PAs management sector, the Ministry of Environment and the Agency for Forest Development and Exploitation (ODEF) are obvious key partners. Around PAs, the Village Association for Participatory Management of Protected Areas (AVGAP) has been established and they should also play a key role. Incremental GEF financing/additional LDCF/SCCF: $9.89 million Land degradation FA: $3.89 million Biodiversity FA: $1 million Climate change mitigation FA: None Sustainable forest management bonus: $1 million LDCF: $4 million SCCF: None *Note*: These amounts include the fee to be paid to the agency. Also, because Togo is a STAR flexible country, resources from the CC FA would be transferred to the LD FA.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include: KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (unit and methodology pending) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#)
Implementing body (if known)	The Ministry of Environment and Forest Resources

13. Knowledge Management, Monitoring, and Evaluation

Project name	Knowledge Management and Monitoring and Evaluation Project
Parent project description (IDA, TF, and so forth)	**Description of baseline project** All the World Bank IDA/IBRD/TF projects that serve as baseline in each country have an M&E component that will be the baseline for this project. In addition, the Centers of Excellence have programs, financed mainly by the Consultative Group on International Agricultural Research (CGIAR), European Commission, and TerrAfrica, that serve as a baseline for knowledge management. Estimated baseline financing (before GEF): $10 million
GEF/LDCF or SCCF alternative	**Description of GEF alternative** GEF resources from the land degradation and climate change mitigation set-asides will be used to promote, among all countries participating in the program, the exchange of experiences, lessons learned and best practices in relation to land management practices, agro-silvo-pastoral systems, economics of SLWM, and carbon measures, in addition to supporting technical assistance on geographic information systems, monitoring, and land-use planning at regional level. The project will have two components: knowledge management compilation and dissemination and program M&E. The project will be implemented by Centers of Excellence (in collaboration with civil society organizations and CGIAR centers) from the regions including: - The permanent Interstate Committee for Drought Control in the Sahel (CILSS), which is an international organization of eight countries in the Sahel (Burkina Faso, The Gambia, Cape Verde, Mali, Mauritania, Niger, Senegal, and Chad). The CILSS is based in Ouagadougou, Burkina Faso, and will be responsible for the regional knowledge management compilation and dissemination component, in close collaboration with CGIAR Center such as ICRAF and IITA. - The AGRHYMET Regional Centre was established in 1974 as a institute of the CILSS specialized on agro-hydro-meteorology. It is composed of nine member states (Burkina Faso, Cape Verde, Chad, The Gambia, Guinea Bissau, Mali, Mauritania, Niger, and Senegal). It is based in Niamey, Niger. Its main objectives are achieving food security and increased agricultural production in the CILSS member states and improving natural resources management in the Sahelian region. It will be responsible for providing accurate forecasts to the program countries. This center will work in close collaboration with IGAD Climate Prediction and Application Center (ICPAC), based in Nairobi. - The OSS (Observatoire du Sahara et du Sahel) is an international organization based in Tunis. It was founded in 1992 to improve early warning and monitoring systems for agriculture, food security, and drought in Africa. The OSS community includes 22 member countries including four subregional organizations—representing West Africa (CILSS and Côte d'Ivoire), East Africa (IGAD) and North Africa (AMU and Egypt), a subregional organization covering the whole circum-Sahara (CEN-SAD), regional organizations, as well as organizations part of the United Nations system and civil society. The OSS will be responsible for aggregating country M&E project data into regional M&E data to monitor the indicators of the program presented in the PFD results framework. - The Regional IUCN (International Union of the Conservation of Nature) office in Burkina Faso has been leading work on transboundary biodiversity in the regional and biological/wildlife corridors. The Regional IUCN office will be responsible for preparation of Transboundary Biodiversity Management Plans for the program. These centers will collaborate with the ECOWAS Water Resources Coordination Centers, IGAD, Rural Hub, 2iE, ICRAF, IITA, and ACMAD (African Center for Climate Applied to Development) among others.

