



REPUBLIC OF TOGO
Travail-Liberté-Patrie

Ministry of Environment and Forestry Resources (MERF)



NATIONAL PRIORITIES FOR GEF-5



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ABBREVIATIONS AND ACRONYMS

AVGAP	Village Association for Participatory Management of Protected Areas [<i>Association Villageoise de Gestion des Aires Protégées</i>]
CBD	Convention on Biological Diversity
CDQ	Neighborhood Development Committee [<i>Comité de Développement de Quartiers</i>]
CVD	Village Development Committee [<i>Comité Villageois de Développement</i>]
DRR	Disaster Risk Reduction
EMRL	Extraneous Maximum Residue Limits
ENRM	Environment and Natural Resource Management
FNC	First National Communication
GEF	Global Environment Facility
GGW Initiative	Green Great Wall Initiative [<i>Projet de la Grande Muraille Verte</i>]
GHG	Greenhouse gases
HCB	Hexachlorobenzene
IEC	Information, Education and Communication
ISFM	Integrated Soil Fertility Management
LDC	Least developed countries
LULUCF	Land Use, Land-Use Change and Forestry
MAEP	Ministry of Agriculture, Livestock Production, and Fisheries [<i>Ministère de l'Agriculture, de l'Élevage et de la Pêche</i>]
MDG	Millennium Development Goal
MEHVA	Ministry of Water, Village Water Supply, and Sanitation [<i>Ministère de l'Eau, de l'Hydraulique Villageoise et de l'Assainissement</i>]
MERF	Ministry of Environment and Forestry Resources [<i>Ministère de l'Environnement et des Ressources Forestières</i>]
NAPA	National Adaptation Programme of Action (under the climate change convention) [<i>Plan d'Action National d'Adaptation aux changements climatiques</i>]
NAPCD	National Action Plan to Combat Desertification [<i>Programme d'Action National de lutte contre la desertification</i>]
NEAP	National Environmental Action Plan
NEMP	National Environmental Management Program [<i>Programme National de Gestion de l'Environnement</i>]
NGO	Nongovernmental organization
NIP	National Implementation Plan for the Stockholm Convention [<i>Plan National pour la Mise en œuvre de la Convention de Stockholm</i>]
ODS	Ozone-depleting substances
OFF	Operational Focal Point
PANSEA	National Action Plan for the Water and Sanitation Sector [<i>Plan d'Action National pour le Secteur de l'Eau et de l'Assainissement</i>]
PCB	Polychlorinated biphenyls
PIF	Project Information Form
PNADE	National Program of Decentralized Environmental Management Activities [<i>Programme National d'Actions Décentralisées de gestion de l'Environnement</i>]
PNAE	National Action Plan for the Environment [<i>Plan National d'Action pour l'Environnement</i>]
PNIASA	National Program for Agricultural Investment and Food Security [<i>Programme National d'Investissement pour l'Agriculture et la Sécurité</i>]

	<i>Alimentaire]</i>
PNIERN	National Environment and Natural Resources Investment Program [<i>Programme National d'Investissements pour l'Environnement et les Ressources Naturelles</i>]
PNSA	National Food Security Program [<i>Programme National de Sécurité Alimentaire</i>]
POPs	Persistent organic pollutants
PRSP	Poverty Reduction Strategy Paper
RAF	Resource Allocation Framework
SLM	Sustainable Land Management
SNC	Second National Communication
STAR	System for Transparent Allocation of Resources
TFP	Technical and financial partner
UAVGAP	Union of Village Associations for Participatory Management of Protected Areas [<i>Union des Associations Villageoises de Gestion Participative des Aires Protégées</i>]
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization

SUMMARY

This study is part of the framework for developing national priorities, based on which the GEF will focus its interventions in Togo to enhance the visibility and clarity of its environmental management activities as well as to improve the country's absorptive capacity. This report deals mainly with the three primary GEF focal areas covered by the System for Transparent Allocation of Resources (STAR), namely, land degradation, climate change, and biodiversity. It aims to formulate specific national priorities in these three focal areas to be submitted at GEF-5 for the 2010–2014 period, based on consultation with stakeholders. The Togolese Government also hopes that the priority intervention areas selected will be consistent with those included in the National Environment and Natural Resources Investment Program [*Programme National d'Investissements pour l'Environnement et les Ressources Naturelles* PNIERN] developed for the next five years (2011–2015). This exercise is based mainly on documentary research and a process of consultation with various stakeholders as well as site visits.

At the conclusion of this study, it became evident that the environmental challenges in the areas of land degradation, climate change, and biodiversity are considerable and require urgent action. To this end, project ideas have been identified and the highest priority intervention areas to be submitted at GEF-5 for the 2010–2014 period have been grouped into subprograms within the Integrated Disaster and Land Management Project. For the three GEF-5 focal areas, seven subprograms have been identified, of which five are sectoral subprograms (two subprograms in the area of land degradation, one subprogram in the area of climate change, and two subprograms in the area of biodiversity) and two are crosscutting subprograms. The total cost of implementing these subprograms is assessed at US\$9,890,000, and the World Bank is the implementing agency tasked with carrying out these priority actions.

I. INTRODUCTION

The Global Environment Facility (GEF) is a mechanism for international cooperation that plays a decisive role in improving the global environment. Through its agencies (UNDP, UNEP, World Bank, UNIDO, etc.), for over a decade the GEF has financed numerous capacity-building projects in Togo, in particular in the areas of climate change, biological diversity, and persistent organic pollutants, as well as regional projects in watershed management of the Volta River, which includes Benin, Burkina Faso, Côte d'Ivoire, Mali, Ghana, and Togo; the regional program for a strategic approach to ecologically sound management of polychlorinated biphenyls (PCB) and PCB-containing equipment for francophone countries; and the regional capacity-building program for the least developed African countries in the context of the National Implementation Plans for the Stockholm Convention (NIP), among others. Despite such multi-faceted financing, the national portfolio of GEF projects must still strive for better clarity and visibility of activities in Togo as well as improve the country's absorptive capacity.

In the specific context of the fifth replenishment of GEF resources (GEF-5), the programmatic approach represents a strategic methodology adopted by Togo in order to establish national priorities with a view to its fifth replenishment. These priorities involve the three primary GEF focal areas under the System for Transparent Allocation of Resources (STAR), namely, land degradation, biodiversity, and climate change. By drafting priorities, the Togolese Government aims to produce a document that would guide GEF-5 activities during the 2010–2014 period and that would bring national priorities in line with signed and ratified international agreements relating to environmental matters, in particular the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention on Biological Diversity (CBD).

With respect to the allocation of GEF-5 resources, Togo has received a total of US\$5,490,000 divided among the three focal areas provided for in the STAR: US\$2,000,000 for climate change, US\$1,500,000 for biodiversity, and US\$1,990,000 for land degradation. In addition to this total amount, Togo has allocated US\$600,000 to the GEF microfinance program to support the activities of NGOs and grassroots community-based organizations. Having some flexibility with resource allocation, Togo has approved an indicative amount of US\$3,890,000 for land degradation and US\$1,000,000 for biodiversity. Given that the country has adopted a programmatic approach, it was decided that part of the funds from the least developed countries (LDC) (US\$4,000,000) would be used for climate change adaptation. This programmatic approach has also helped the country benefit from an additional US\$1,000,000, which it is allocating to sustainable forest management.

The resources, when combined, amount to a total of US\$9,890,000 for all the national priorities to be submitted for a request for financing from GEF-5.

Thus, following the GEF-5 Replenishment and taking into account the programmatic approach to environmental management, the country chose to develop specific national priorities to be submitted at GEF-5 in the areas of land degradation, biodiversity, and climate change.

Specifically, this involves the following:

- Outlining the Togolese Government's strategic and political orientations with respect to environmental management; and

- Identifying the national priority actions in the areas of land degradation, biodiversity, and climate change to be submitted at GEF-5 based on consultation with stakeholders.

This document summarizes and presents the main results of activities carried out and focuses on four (4) main points. First, it presents the approach to preparing the GEF-5 document; second, it analyzes the environmental problems, highlighting the environmental challenges in six GEF focal areas, namely, climate change, biological diversity, soil degradation, international waters, persistent organic pollutants, and ozone layer depletion (transition countries only); third, it presents the political orientations in each of these areas; and fourth, the report identifies the national priorities to be submitted at GEF-5.