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Project name	Knowledge Management and Monitoring and Evaluation Project
GEF/LDCF or SCCF alternative	The program's regional activities on information and institutions will benefit from directly and indirectly involve key SRAP facilitators including ECOWAS/CILSS for West Africa, IGAD for eastern Africa, and ECCAS/COMIFAC for Central Africa. For the M&E, the project will aim to apply the UNEP/GEF-financed carbon benefits tools that are not yet available. Discrete projects will consider applying this tool, depending on country circumstances, and results will be aggregated by the regional project. Discrete project teams will also consider alternate tools such as the GEF-financed Land Degradation Assessment in Drylands (LADA) toolkit. In addition, the project will consider the Performance Review and Assessment of the Implementation System (PRAIS), designed for monitoring the implementation of the UNCCD 10-year strategy and convention, in the design and implementation of the national projects within the program. Incremental GEF financing/additional LDCF/SCCF: $5 million Land degradation set-aside: $3 million Climate change mitigation set-aside: $2 million *Note*: These amounts include the fee to be paid to the agency.
Indicative indicators for measuring GEF contribution	The GEF increment will contribute to the support program's objectives via KPIs aggregated at portfolio program level. The KPIs include (check those that apply): KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, PAs) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (hectares) KPI 3. Targeted institutions with increased adaptive capacity to reduce risks and respond to climate variability, compared to baseline (#) KPI 4. Change in carbon accumulation rates, compared to baselines of individual projects (tC/ha)
Implementing body (if known)	CILSS, AGRHYMET Regional Centre, OSS, and Regional IUCN

Annex D. Baseline Projects and Cofinancing (estimated financing)

Country	Potential baseline project	Baseline				Incremental cost		Additional cost
		Financing ($ millions)	Source of financing	Active	Potential pipeline	Potential GEF increment ($ millions)	Top up for SFM ($ millions)	Potential adaptation increment (SCCF or LDCF) ($ millions)
Benin	West Africa Agriculture Productivity Project (WAAPP)	10.0	IDA		X	4.50	1.5	
Benin	Urban Environment and Disaster Management Project	10.0	IDA		X			
Burkina Faso	Forest Investment Program (FIP)	27.0	FIP		X	6.00	2.0	
Burkina Faso	Disaster Management Project	5.0	GFDRR		X			
Burkina Faso	Regional NRM Project	12.0	IDA		X			
Chad	Agricultural Productivity Project	30.0	IDA		x	4.00	1.0	5.0
Chad	Local Development Program Support Project 2 (LDPSP 2)	30.0	IDA		X			
Ethiopia	Sustainable Land Management Project (SLMP II)	100.0	IDA		X	7.00	2.0	5.0
Ethiopia	Agriculture Growth Project	150.0	IDA	X				
Ethiopia	Productive Safety Net Project (PSNP)	450.0	IDA	X				
Ethiopia	Forest Carbon Partnership/ REDD	3.6	FCPF		X			
Ethiopia	Pastoral Community Development Project	56.0	IDA	X				

Country	Potential baseline project	Baseline				Incremental cost		Additional cost
		Financing ($ millions)	Source of financing	Active	Potential pipeline	Potential GEF increment ($ millions)	Top up for SFM ($ millions)	Potential adaptation increment (SCCF or LDCF) ($ millions)
Ghana	Forest Carbon Partnership/ REDD	3.6	FCPF			7.45	2.0	
Ghana	Natural Resources and Environmental Governance DPL	10.0	IDA		X			
Ghana	Forest Investment Program (FIP)	30.0	FIP		X			
Ghana	Community-Based Rural Development Project (CBRDP)	82.0	IDA	X				
Ghana	Agriculture DPL	50.0	IDA	X				
Mali	Natural Resource Management in a Changing Climate (Regional NRM)	12.0	IDA	X	X	5.60	1.5	2.0
Mali	Disaster Risk Management	5.0	GFDDR		X			
Mali	Program Scaling Up Renewable Energy (SREP)	30.0	TF		X			
Mauritania	Integrated Development Project for Irrigated Agriculture APL #3 (PDIAIM)	10.0	IDA		X	6.37	2.0	
Mauritania	Regional Natural Resources Management Project	12.0	IDA		x			
Mauritania	Community-Based Rural Development (CBRD) II	10.0	IDA		X			
Niger	PPCR	63.0	PPCR		X			