II. METHODOLOGICAL APPROACH

This exercise to define national priorities for the use of GEF-5 resources is coordinated by the GEF Operational Focal Point in Togo and the coordinator of the PNIERN Technical Team. It is based on documentary research on one hand and on a process of consultation with the various stakeholders and site visits on the other.

2.1. Documentary Research and Analysis

Documentary research facilitates the identification of environmental challenges and the strategic and political orientations of the State in the areas of land degradation, biodiversity, and climate change. For this purpose, documents on strategies, policies, and economic and social development programs currently under way in Togo were consulted. Among them were the full PRSP, the National Program of Decentralized Environmental Management Activities (PNADE), the National Action Plan to Combat Desertification (NAPCD), the National Action Plan for the Environment (PNAE), the National Environmental Management Program (NEMP), the National Food Security Program (PNSA), the National Action Plan for the Water and Sanitation Sector (PANSEA), CBD Reports, the First National Communication (FNC), the Second National Communication (SNC), the National Adaptation Programme of Action (NAPA), Togo's Environmental Profile, the National Program for Agricultural Investment and Food Security (PNIASA), and the National Environment and Natural Resources Investment Program (PNIERN).

With respect to the PNIERN, Togo conducted a broad-based consultative process, with support from technical and financial partners, which led to the identification of investment priorities in the environment and natural resource sector. This process culminated in the adoption on October 7, 2010 of the National Environment and Natural Resources Investment Program [*Programme National d'Investissements pour l'Environnement et les Ressources Naturelles* PNIERN], which is the current strategic framework for investment in the Environment and Natural Resource Management (ENRM) sector for the 2011–2015 period. For this reason, the PNIERN remains the principal document for guiding the national priorities to be defined for Togo for GEF-5.

2.2. Consultations

Stakeholder consultation took place in two phases: a preliminary phase including site visits throughout the country and a national workshop to validate national priorities.

2.2.1. Preliminary Stakeholder Consultation and Site Visits

The aim of preliminary consultation with stakeholders was to take note of their concerns in order to define in a participatory manner the priorities to be submitted at GEF-5 as well as the targeting of intervention areas for activities to be carried out on the ground. Prior to consultations in the various regions of Togo and field observations, preliminary working sessions were held in Lomé with the Convention focal points within the Ministry of Environment and Forestry Resources (biodiversity, climate change, and land degradation). Site visits consisted of collecting initial project ideas from actors on the ground. The major actors encountered during this exercise were very diverse and were made up of public administration departments (deconcentrated environment, agriculture, energy, water, and health departments, among others), private sector actors (mining companies, dams, reservoirs, etc.), and sociocultural actors (traditional tribal leaders, Village Development Committees (CVD), Neighborhood Development Committees (CDQ), Village Associations for Participatory Management of Protected Areas (AVGAP) or Unions of Village Associations for Participatory Management of Protected Areas (UAVGAP), groups and associations, NGOs, woodworker unions, etc.). In addition, field observations helped to validate the intervention areas identified.

Following the documentary research and site visits, thematic reports on the actions identified were produced and submitted to the GEF focal point for restricted technical validation. The summary report produced was submitted for validation at a national workshop after adoption of the logistical framework of priorities for GEF-5 at an internal meeting of the Ministry of Environment and Forestry Resources, expanded to include the World Bank, and chaired by His Excellency Mr. Kossivi Ayikoe, Minister of Environment and Forestry Resources.

2.2.2. National Workshop

The national workshop to validate the document on national priorities for GEF-5 (2010–2014) was held on September 29, 2011 in the **Les Palmiers** Hotel conference room in Lomé. The workshop, organized by the Ministry of Environment and Forestry Resources, brought together approximately 40 participants. This workshop is part of the exercise undertaken by Togo to formulate the portfolio of projects to be submitted at GEF-5.

The overall objective of this workshop was to compile a portfolio of projects for Togo to serve as the basis for programming GEF-5 resources through a process of consultation between State technical departments and other stakeholders involved in environment and natural resource management. Specifically, it included the following:

- Educating the participants about GEF opportunities and its STAR mechanism;
- Verifying the design and cohesion of project ideas collected from various actors and their integration into the national priorities to be submitted at GEF-5; and
- Bringing forward additional contributions in order to enhance the document.

The official opening ceremony was chaired by Mr. Didi Komlan Daku, Secretary General of the Ministry of Environment and Forestry Resources (MERF), representing the Minister of Environment and Forestry Resources. It comprised two speeches: welcome remarks from the GEF Operational Focal Point and opening remarks by the Secretary General of the MERF.

After the establishment of the executive committee of the workshop, comprising three (3) members, the real work began with three statements presented by Mr. Djiwa (PNIERN Coordinator) and Professor Kokou (Lead Consultant). The first statement (by Mr. Djiwa) dealt with the links between the results of the GEF portfolio formulation exercise and the National Environment and Natural Resources Investment Program (PNIERN). The two other statements, presented by Professor Kokou, respectively addressed (1) the experience of Togo in the area of identifying GEF priorities and (2) the national priorities to be submitted at GEF-5 (2010–2014).

Following these statements, a general discussion was held to allow participants to ask questions seeking clarification and to raise concerns, which were fielded by the PNIERN Coordinator and the GEF Operational Focal Point. Participants then engaged in a thorough study of the document in order to analyze and develop the project ideas and to offer contributions to further improve the document.

2.3. Prioritization of Actions to be Taken

The method of prioritizing actions to be carried out in the context of this exercise consisted of listing the proposals made by the various actors by order of importance. The final selection criteria and prioritization are as follows: (1) *degree of urgency of the action*; (2) *feasibility*; (3) *strategic priorities linked to the actions identified in the PNIERN and to the GEF intervention areas*; and (4) *stakeholder participation indicators*.

III. THE THEMATIC AREAS OF THE GEF-5 – ASSESSMENT

3.1. The Thematic Areas of the GEF-5 – Main Environmental Challenges

3.1.1. Land Degradation

Until 1994, land in Togo was not very degraded (Brabant *et al* 1994). Heavily degraded land resulting from human activity amounted to a mere 1.6 percent of land, while moderately degraded land accounted for 21 percent, and lightly degraded land for 62.7 percent. Overall, although roughly 3.6 million hectares or 60 percent of Togo's land was cultivable, it was estimated that cultivated land stood at a mere 1.4 million hectares, representing 41 percent of cultivable land and 25 percent of Togo's total land.

Beginning in 1994, there was a sharp increase in land degradation owing to intensive deforestation and the development of large-scale farming. The growing need for arable land in particular led farmers to cultivate an increasing amount of marginal land such as land located on steep mountain slopes, which is highly susceptible to erosion. Current practices include the deforestation of the banks of waterways, in particular the overexploitation of the cultivable land available and farming on marginal land located on fertile slopes or in high population density areas, the destruction of gallery forests and woody savanna for growing yams in particular, extensive clearing of land to produce such income-generating crops as coffee, cocoa, and cotton, the excessive trimming of fodder trees, the unchecked exploitation of commercial timber using prohibited resources as well as energy wood along major thoroughfares in order to supply major urban centers, the widespread practice of burning vegetation, the use of classified forests for agricultural purposes, overgrazing, and the destruction of saplings by roaming animals.

At the moment, non-degraded land is located in the national parks and in the forest and animal reserves in particular, while degraded and moderately degraded land is located around major thoroughfares and in the vicinity of a number of cities (Dapaong, Kara, Bassar, Sokodé, Atakpamé, Notsé, and Lomé), and near large rural towns (Gléi, Glito, Kambolé, and Moretan). Heavily degraded land is located in four areas, divided by the occupational density of land:

- Areas with scant rural activity: 5 to 20 percent of the land is used for farming (area in the mountains of Togo, upper basin of the Mono and Ogou and the plains in Oti and Kéran located in the protected areas of Fazao-Malfakassa, Abdoulaye, Oti-Kéran and Mandouri);
- Areas with moderate rural activity: 20 to 30 percent of the land is used for farming (new routes in the Plateaux and Centrale regions and the Bassar and Dankpen prefectures);
- Areas with extensive rural activity: 30 to 60 percent of the land is used for farming (*Terre de Barre* plateau in the Maritime region, south Atakpamé, east Anié and east Mono, Danyi prefecture, Sotouboua-Sokodé district, part of the Kara region, upper portion of Kéran (Kantè, Pays Tamberma) and in the vicinity of Dapaong);
- Areas with very extensive rural activity: more than 60 percent of the land is used for farming (Lac and Vo prefectures and a portion of Yoto prefecture in the Maritime region), Kozah, Binah, and Doufelgou prefectures, the eastern part of Assoli prefecture (Kara region), and the north-western part of the Savanes region).