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Country	Potential baseline project	Baseline				Incremental cost		Additional cost
		Financing ($ millions)	Source of financing	Active	Potential pipeline	Potential GEF increment ($ millions)	Top up for SFM ($ millions)	Potential adaptation increment (SCCF or LDCF) ($ millions)
Niger	West Africa Agriculture Productivity Project (WAAPP)	10.0	IDA		X			
Nigeria	Nigeria Erosion & Watershed Management Project (NEWMAP)	400.0	IDA		X	3.28	1.0	5.0
Senegal	PROGEDE Forestry Project	15.0	IDA	X		5.00	1.5	
Senegal	Regional Natural Resources Management Project	12.0	IDA					
Sudan	Improving Agricultural Support Services in the Traditional Rain-Fed Farming Areas	20.0	TF	x		6.35	$2.0	
Togo	Agriculture Sector Support Project	37.0	IDA		X	4.89	$1.0	4.0
Togo	Integrated Disaster and Land Management	7.8	GFDDR		X			
Togo	West Africa Agriculture Productivity Project (WAAPP)	10.0	IDA		X			
Regional	Regional Knowledge Management and M&E Project	10.0	IDA			5.00		
	Total financing	1,735.0				69.32	$18.5	21.0
Cofinancing EU		15.00						
Cofinancing national governments		60.00						
Total cofinancing		1,810.00						

Source: Author's compilation.
Note: The amounts shown for GEF/SFM/LDCF by country include the agency fees.

Annex E. Key Suggestions from Bonn Ministerial Declaration (February 2011)

In the program design, the World Bank considered key technical comments provided at the Expert and Ministerial Consultation on the Great Green Wall, which was held in Bonn, Germany, in February 2011. Some of these key considerations referred to: taking advantage of existing work and lessons learned in the region; addressing land degradation and climate change challenges with a holistic approach; considering pastoralist issues in the Sahel; the need for a political and legislative framework to facilitate mainstreaming of successful interventions; following an integrated ecosystem management approach; and the need for integration of interventions at the regional level.

The following table summarizes the main suggestions and comments from countries and partners during the meeting.

Organization/ country	Suggestions/comments	World Bank's response
African Development Bank (AfDB)	The challenge cannot be adequately addressed by limited available resources and by single governments or institutions; the investment levels need to match the scale of the challenge. AfDB will support the initiative, particularly related to the Lake Chad Basin.	The World Bank will promote coordination with other agencies working in the countries on similar initiatives such as the African Development Bank (AfDB).
European Commission (EC)	EC has already developed activities and committed funds to support GGWI.	The World Bank has coordinated with EC for program design because some of the funds will cofinance program activities.
Food and Agriculture Organization (FAO)	Highlights the importance of forests and trees in arid zones and their contribution to the effective implementation of the GGWI. Need for a multisectoral approach, strong collaboration among regional organizations and countries, and community involvement.	SFM is one of the key components of the proposed program. In addition, the program will incorporate all the practices and interventions at the landscape scale mentioned by FAO: SFM, forest landscape restoration, agroforestry, fighting sand encroachment, SLWM, sustainable management and restoration of rangelands, good agricultural practices, and urban and peri-urban forestry and greening.