In a number of these areas, high population density (sometimes more than 300 inhabitants per km²) leads to uninterrupted farming, with no fallow period. This is the case with the *Terres de Barre* in the Vogan district (Maritime region), the extreme north-western part of the country between Dapaong and the border with Burkina Faso, as well a portion of Kara region.

Moreover, soil erosion has reached critical levels in the Savanes region, the mountainous western area of the Plateau region, Atakora and Fazao, and the Maritime region. The manifestations of this soil erosion are at the root of the general silting problems seen in most mainland waterways, in particular the lagoons that serve as the hydrographic basins for the Maritime region (NAPA 2009). In addition, the coastal ecosystem is gravely threatened by coastal erosion, which is endangering the area of the coast between Lomé and Aného, leading to the displacement of human settlements as well as the destruction of the mangrove, the habitat of species of aquatic fauna, mollusks, and crustaceans. Furthermore, Togo's land degradation problems are likely to lead to diminished land productivity and biodiversity, thus reducing the country's capacity to adapt to environmental changes in general and climate change in particular. In light of this degradation, Togo has formulated strategies and policy guidelines for sustainable land management (SLM).

3.1.2. Climate Change

Vulnerability studies conducted to prepare Second National Communication (SNC) on climate change cover five activity sectors, namely energy, agriculture, water resources, human settlements and health, and the coastal area (NAPA 2009; SNC 2010). For the energy sector, analysis of the results obtained from climate scenarios and a comparison of the high and low values of climate parameters lead to the conclusion that the productivity of natural stands and trees, the main sources of biomass energy, will decline significantly by 2025. In the area of hydroelectricity, an increase in rainfall on the order of 120 mm is projected to occur in the Oti basin in the north of the country by 2025. In other regions, lower rainfall will lead to a 7.2 percent decline in hydroelectric power.

In the area of water, vulnerability to the effects of climate change is reflected in the overexploitation of this resource in the Lomé area, a situation that is expected to increase the salinity of water in pumped aquifers. A sharp decrease is being noted in water flow and the level of ground water discharge.

In the area of agriculture, climate disturbances are leading to a proliferation of such pests as mirids and stink bugs in the coffee and cocoa producing areas, and to plant diseases, the main ones being the necrotic withering of coffee trees as well as swollen shoot and brown rot in the case of cocoa trees. Grain (maize and sorghum), which serve as staples for the Togolese population, are particularly vulnerable, owing to their extreme sensitivity to water stress, which can lead to lower yield and thus to a drop in the supply of foodstuff coupled with price hikes. In addition, excessive rainfall will spawn a sharp increase in parasitic microorganisms in plants and pests in flooded areas. Water shortages and the hotter climate will result in the drying up of animal water supply points, the degradation of grazing land, the death of livestock, lower income for pastoralists and agro-pastoralists, and an exodus from rural areas. Excessive rainfall will lead to the worsening of certain diseases, in particular the avian flu and trypanosomiasis among cattle, especially zebu. In the fisheries subsector, climate change will greatly disrupt the productivity cycles of fish, lead to the salinization of bodies of fresh water, and to the death of juvenile fish.

The human settlement and health sector is also vulnerable to the effects of climate change. Makeshift homes and dwellings in high altitude zones have, for the most part, been destroyed by flooding, leading to material losses and the loss of human life. In the mountainous areas, erosion triggered by heavy rains is undermining the foundations of homes and landslides are also washing away some homes. Flooding and high winds have seriously impacted the road network and socioeconomic infrastructure, cutting off access to villages in some instances. In the case of the health subsector, vector diseases such as malaria, which have a much greater impact on children between the ages of 0 and 5 years and pregnant women, are being exacerbated by more frequent flooding. Diseases such as diarrhea and cholera are also being aggravated by the frequency of floods. Drought and extreme heat are triggering meningitis, cardio-vascular and cerebro-vascular diseases, as well as a number of respiratory illnesses (bronchitis, pneumonia, asthma, etc.) which are affecting persons of all ages, with the elderly and children being the hardest hit.

In the coastal area, soil problems stem from saturation, runoff, and drainage. This area is the receptacle basin for the water systems of the three hydrographic basins fed by rain water during the three seasons (two seasons in the south and one in the north of the country). A

projected 10 percent increase in rainfall by 2030 will trigger flooding throughout the coastal plain and very strong flows that will carry enough sediment from the Mono and Volta Rivers to feed coastal drift cells. In addition, coastal erosion, which is leading to rapid beach loss (12m per year), will move volumes of sand in the cells. Current coastal physical oceanographic conditions combined with the probable scenarios (spring tides, storms, sea level elevation) are expected to cause the coast to shrink by 160 m to 240 m by 2030.

All these phenomena are leading to major climate change risks. In the case of Togo, these are manifested in floods, drought, extreme heat, a change in seasons, high winds, wildfires, poor rainfall distribution, and rising sea levels/coastal erosion. The livelihoods most at risk are those derived from food crops, cash crops, market garden products, livestock products, and commercial agricultural products. The most vulnerable ecosystems are the coastal ecosystems, agro-ecosystems, waterways, and forest ecosystems.

3.1.3. Biodiversity

The main causes of biodiversity erosion are the destruction of habitat and the overexploitation of land and aquatic fauna and flora as a result of development activities. Many ecosystems (rainforests, riparian woodlands, wetlands) are veritable biodiversity habitats. Unfortunately, the extensive degradation of these ecosystems caused by various manmade pressures (slash and burn agriculture, logging, livestock production, transhumance, burning of vegetation and human settlement in protected areas, chemical pollution by household, industrial, and agricultural waste, organic pollution, poaching of animals, sale of wild animals, overexploitation of fisheries resources, etc.) as well as development projects (dams, mining activity, etc.) is leading to the destruction of these habitats and, in turn, of this diversity.

Land-based ecosystems are also being contaminated by various sources of pollution (smoke from motorized vehicles and factories, the burning of vegetation, industrial emissions, etc.), which are having a disruptive effect. In the case of aquatic ecosystems (lagoons, ponds, the sea), various kinds of pollutants (wastewater and waste oil, household and industrial waste, etc.) are constantly dumped into these ecosystems, leading to biodiversity degradation. Consequently, a proliferation of invasive species, most often exotic land or aquatic species, can be found in the majority of these ecosystems. In terms of land-based species, *Chromolaena odorata* (Asteraceae), which is associated with the fallow period, particularly the Guinean species *Azadirachta indica* (Meliaceae), can be found throughout Togo, and has even become part of the woody vegetation in a number of small towns in the country, and the *Leucaena leucocephala* (Mimosaceae), etc. are seriously disrupting the development and maintenance of natural ecosystems. The main aquatic species invading all the ponds and lagoons is *Echhornia crassipes* (Ponteriaceae), which is leading to the eutrophication and asphyxiation of all the biodiversity of these ecosystems.

The mangrove ecosystems, located in the extreme southeast of the country around the Gbaga River and its tributaries, currently cover less than 1,000 hectares. These ecosystems contain two species of mangrove: *Rhizophora racemosa* and *Avicennia germinans*, which create a highly productive and multipurpose ecosystem (Afidegnon 1999). Unfortunately, overexploitation of the plant and animal resources and altered salinity caused by the construction of the Nangbéto dam are threatening the survival of this ecosystem.

Furthermore, the excessive and unchecked exploitation of plant resources in order to meet wood-based energy and lumber and timber needs is one factor driving the erosion of

biodiversity. The rate of vegetation degradation in the Kara, Centrale, and Plateaux regions has increased as a result of the surge in demand for fuel wood and charcoal, the main source of energy for 80 percent of the population. The unchecked exploitation of lumber and timber therefore became more widespread from the mid-1970s, when the chainsaw was introduced. The use of this efficient tool quickly replaced the use of manual saws that had been used up to then and contributed to the growing shortage of valuable commercial trees such as the *Milicia excelsa*, *Khaya grandifoliola*, *Khaya senegalensis*, and *Triplochiton scleroxylon*. Lumber from the forest area has become very scarce and there is growing reliance on neighboring countries to supply this product. These practices are therefore the main driver of the destruction of wild fauna habitats and the erosion of animal and plant diversity.

Moreover, the threat to protected areas grew in the early 1990s as a result of the socio-political unrest in the country during that period, as evidenced by:

- The increase, from 10 percent to 90 percent on average, in the occupation of protected areas and the total takeover of other areas by the population;
- Widespread felling of trees in the Fazao-Malfacassa, Kéran, and Mandouri parks and reserves; and
- The unchecked destruction of wood species in protected areas.

Poaching has also led to the disappearance or scarcity of numerous species in Togo. Several vertebrate species once common and existing in very large numbers in Togo have become very rare or extinct, owing to overexploitation. This is the case with the forest duiker (*Cephalophus maxwelli*, *C. rufilatus*, *C. dorsalis*), and the bongo (*Tragelaphus eurycerus*). Despite the existence of fewer animals due to the disappearance of habitats, wild animals unfortunately still serve as a significant source of protein for a major portion of the rural population.

3.1.4. International Waters

Most surface water and some ground water in Togo are shared with other countries of the region, in particular Burkina Faso, Benin, and Ghana. This is the case with the Oti basin, a sub-basin of the Volta River; the Mono basin and coastal lagoon system in the case of Benin; and the coastal sedimentary basin in the case of Ghana and Benin. Taking into account the generally high degree of sensitivity associated with the international dimension of common waters and the clearly shared nature of water resources in Togo, these resources can only be managed through the integration of national river basins into the bigger, regionally shared basins.

Unfortunately, surface fresh water, ground water, and, by extension, sea water are being contaminated by solid waste, waste water dumping, industrial waste, the excessive use of pesticides and fertilizers, and the inappropriate application of sanitation techniques, along with a number of other practices. While no international agreement has been concluded with respect to the management of the coastal sedimentary aquifer or coastal lagoon system, a number of agreements have been concluded in the maritime field. In depth studies should be conducted of the management of the coastal sedimentary basin and lagoon system, as well as maritime issues, in particular the pollution of sea water from phosphate sludge and coastal erosion caused by the Akossombo dam.

Although Benin and Togo have concluded an agreement with respect to the Mono Basin, it is becoming important to articulate a shared vision and to expand this agreement to all matters related to the integrated management of common water resources (quantitative and qualitative aspects, development, exploitation, etc.). Hydro-agricultural development projects in the lower Mono valley should also be implemented as part of the overall management of the basin. A review should be done of the extent to which management of the Nangbéto dam could be improved so as to limit recurring flooding upstream, in both Togo and Benin, from the discharge of water. Furthermore, a discussion should be held among Togo, Burkina Faso, and Benin on the management of the Kompienga dam in order to resolve the problem of the water quality of the Oti River and to focus efforts on settling conflicts of interest that often involve several countries.

3.1.5. Persistent Organic Pollutants (POPs) and Other Chemical Products

The data collected as part of the initial inventory of national pesticides point to an increase in the use of pesticides in Togo, although a cause and effect relationship cannot be established with respect to greater quantities of POP pesticides. This inventory also suggests, preliminarily, that there are 424 transformers containing dielectric fluids, which are probably PCB-based. This corresponds to 342 metric tons of PCB and 1045 metric tons of PCB-contaminated solid waste as of March 31, 2004, the date the inventory was last updated. Another potential form of environmental pollution may be linked to the residue [of chemicals] widely used until fairly recently (EMRLs, which indicate contamination by POP pesticides, have never been systematically measured in Togo). Consequently, a sampling should be taken, for screening purposes, as part of a national monitoring program in order to more accurately assess the scope of this issue.

Unlike POP pesticides and PCBs, which are man-made in order to serve a variety of purposes, Polychlorinated dibenzo-p-dioxins (PCDDs or dioxins) and Polychlorinated dibenzofurans (PCDF or furanes) have never been produced on a large scale for any use. This category of POPs, including 135 congeneric forms of PCDD and 75 forms of PCDF are accidentally becoming byproducts in combustion processes (high temperature incineration, burning of biomass, fossil fuel combustion, etc.) and a number of industrial products (metal, chemical, paper, mining, etc.) and also certain biological processes (biomethanization, composting, etc.).

In the case of Togo, the net aggregate greenhouse gas (GHG) emissions directly released into the atmosphere in Togo in 2000 are estimated at 13,249.76 Gg CO₂-e. Of all these greenhouse gases, carbon dioxide (CO₂) accounts for 9,010 Gg CO₂-e or 68 percent of total emissions, methane (CH₄) for 1,512.42 Gg CO₂-e or 11.5 percent, and nitrous oxide N₂O for 2,724.13 Gg CO₂-e or 20.5 percent. It should be noted that emissions due to burning biomass, estimated at 4,345.4 Gg, and to international fuel oil, estimated at 45.21 Gg, have not been included in total national quantities. An analysis by sector of direct greenhouse gas emissions (CO₂, CH₄ et N₂O) shows the Land Use, Land-Use Change, and Forestry (LULUCF) sector to be the greatest contributor with 8,329.28 Gg CO₂-e (62.88 percent), followed by the agricultural sector with 2,720.89 Gg CO₂-e, the energy sector with 1,714.68 Gg CO₂-e (12.94 percent), industrial processes with 312.57 Gg CO₂-e (2.36 percent), and lastly, waste with 169.9 Gg CO₂-e (1.28 percent). The main categories of key sources, based on an assessment of levels (including LULUCF) are:

- LULUCF categories (conversion of forest land into cultivable land, removal of the woody biomass in forest land and cultivated land);
- Fuel combustion categories of the energy sector (road transport, manufacturing, and construction industries);
- Agricultural sector categories (agricultural soil, enteric fermentation, and manure management); and
- Production of cement in the industrial sector.

Trends in aggregate emissions of the three direct greenhouse gases for the 1995-2005 period indicate that CO₂ emissions are the most dominant, followed by N₂O and CH₄ emissions. Trends in the emissions of the three main gases, namely CO₂, N₂O, and CH₄, point to a rapid increase in CO₂ emissions, from 6,777.62 in 1995 to 11,502.76 Gg CO₂-e in 2005, with the LULUCF sector being the main contributor to CO₂. These trends could therefore change significantly as a result of the enormous pressure placed on forest reserves, leading to a sharp decrease in potential carbon sinks. The impact of changes in CH₄ and N₂O emissions on the increase in national emissions remains very low.

3.2. The GEF-5 Thematic Areas – Policy Guidelines

3.2.1. Sustainable Land Management

In the area of environmental management, combating desertification, and sustainable land management, Togo has formulated several strategies and policies to achieve the Millennium Development Goals. These policy approaches have been integrated into the major national programs currently underway (NEMP, PNSA, full PRSP, PANSEA, PAN, PNIASA). The most important of these, which should guide the actions of the technical and financial partners (TFPs) in the area of SLM over the next five years (2011-2015), are set forth in the PNIERN. Sub-program 1 of the PNIERN related to institutional, legal, financial, and technical capacity building to create conditions conducive to sustainable management of the environment and natural resources therefore identifies such priority areas as:

- Building institutional capacity for SLM;
- Building the financial and economic skills of actors in the area of SLM; and
- Building the technical expertise of actors in the area of SLM.

With regard to sub-program 2 of the PNIERN related to assistance with the implementation and expansion of environmental and natural resource management [ENRM] good practices in the rural setting, priority areas identified include:

- A detailed ecosystemic and technical assessment;
- Promotion and development of water and soil conservation practices;
- Improved soil fertility (organic fertilizers, compost, natural phosphates, and integrated soil fertility management (ISFM));
- Management of vegetation fires;
- Planning and development of lowlands;
- Support for the development of sustainable aquaculture (improving the environment with a view to SLM); and
- Support for SLM applied research.

Lastly, sub-program 6 of the PNIERN related to the preparation of effective systems for acquiring and managing knowledge pertaining to ENRM, M&E, and the dissemination of information is related to such priority areas as:

- SLM monitoring and evaluation;
- Continuing SLM-related advocacy work; and
- Establishing a national SLM information, education, and communication strategy.

3.2.2. Combating Climate Change

Climate change has impacted the environment and natural resources, as well as the approach to their management. Natural resource management [ENRM] may therefore offer one of many options for climate change adaptation. With this in mind, the Togolese State has formulated a host of strategies and policies (full PRSP, FNC, SNC, NAPA, NEMP, PNSA, PNAE, PNIERN) in order to have at its disposal special climate change adaptation tools. Consequently, in the context of its investment priority options, the PNIERN has identified the following two sub-programs related to climate change:

- a. Mitigation of the effects of climate change, disaster management, and risk prevention; and
- b. Improvement of living conditions in urban and rural areas.