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Organization/ country	Suggestions/comments	World Bank's response
Food and Agriculture Organization (FAO) (*continued*)		The program is designed as a multisectoral investment that will build on the TerrAfrica platform for regional collaboration. Local communities will be in charge of implementing on-ground activities. The World Bank will promote coordination.
French Ministry Foreign Affairs	Importance of involving existing institutions (AU, CEN-SAD) as well as regional and subregional organizations such as OSS and CILSS.	All of these organizations and institutions will be involved in the program as implementing agencies of regional activities and members of the Technical Committee.
International Fund for Agriculture Development (IFAD)	Support and interest in participating in the initiative linking their portfolio with GEF components (as has been done with SIP/TerrAfrica).	The World Bank will promote coordination with IFAD for the program's implementation. Coordination already has started. For example, for Togo and Senegal, coordinated work resulted in the identification of priorities to be included in the LDCF envelope.
International Union for Conservation of Nature (IUCN)	Highlights areas of expertise that could support GGWI.	The World Bank proposes that the Regional IUCN will be one of the partners to implement the Regional Knowledge Management and M&E Project, particularly being responsible for preparation of Transboundary Biodiversity Management Plans for the program.
Sahara and Sahel Observatory (OSS)	Highlights the main aspects in which the institution will be able to contribute to the GGWI.	The OSS will become a partner in the program's implementation, particularly for the Regional Knowledge Management and M&E Project.
United Nations Development Programme (UNDP)	UNDP highlights several vehicles that can accompany the GGWI.	The World Bank took note of these points and will promote coordination.
United Nations Environment Programme (UNEP)	Highlights key points: integrated approach, impacts at local level, and taking advantage of existing good practices. UNEP indicates areas in which they could support countries.	The program has considered the key points mentioned for its design and will promote coordination with this agency.
United States Agency for International Development (USAID)	Importance of building on and scaling up past successes to national and regional level. Need to strengthen local governance in implementing SLM initiatives.	The program was designed building on past experiences, particularly under the TerrAfrica heritage. Strengthening local governance will be supported complementing advances achieved by baseline projects.
World Agroforestry Centre (ICRAF)	Importance of incorporating dimensions of income generation and markets. Interest in supporting regional baseline measures and ongoing monitoring (biophysical and socioeconomic).	These dimensions have been incorporated in the program design. ICRAF will participate in the Regional Knowledge Management and M&E Project.

Organization/ country	Suggestions/comments	World Bank's response
World Wildlife Fund (WWF)	Urgency to develop a regional capacity to provide decision support methodologies and tools: sophisticated technology-based information systems (geospatial information technologies for natural resource management, computer modeling of climate impacts, and knowledge-based systems for cataloguing and disseminating information).	The Regional Knowledge Management and M&E Project will consider the tools mentioned.

Annex F. Sustainable Land and Water Management: Definition and Practices

SLWM practices include both technologies and approaches applied to raise land quality (see definitions of land, SLWM, land degradation, and land quality in TerrAfrica [2009, annex 5]). The precise practices are usually site specific, allowing project managers freedom in defining what is an SLWM technology or practice. For example, tree planting may be an SLM practice in one area, but not in another because the practice may negatively affect downstream water availability.

Technologies refer to agronomic, vegetative, structural, and management measures that control land degradation in the field: examples include terracing, forestation, reduced tillage, micro-irrigation, and others. Approaches include ways and means of support that help to introduce, implement, adapt, and apply technologies in the field: examples include watershed management, climate risk management, community land-use planning, and others.

Recognizing that there is no one "miracle" solution to solve the problems of land degradation and low productivity, selection of the appropriate SLWM technologies for a particular area will be determined by: (i) the qualities and characteristics of the local land resources; (ii) the SLWM requirements of the land use to be pursued; and (iii) the socioeconomic context and priorities of the land users. While SLWM should target the landscape level, it will be based on gaining incremental improvements within the land-use production system through combining local practices that will result in:

- Improved plant management, for example, higher yields, good vegetative cover, and reduced raindrop impact;
- Improved soil and nutrient management, for example, higher organic matter levels, integrated plant nutrition, improved soil structure, and good rooting conditions;
- Improved rainwater management, for example, reduced runoff, increased infiltration, and improved soil moisture conditions; and
- Reduced risk to production systems, people, and assets.

There will be synergistic benefits from combining many of these, which can be expected to lead to greater productivity and environmental benefits than could be achieved with each one on a purely incremental basis.

There are a number of common technical elements that underpin win-win management options, notably:

- Minimum soil disturbance;

[i] This annex draws from TerrAfrica's (2009) Country Support Tool.

- Maintenance of good ground cover;
- Restoration of soil organic matter and related biological activity;
- Integrated plant nutrition management;
- Better crop husbandry;
- Development of integrated crop/livestock/ agroforestry systems;
- Opportunistic flexible management of traditional pastoral systems; and
- Delineation of temporary or permanent PAs.
- Specific practices that can be used in combination to advance toward SLM are listed in the table below.