In addition, the National Adaptation Programme of Action (NAPA) under the climate change convention, drafted in 2009, is aimed at the following three key objectives:

- Protecting the lives of the people as well as their livelihoods, resources, infrastructure, and environment;
- Identifying and implementing the urgent and immediate needs of grassroots communities for adaptation to the adverse effects of climate change and climate variabilities; and
- Integrating adaptation measures and objectives into sectoral policies and national planning.

Moreover, the NAPA identified seven climate change adaptation policy options. They are:

1. Adapting the agricultural production systems in three regions through the establishment of farming techniques that include climate change and the improvement of agrometeorological information;
2. Establishing an early warning system to provide information in real time on flooding in the Maritime and Savanes regions;
3. Strengthening the coastal protection system against coastal erosion in the eastern part of the Autonomous Port of Lomé;
4. Supporting and assisting rural communities in the Savanes and Plateau regions in order to prevent and combat vectoral diseases;
5. Developing small-scale irrigation in lowland areas for market gardening groups in the Centrale, Kara, and Savanes regions, an initiative that is likely to stem the rural exodus;
6. Starting IGAs for the market gardening and fishing communities in the coastal area, for the purpose of building capacity to cope with the adverse effects of climate change; and
7. Assisting with the collection of surface water in the Savanes and Kara regions using multi-purpose catchment reservoirs.

3.2.3. Conservation and Sustainable Use of Biodiversity

In the area of the conservation and sustainable use of biodiversity, Togo prepared its national biodiversity conservation strategy in 2003 with the main objective of conserving and rationally using biodiversity to improve the living conditions and quality of life of the people and guarantee future generations adequate natural resources in the context of the country's sustainable development. This objective must be achieved through three strategic and/or specific objectives:

- Building the capacity of all actors involved with biodiversity management;
- Preserving, in a participatory manner, areas representative of the different ecosystems so as to guarantee their sustainability and conserve their essential components; and
- Ensuring the sustainable use of resources and the equitable sharing of the roles, responsibilities, and benefits associated with biodiversity.

In addition to this strategy, in 2009 Benin launched a reforestation and sustainable forest management program. The overall objective of this program is to increase national wood production by restoring the national forest cover. This program seeks, inter alia, to:

- Improve forest governance and restore the economic activities of the forest sector;
- Restore forest stands with the aim of mitigating the effects of climate change, achieving biodiversity conservation, and combating desertification;
- Restore natural forests with a view to conserving biodiversity and the optimal production of lumber with regional and local government support; and
- Strengthen the technical capacity of the forest administration to provide forest-related support and advice.

Under the PNIERN, Togo is according priority to first channeling its investments to the most degraded areas, which are most vulnerable to climate variability and will be the hardest hit in terms of the effects of climate change. Moreover, Togo is in the process of finalizing its forestry policy and National Forestry Action Plan (Phase 1), based on a global vision extending through 2035 “by strengthening the decentralization process and assigning clear accountability to grassroots actors through the meaningful involvement of private actors and civil society in the management of forests and production systems, adopting an approach that preserves the balance of ecosystems and respects the ecological, social, and economic functions of forests. Togo’s forest cover stands at 20 percent and the country is meeting all its wood-energy needs, conserving biodiversity, and ensuring the sustainable protection of at-risk areas as well as animal habitats.”

3.2.4. International Waters

The management of water resources cannot, in the final analysis, be carried out without the inclusion of national watersheds in the broader group of shared regional basins. For this reason, the rules applicable to national basins also apply to international basins, in particular the need for collaboration and negotiation with the aim of establishing a common framework for transboundary management that respects the interests of each neighboring country. Consequently, the focus of shared water resource management is essentially on the:

- Promotion of integrated management of these water resources;
- Establishment of a framework for cooperation among neighboring countries;
- Promotion of dialogue and the exchange of available information among neighboring countries;

- Study of such priority problems as the joint management of dams (Kompienga and Nangbéto) and water release points, flood risks, preservation of the quality of sea water, and the risks of coastal erosion; and
- Conclusion of conventions and agreements for cooperation among neighboring countries.

3.2.5. Persistent Organic Pollutants (POPs) and Ozone-Depleting Substances (ODS)

Cognizant of the scope of the adverse effects of Persistent Organic Pollutants (POPs) on human health and the environment and of the need to combat these effects at the global level, Togo signed the Stockholm Convention on Persistent Organic Pollutants on May 23, 2001 and ratified it on July 22, 2004. With a view to implementing the provisions of this Convention, the Togolese State [prepared], through a broad participatory process, a national plan for the implementation of the Convention that includes all the conceptual dimensions of health and environmental protection against POPs. The goal is to ensure better management of POPs in order to safeguard the health of persons and the environment against their harmful effects, in accordance with the provisions of the Convention. The thrust of this plan includes the following priority lines of action:

- Exchanging information;
- Managing the chemicals listed in Annex A, part I: POP pesticides;
- Managing the chemicals listed in Annex A, part II: PCBs;
- Conducting research and development;
- Building awareness in, providing information to, and educating the general public;
- Managing obsolete intentional stocks, sites, and waste;
- Conducting surveillance activities;
- Strengthening institutions and regulations;
- Managing waste resulting from the unintentional production of chemical substances;
- Managing the chemicals listed in Annex B: DDT; and
- Obsolete stocks of intentional POPs – taking an inventory and properly managing contaminated sites (chemical products listed in Annexes A, B, and C).

In addition, Benin has undertaken to conduct periodic inventories of emissions by sources and absorption of greenhouse gas sinks and to implement its policy to contribute to the international objectives aimed at reducing global greenhouse gas emissions.

The guidelines of the Montreal Protocol target elimination of ozone-depleting substances (ODS) in the various national activity sectors, namely, refrigeration and air conditioning, foam production, etc. Consequently, some of the main actions planned pertain to:

- Preparing the refrigerant fluid management plan;
- Taking an inventory of the types of ozone-depleting substances used in Togo in the domestic, commercial, and industrial sectors;
- Training the trainers of refrigeration mechanics, customs officers, and police officers; recovering and recycling chemical products; drafting legislation related to the issuance of licenses and permits for trading in ozone-depleting substances;
- Regulating the method of monitoring the use, distribution, and importation of substitution products; and
- Harmonizing the new nomenclature.

IV. GEF-5 - NATIONAL PRIORITIES

Through the participatory process, which involves all stakeholders, most of the concerns of the main actors have been gathered and the priorities in the PNIERN related to land degradation, climate change, and biodiversity have been explored in greater depth. The programmatic approach has made it possible to include the project ideas developed by the actors on the ground in order to build synergies, avoid redundancies, and maximize resources so as to derive additional benefits (Table 1, Annexes 1 and 2).

Consequently, based on the priorities outlined in the PNIERN document and those expressed by the actors on the ground (Annexes 3, 4, and 5), five sectoral priorities have been selected for GEF-5 financing (Table 1), two of which relate to sustainable land management, one to climate change, and two to biodiversity. They are supplemented by two other multi-sectoral priorities. All these priorities are part of the PNIERN's **Integrated Disaster and Land Management Project** (Annex 2).

Table 1: GEF-5 Priorities

Sub-programs/Project ideas	Intervention Zones	Actors	Cost in US\$	Agency Targeted	Duration
SECTORAL SUBPROGRAMS					
Sustainable Land Management					
Priority 1: Community support for integrated land management	Regional: Maritime, Plateau, Kara and Savanes region	MERF, MAEP, NGO, local and regional authorities	1,500,000	World Bank	3 years
Priority 2: Improvement of the institutional and technical framework for sustainable land management	National	MERF, MAEP, ONG, local and regional authorities	500,000	World Bank	2 years
Climate Change					
Priority 3: Capacity building of actors in climate change	National	MERF, MAEP, NGO, Ministry of Mining and Energy, regional and local authorities	1,500,000	World Bank	2 years
Biodiversity					
Priority 4: Conservation of Togo's semi-deciduous dense forests and protection of threatened species	Regional: Ecological zone and the Bassar region	MERF, MAEP, NGO, loggers unions, regional and local authorities, and local communities	1,500,000	World Bank	3 years
Priority 5: Protected areas management	Regional: Centrale and Maritime regions	MERF, MAEP, ONG, village associations, regional and local authorities	890,000	World Bank	2 years
Multi-sectoral Subprograms					
Priority 6: Development and integrated management of wetlands	Regional: Savanes, Kara, and Maritime regions	MERF, MAEP, NGO, MEHVA, fisher groups, regional and local authorities	1,500,000	World Bank	2 years
Priority 7: Togo's GGW Initiative Implementation Project	Regional: Savanes and Kara regions	MERF, MAEP, NGO, agricultural groups, junior and senior high schools, universities, Ministry of Social Action, regional and local authorities	2,500,000	World Bank	3 years
Overall Cost of Sub-Programs			US\$9,890,000		

MERF: Ministry of Environment and Forestry Resources; MAEP: Ministry of Agriculture, Livestock and Fisheries; MEHVA: Ministry of Water, Village Water Supply and Sanitation

CONCLUSION

Based on the priorities outlined in the National Environment and Natural Resources Investment Program (PNIERN) and on the results of stakeholder consultations, this exercise, which entailed the formulation of national priorities, facilitated identification of the priority areas of intervention to be submitted to the GEF-5 for the 2010-2014 period. Implementation of priorities paves the way for resolution of the urgent environmental problems linked to the pressures exerted on natural resources in general and on the three thematic areas covered by the GEF-5 in particular, namely land degradation, climate change, and biodiversity. It also facilitates the execution of concrete actions in the different regions of Togo as well as an increase in the country's absorptive capacity.

The overall cost of implementation of the seven priorities stands at US\$9,890,000, with US\$5,890,000 going to sectoral priorities (US\$2,000,000 for land degradation priorities, US\$1,500,000 for climate change priorities, and US\$2,390,000 for biodiversity priorities) and US\$4,000,000 to multisectoral priorities (land degradation, climate change, and biodiversity).

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ANNEXES

Annex 1: GEF-5 Intervention Platform for Togo

Priorities	Intervention Zone	Actors	Effect and Impact Indicators	Reference Situation
SECTORAL SUBPROGRAMS				
LAND DEGRADATION				
1. Community support for integrated land management	<ul style="list-style-type: none"> - Savanes region, Akposso Plateau and Litimé, Kara region; - Quarries: Hahotoé, Tabligbo, and Bandjéli 	MERF, MAEP, NGO, regional and local authorities	<ul style="list-style-type: none"> - Surface area of degraded land restored; - Percentage of waterways surrounded by a protective forest strip that is respected by neighboring communities; - Number of individuals, at the local level, using fertility-building and fodder crops; - Number of individuals, at the local level, who are engaged in agrosylvopastoral activities, etc. and store biomass for pastoral use; - Number of individuals, at the local level, using compost in their fields and conservation techniques for hillsides (contour stone lines, terrace planting, dikes, compost pit, contour farming, construction of diguettes, etc.); - Number of fire prevention best practices promoted; - Percentage change in vegetation cover (quantity and quality); - Number of <i>Unimogs</i> bought and distributed in the regions to combat wildfires; - Number of students with a sound grasp of reforestation techniques; - Number of microcredits granted to support agricultural associations; 	<ul style="list-style-type: none"> - Severely degraded hillsides caused by traditional land-use techniques; - Indiscriminate use of banks of waterways for agricultural purposes; - On average, 30,000 km² of the country's surface area burn each year. With respect to the use of burnt land, the Kara and Savanes regions stand out from the others.
2. Improvement of the institutional and	Nationwide	MERF, MAEP, NGO, regional and local	<ul style="list-style-type: none"> - The capacity of actors to participate in SLM is assessed based on the following: ✓ Achievement of the MDG indicators, especially Goal No. 7 “ensure environmental sustainability” and Goal No. 1 “eradicate extreme poverty;” ✓ Social indicators for sustainable land management; 	The National Agricultural Training Institute [<i>Institut National de Formation Agricole</i> INFA] offers an on-site forestry option to middle management agriculture staff. This school,

technical framework for sustainable land management		authorities	<ul style="list-style-type: none"> - Number of training centers for rural land management techniques established; - Number of agricultural technicians trained and deployed to the rural areas; - Guidelines for implementation of the GEF in Togo are adopted. 	which closed its doors in 1996 owing to financial difficulties, reopened in 2004 and currently provides training to qualified technicians (BAC+3) and agricultural technicians (BEPC+3).
CLIMATE CHANGE				
3. Capacity building of actors in climate change	Nationwide	MERF, MAEP, NGO, Ministry of Mining and Energy, regional and local authorities	<ul style="list-style-type: none"> - Number of IEC sessions on community management and prevention of the deleterious effects of climate change organized; - Number of Togolese actors trained in the development opportunities provided by implementation of the UNFCCC; - Number of climate change data management units created; - Number of Togolese experts trained in international climate negotiations. 	Most Togolese actors do not possess adequate capacity to develop adaptation and mitigation technologies to combat the harmful effects of climate change.
BIODIVERSITY				
4. Conservation of Togo's semi-deciduous dense forests and protection of threatened species	Ecological zone IV and the Bassar region	MERF, MAEP, NGO, loggers unions, regional and local authorities	<ul style="list-style-type: none"> - Number of local actors (populations, NGO, CVD) whose capacity in sustainable natural forest management has been strengthened; - Number of planters organized and trained to enhance effectiveness; - Forest-based industries (timber, services, energy sources) are organized; - Number of income-generating activities created in sectors such as livestock production, market gardening, etc.; - Agroforestry is adopted as a biodiversity conservation method in Togo's entire forest area; - The degraded ecosystems of banks of waterways and mountainsides are restored and declared deferred grazing areas; - Rare or endangered plant species are conserved <i>ex situ</i> 	Togo's forest cover is approximately 6.8 percent, thus placing continuous pressure on the biodiversity. Togo's forest policy document identified roughly 140 species threatened to varying degrees.

			<ul style="list-style-type: none"> and <i>in situ</i> (number of arboretums established); - A seed bank of local species is established and nursery growers trained; - Number of women's groups trained in the use and processing of non woody forest products. 	
5. Protected areas management	<ul style="list-style-type: none"> - <u>Centrale Region</u> Abdoulaye Fauna Reserve and Fazao-Malfakassa National Park) - <u>Maritime Region</u> (Togodo Fauna Reserve): - <u>Kara and Savanes Regions</u> Peripheral zone of Oti-Kéran park - At the national level: community forests and sacred forests 	MERF, MAEP, ONG, village associations, regional and local authorities	<ul style="list-style-type: none"> - The protected area management strategy is developed; - The requalification process for protected areas is finalized; - The number of park units to safeguard the protected areas is increased; - The number of income-generating activities (small ruminant and grasscutter farming, beekeeping, etc.) in riverside villages and areas returned to the populations; - The number of reservoirs constructed in the riverside villages to promote market gardening among vulnerable population segments (women and young people); the number of persons who engage in this activity; - Management plans for protected areas are formulated and adopted; - The number of CVDs, AVGAPs, and UAVGAPs with strengthened technical and financial capacities; - The number of [water] points developed for transhumants; - The total surface area of community forests and sacred forests demarcated and mapped; - The number of community forests and sacred forests with a development plan or simple management plan; - The forest activities undertaken in community forests and sacred forests based on a development plan or simple management plan. 	<p>Guidelines for the rehabilitation of protected areas exist. Togo launched a consensus-based requalification process for the following protected areas: Abdoulaye, Mont Haïto, Mont Balam, Sirka, Sadjì, Monda, Mont Barba Bassar, Fazao-Malfacassa, Nadoba, Mont Agou, Assimé, Atilakoutsè, Aou-Mono, Missahoe, Foukpa, and 2 Béna. Demarcation of community forests and sacred forests is underway in Togo.</p>
CROSSCUTTING SUBPROGRAMS (MULTISECTORAL)				
LAND DEGRADATION AND BIODIVERSITY				
			<ul style="list-style-type: none"> - The number of alternative activities created for market gardeners operating along the banks of waterways; 	<ul style="list-style-type: none"> - Indiscriminate use of banks of waterways for agriculture