SLWM Practices		
Land/water management approaches	**Land/water management technologies**	
Land-use regimes	**Agronomic and vegetative measures**	**Structural measures**
— Watershed plans — Community land-use plans — Grazing agreements, — Closures, and so forth — Biodiversity corridors — Biodiversity corridors — PA management — Conservation zones — Other	— Intercropping — Agroforestry in crop or grazing systems — Afforestation and reforestation — Mulching and crop residue — Crop rotation — Fallowing — Low till — Composting/green manure — Integrated pest management — Vegetative strip cover — Contour planting — Revegetation of rangelands — Integrated crop-livestock systems — Woodlots — Alternatives to fuelwood — Sand dune stabilization — Other	— Terraces and other physical measures (for example, soil bunds, stone bunds, bench terraces, and so forth) — Flood control and drainage measures (for example, rock catchments' water harvesting, cut-off drains, vegetative waterways, stone-paved waterways, flood water diversion, and so forth) — Water harvesting, runoff management, and small-scale irrigation (shallow wells/boreholes, micro-ponds, underground cisterns, percolation pits, ponds, spring development, roof water harvesting, river bed dams, stream diversion weir, farm dam, tie ridges, inter-row water harvesting, half-moon structures, and so forth) — Gully control measures (for example, stone check dams, brushwood check dams, gully cut/reshaping and filling, gully revegetation, and so forth) — Other

References

Butt, T. A., B. A. McCarl, J. Angerer, P. R. Dyke, and J. W. Stuth. 2005. “Food Security Implication of Climate Change in Developing Countries: Findings from a Case Study in Mali.” Climatic Change 68(3), February, 355–78.

GEF (Global Environment Facility). 2010.” GEF-5 Programming Document.” May 12, Paris, France. http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF_R5_31_CRP1.pdf.

ICRAF. 2006. Nairobi, Kenya.

Kandji, T. Serigne, Louis Verchot, and Jens Mackensen. 2006. “Climate Change and Variability in the Sahel Region: Impacts and Adaptation Strategies in the Agricultural Sector.” UNEP.

TerrAfrica. 2009. Country Support Tool: For Scaling-up Sustainable Land Management in Sub-Saharan Africa. FAO. http://knowledgebase.terrafrica.org/fileadmin/user_upload/terrafrica/docs/topic_page /Country_Support_Tool_2_.pdf.

———. 2011. Sustainable Land Management in Practice: Guidelines and Best Practices for Sub-Saharan Africa. FAO, Rome, Italy. http://knowledgebase.terrafrica.org/fileadmin/user_upload/ terrafrica/docs/topic_page/SLM_in_Practice_english.pdf.

UNDP (United Nations Development Programme). 2010. 2010 UNDP Human Development Index (HDI).

World Bank. 2011. Africa’s Future and the World Bank’s Support to It. Washington, DC.

Notes

1. Program ID number will be assigned by GEFSEC.

2. Refer to GEF-5 Template Reference Guide posted on the GEF Web site for description of the FA Results Framework when filling in table A. Note that the multitrust fund for CCA-1 and CCA-2 refers to LDCF and SCCF.

3. This is the cost associated with the unit executing the project on the ground and could be financed out of trust fund or cofinancing sources.

4. Same as footnote 3.

5. In Chad, the term “communes” refers to urban communities, while for rural entities the term “rural communities” tends to be used.

TerrAfrica is an African-driven global partnership program to scale up sustainable land and water management across sectors in 23 Sub-Saharan countries. The partnership supports this effort by reinforcing investments, institutions and information at country and regional levels.
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www.thegef.org

www.terrafrica.org

TerrAfrica is a vehicle for country programs that implement objectives of the UN Convention to Combat Desertification, other environmental conventions, and the Comprehensive Africa Agricultural Development Program (CAADP) and Environment Action Plan of the African Union's New Partnership for Africa's Development Planning and Coordination Agency.

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