<p>6. Development and integrated management of wetlands</p>	<ul style="list-style-type: none"> - Kara and Oti basin; - Mono basin (Djéta, Séko, and Agbanakin, Sédomé) 	<p>MERF, MAEP, NGO, MEHVA, fisher groups, regional and local authorities</p>	<ul style="list-style-type: none"> - Laws to combat pollution caused by pesticide and fertilizer use; - One village, one reservoir: the number of reservoirs constructed and/or rehabilitated for rice growing and market gardening in Oti valley; - Size of the surface area of new plantings, particularly in the bottomlands; - The number of persons, NGOs, associations, and CVDs involved in the management of mangrove ecosystems, whose technical and financial capacities have been strengthened; - The number of annual visits to sites for ecotourism, or of persons trained (women and young people) in socioeconomic activities (fishing, market gardening, etc.) around the ponds; - Strategy paper for wetlands management; - The number of fishers organized into associations to ensure improved management of the activity. 	<p>and of bottomlands;</p> <ul style="list-style-type: none"> - Mangroves currently cover 546.97 hectares compared to 1,000 hectares in 1999, roughly a 50 percent reduction; - Uncoordinated fishing activities, thus placing tremendous pressure on fish resources.
<p>LAND DEGRADATION, CLIMATE CHANGE AND BIODIVERSITY</p>				
<p>7. Togo's GGW Initiative Implementation Project</p>	<p>Far north of Togo, from the border with Burkina Faso to the Kanté latitude</p>	<p>MERF, MAEP, NGO, Agricultural groups, junior and senior high schools, universities, Ministry of Social Action, regional and</p>	<ul style="list-style-type: none"> - The number of farmers with strengthened capacity in the area of agricultural practices adapted to climate change; - Adapted technologies for water use and soil treatment and conservation are implemented and incorporate local knowledge; - Natural forest ecosystems in northern Togo (gallery forests, protected areas) are managed in order to improve their role in climate change adaptation; - Family farm plots are established in northern Togo (one family - one hectare farm plot); - Approximately 1,500,000 hectares of agroforestry parks comprising multipurpose plants are created (<i>nééré</i>, shea butter, baobab, silk cotton, etc.); - The wildfire management strategy is implemented; - Early warning systems are strengthened. 	<p>Simulations carried out in the context of the SNC reveal an overall rise in temperature ranging from 1.5 to 5.3°C between the latitudes of Togo. Rainfall appears to increase or decrease, depending on latitude. Between 6° (~ Lomé) and 10° (~Kanté) of the north latitude, rainfall is projected to decline by 1.4 percent in 2025 and 3 percent in 2050. Between 10° and 11° of the north latitude (Savanes region), it will increase by as much as 0.8 percent in 2025 and 2 percent in 2050. A succession</p>

		local authorities		of periods of drought and very rainy periods is expected, particularly in the northern part of the country.
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**Annex 2: Summary Logical Framework for PNIERN’s “Integrated Disaster and Land Management Project,”
Incorporating Priority Actions for GEF-5**

Components	Results	Activities	Relevant GEF Focal Area
Component 1: Strengthening of the institutional framework and capacities at all levels	Result 1.1. Climate-resilient institutional and technical sustainable land management capacities are developed	Activity 1.1.1. Development and implementation of a program to build capacity and formulate training activities for the Ministry of Environment and Forestry Resources, decentralized entities, and the target populations	Land Degradation, Climate Change, Biodiversity
		Activity 1.1.2. Scaling up of resources for the prevention and management units for DRR	Climate Change
		Activity 1.1.3. Improvement of the institutional and technical framework for sustainable land management by upgrading current local training entities	Land Degradation
		Activity 1.1.4. Awareness building among local populations located in the degraded areas along the waterways, around man-made lakes, and on mountainsides on the deleterious effects of deforestation	Biodiversity, Land Degradation
	Result 1.2. Investment in sustainable land and forest management increased relative to the initial situation	Activity 1.2.1. Implementation and coordination of multipartner and multisector coordination mechanisms and activities	Land Degradation, Climate Change, Biodiversity
		Activity 1.2.2. Scaling up of support for related community integrated disaster and land management activities in vulnerable areas	Land Degradation
		Activity 1.2.4. Strengthening of the capacity of actors in climate change adaptation	Climate Change
Component 2: Support for SLM and DRR activities for local development	Result 2.1. Climate-resilient sustainable land management practices are adopted by the targeted local communities	Activity 2.1.1. Promotion of innovative sustainable land and forest management approaches at targeted pilot sites	Land Degradation, Biodiversity, Climate Change
		Activity 2.1.2. Introduction of sustainable land management practices in the target agricultural production systems	Land Degradation
		Activity 2.1.3. Development of adaptive conservation and restoration activities for fragile ecosystems that are exposed to the effects of climate change	Climate Change
	Result 2.2. Sustainable management of the target forests and protected areas is strengthened	Activity 2.2.1. Introduction of sustainable forest management practices in the targeted areas	Biodiversity, Climate Change
		Activity 2.2.2. Development of the priority protected areas and community and sacred forests with the participation of the local populations	<u>Biodiversity</u>
		Activity 2.2.3. Development and integrated management of the wetlands in the Oti, Zio, Haho, and Mono basins	Land Degradation,

Components	Results	Activities	Relevant GEF Focal Area
			Climate Change, Biodiversity
Component 3: Support for the development of knowledge and surveillance systems	Result 3.1. Knowledge on climate-resilient sustainable land management and disaster and risk reduction is produced	Activity 3.1.1. Development of products (guides, tools, etc.) on current inovative and climate – resilient SLM and DRR practices (number of products)	Land Degradation
		Activity 3.1.2. Preparation of a catalogue of local knowledge warning of the risks of climate disasters in communities	Climate Change
	Result 3.2. A sustainable country surveillance system is developed	Activity 3.2.1. The operationalization of the information system for monitoring vegetation cover and land use, and wildfire surveillance in the targeted areas	Land Degradation, Climate Change, Biodiversity
		Activity 3.2.2. Ecosystem (map) and technical (SLM sheets) diagnostic analysis for sustainable disaster and land management	Land Degradation
Management of the project			
			Total (partial)
			Total project

Annex 3: Stakeholders' National Priorities for Sustainable Land Management (taken from the priorities to be submitted for GEF-5)

Subprogram 1: Community support for integrated land management

The main priority actions to be implemented in this subprogram are as follows:

- Reforestation of degraded land and river banks in the Oti basin, on the Akposso plateau, and in Litimé;
- Promotion of cover crops and regeneration of mountain soils around Kara;
- Promotion of agropastoralism for compost production in the Savanes region;
- Capacity building of farmers in composting techniques and local technologies to combat soil erosion in the Kara and Savanes regions (contour stone lines, terrace planting, dikes, compost pits, contour farming, construction of diguettes, etc.) ;
- Training and capacity building of young people (junior and senior high school students) in nursery techniques, grafting for reforestation, and the creation of green spaces in the Kara region;
- Restoration of soils at the Hahotoé, Tabligbo, and Bandjéli mining quarries;
- Establishment as deferred grazing areas and reforestation of the mountain sides in Kanté and the southeastern section of Atakora to ensure restoration of vegetation cover and soils;
- Promotion of agroforestry for the restoration of fertility and soil protection in the Savanes and Kara regions;
- Implementation of a microcredit system for technical support of agricultural associations in Oti valley;
- Wildfire management in Togo's vulnerable regions;
- Development and management of grazing areas and promotion of fodder crop planting (training in fodder storage and conservation techniques, establishment of fodder species corridors, etc.) in the Savanes region;
- Support to local populations with livestock rearing in enclosed areas in the Savanes region (infrastructure and equipment, capacity building in animal care, training for compost production, etc.).

Subprogram 2: Development and integrated management of wetlands

This subprogram includes the following priority actions:

- Creation of alternative activities for market gardeners operating along the banks of the Kara River, in order to combat pollution caused by pesticide and fertilizer use;
- Reforestation of bottomlands, banks of waterways, and management of green belts in the Oti basin;
- Construction and/or rehabilitation of reservoirs for rice growing in Oti valley.

Subprogram 3: Ecosystem and technical diagnostic analysis for sustainable land management

The priority actions to be implemented are as follows:

- Mapping and typology of soils in Togo based on their cultural aptitude;
- Development and dissemination of technical sheets on best traditional and modern sustainable land management practices in Togo.

Subprogram 4: Improvement of the SLM institutional and technical framework

This subprogram facilitates the implementation of the following priority actions:

- Strengthening of the operational capacity of the various technical institutions at the central and deconcentrated levels;
- Training of agricultural technicians located in rural areas;
- Creation of a center to provide training in rural land management techniques;
- Institutional capacity building of the GEF coordination office in Togo.

Annex 4: Stakeholders' National Priorities for Combating Climate Change

Subprogram 5: Togo's Green Great Wall (GGW) Initiative Implementation Project

This subprogram entails the following priority actions:

- capacity building in farming practices adapted to climate change for the population in the far north of Togo;
- implementation of appropriate technologies for water use, soil treatment, and soil conservation, incorporating local knowledge;
- sustainable management of natural forest ecosystems in the north of Togo to improve their role in climate change adaptation;
- promotion of family farm plots in the north of Togo (a one-hectare farm plot per family);
- support to populations with community reforestation using multipurpose plants in the north of Togo;
- capacity building of regional technical units and populations to combat wildfires; and
- strengthening of the early warning system for flooding in the Savanes region.

Subprogram 6: Promotion of New and Renewable Energy Sources

The priority actions planned under this subprogram are the:

- creation of alternative income-generating activities for charcoal producers in order to divert them from this activity;
- promotion of improved stoves and subsidizing of the installation of these stoves in average homes in order to limit the excessive use of charcoal as a domestic energy source;
- formulation of a national strategy for the development, production, and exploitation of new and renewable energy sources;
- subsidizing of production systems for new and renewable energy sources (solar, wind, etc.); and
- awareness raising of population groups to encourage them to adopt new and renewable energy equipment and technology.

Subprogram 7: Improvement of the Living Conditions of Rural, Semi-urban, and Urban Populations

This subprogram entails the following priority actions:

- improvement of the institutional framework for better management of the adverse effects of climate change;
- development of an action plan designed to improve access to health, sanitation, and potable water supply services;
- development of an action plan for managing household waste, special waste, intermediate and final waste in big cities, and the construction of temporary and permanent disposal plants in urban centers;
- establishment of health facilities, with the material and equipment needed to service rural populations;
- support to combat and prevent the exacerbation of vector-borne diseases in the Savanes and Plateaux regions; and

- support for the establishment of a technical unit for the treatment and management of power plant waste (wastewater, solid and liquid waste, oils, prohibited insulation materials, etc.).

Subprogram 8: Capacity Building of Actors in Climate Change

The actions to be executed under this subprogram are the:

- development of an Information, Education, and Communication (IEC) Strategy on community management and prevention of the adverse effects of climate change;
- capacity building (information and training) of actors (decision makers, NGOs, private sector, researchers) in the development opportunities provided by the implementation of the UNFCCC;
- establishment of a national climate change data management system;
- capacity building of Togolese elected officials and experts for active and beneficial participation in international climate negotiations; and
- establishment of a harmonious institutional framework for the continuous implementation of the UNFCCC in Togo.

Annex 5: Stakeholders' National Priorities for the Conservation and Sustainable Use of Biodiversity

Subprogram 9: Conservation of Togo's Dense Semi-deciduous Forests and Protection of Threatened Species

This subprogram allows for the execution of the following priority actions:

- capacity building of local actors involved in the management of dense semi-deciduous forests;
 - o technical and financial capacity building of existing associations, groups, and village development committees [CVDs];
 - o organization of planters for greater effectiveness of their efforts;
 - o registration and organization of timber, fuel wood, and charcoal operators in order to redirect them to other activities that are less harmful to biodiversity in particular, and natural resources in general;
 - o promotion of income-generating activities, such as small ruminant farming, beekeeping, mushroom growing, market gardening, etc;
 - o strengthening of cash cropping under tree crown cover (agroforestry);
- support for the restoration of degraded ecosystems, especially the banks of waterways and mountainsides;
- promotion of *ex situ* and *in situ* conservation of rare or endangered plant species;
 - o creation of an arboretum (*ex situ* conservation);
 - o strengthening of the practice of agroforestry in the Sudanian zone (*ex situ* and *in situ* conservation);
 - o awareness raising of population groups about the consequences of their activities on these species, the environment, and their own living conditions;
 - o research on seeds and training of nursery growers;
 - o establishment of large nurseries to serve the towns and farmers involved;
 - o support for the processing of agroforestry products; and
 - o assistance with identifying markets in which to promote products from agroforestry activities.

Subprogram 10: Protected Areas Management

This subprogram entails the:

- development of a national protected areas management strategy that provides a general outline of ecosystem management actions;
- management of protected areas in the Centrale Region (Abdoulaye Fauna Reserve and Fazao-Malfakassa National Park);
 - o securing of the area (increasing the number of park units and strengthening the existing ones, establishing the boundaries of the Reserve with clearly visible boundary stones, outlining the steps for oversight and management);
 - o strengthening of the organization of hunters' associations;
 - o promotion of income-generating activities for the population, especially poachers (livestock production, creation of water reservoirs for market gardening in riparian villages in protected areas, etc.);
 - o consensus-based demarcation of the Fazao-Malfakassa National Park with the establishment of park boundaries using clearly visible boundary stones;
- management of the Togodo Fauna Reserve;

- protected area management; this will entail outlining the steps that will facilitate surveillance and better management;
- promotion of substitution and/or reconversion activities in the returned zone (livestock production, fish farming, market gardening, etc.);
- technical and financial capacity building of the CVDs, Village Associations for Participatory Management of Protected Areas [*Associations Villageoises pour la Management de l'Aire Protégée* AVGAP], and their union [UAVGAP];
- management of the peripheral zone and returned spaces around the Oti-Kéran Park:
 - capacity building of riparian populations of the Oti-Kéran National Park;
 - strengthening of water supply infrastructures (reservoirs, wells, boreholes, etc.) in the villages on the periphery of the protected area to promote market gardening;
 - development of water points for better management of transhumance;
 - promotion of substitution and/or reconversion activities in the peripheral zone of the park (livestock production, fish farming, beekeeping, etc.);
 - technical and financial capacity building of the CVDs, AVGAPs, and UAVGAP;
- management of community forests and sacred forests;
 - demarcation and mapping of community forests and sacred forests;
 - diagnostic analysis (socioeconomic and technical) of the state of resource conservation in community forests and sacred forests;
 - formulation of development plans or simple management plans for large community forests and sacred forests; and
 - implementation of development plans or simple management plans for community forests and sacred forests.

Subprogram 11: Management of Wetlands in the South and North of Togo

The main priority actions to be implemented under this subprogram are the:

- management of the wetlands in the south;
 - restoration of mangroves;
 - training of nursery growers to master the biology of mangrove germination, species that are typical of mangroves for their effective restoration;
 - technical and financial capacity building of NGOs, Associations, and the CVDs involved in the sector responsible for management of these ecosystems;
- management of ponds;
 - management of ponds in Sédomé, Djéta, Séko, and Agbanakin, for ecotourism purposes, and for socioeconomic activities (fishing, market gardening, etc.);
 - organization of fishers into associations for better management of the activity;
- management of wetlands in the north of Togo;
 - restoration of the pond for hippopotamuses for the re-establishment of the pond feed system through community work;
 - promotion of income-generating activities for the most vulnerable social groups (market gardening, fish farming, beekeeping, etc.);
 - support for the production of plant species suitable for the restoration of the banks of the pond;
- management of permanent ponds in the south of the Togodo Fauna Reserve:
 - management of the town's main pond for the promotion of ecotourism; and
 - organization of fishers to reduce pressure on the fish resources of these ponds and on the hippopotamuses.

Annex 6: List of Persons Interviewed

Towns visited		Actors interviewed		
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		AGBO Philomène	CVD Treasurer	
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		Dr Katanga	Director, Regional Hospital	90225435
		Dr TOKE	DR of Public Health	90196808
		ADANOU	DRAEP-RP (Agriculture, Livestock & Fisheries)	
	DÉDOMÉ	BAÏTA Koudjo	CVD President	90192279
		KPODZRO Koffi	CVD Secretary	90825883
		ETSONOU Parfait	Management Committee	90921471
	BÉNA	WOENANYO Kwami	CVD President	91868968
		DJAGBASSOU Victor	CVD Treasurer	
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		ANKODJOL N'gbérga	Farmer		
		TCHIBOU Komina	Farmer	91965377	
		YANKODJOL Magnati	Farmer		
		DJABAL Nnobla	Farmer		
		DJADI Yaa	Homemaker		
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		MAMA Yaya	Nursery Grower	
		YAYA Pibabou	Farmer	
		MAMAH Fatima	Rice Farmer	
		MAMAH Afséta	Farmer	
		MOUSSA Assétou	Farmer	
		NANA Idrissou	Producer	
		AWANOO Mohamed	Producer	
		YAOKAN Souleman	Farmer/Livestock Farmer	
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Annex 7: List of Participants in the National Workshop

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