GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

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June 25, 2013

Dear LDCF/SCCF Council Member,

IFAD as the Implementing Agency for the project entitled: ***Togo: Adapting Agriculture Production in Togo (ADAPT),*** has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with IFAD procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the LDCF/SCCF Council in October 2011 and the proposed project remains consistent with the Instrument and LDCF/GEF policies and procedures. The attached explanation prepared by IFAD satisfactorily details how Council's comments have been addressed.

We have today posted the proposed project document on the GEF website at www.TheGEF.org for your information. We would welcome any comments you may wish to provide by July 24, 2013 before I endorse the project. You may send your comments to gcoordination@TheGEF.org .

If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Naoko Ishii
CEO and Chairperson

Attachment: GEFSEC Project Review Document
cc: Country Operational Focal Point, GEF Agencies, STAP, Trustee

REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:LDCF

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PART I: PROJECT INFORMATION

Project Title: Adapting Agriculture Production in Togo - ADAPT			
Country(ies):	Republic of Togo	GEF Project ID:[1]	4570
GEF Agency(ies):	IFAD	GEF Agency Project ID:	NA
Other Executing Partner(s):	COD-PADAT (Delegated Coordination Unit of Agricultural Development Support Project in Togo), Ministry of Agriculture, Livestock, and Fishery (MAEP), and Ministry of Environment and of Forestry Resources (MERF)	Submission Date:	20 June 2013
GEF Focal Area (s):	Climate Change	Project Duration(Months)	48
Name of Parent Program (if applicable): ➢ For SFM/REDD+ ☐ ➢ For SGP ☐	NA	Agency Fee ($):	535,454 (excluding PPG fees)

A. FOCAL AREA STRATEGY FRAMEWORK[2]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
CCA-1	Outcome 1.1. Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas	1.1.1 Adaptation measures included in Agricultural Investments Plans	LDCF	3,263,001	6,874,048
	Outcome 1.2. Increased adaptive capacity to climate change in development sectors	1.2.1 NRM-based adaptive measures introduced in hotspot of vulnerability to minimize climate impacts on natural assets and sustain agricultural production 1.2.2 Innovative demand-led practices, technologies and infrastructures aiming to increase the efficiency and resilience to climate change of smallholder production promoted			

[1] Project ID number will be assigned by GEFSEC.
[2] Refer to the Focal Area Results Framework and LDCF/SCCF Framework when completing Table A.

CCA-2 (select)	Outcome 2.1 Increased knowledge and understanding of climate variability and change induced threats at country level and in targeted vulnerable areas	2.1.1 Monitoring and evaluation system in place to disseminate climate adaptation information timely	LDCF	1,824,545	3,175,676
	Outcome 2. 2 Strengthened adaptive capacity to reduce risks to climate-induced economic losses	2.2.1 Capacity of Meteorological Service and Ministry of Agriculture staff on the links between climate change and agriculture strenghtened			
	Outcome 2.3 Strengthened awareness and ownership of adaptation and climate risk reduction process at local level	2.3.1 Effective awareness raising and communication campains to local stakeholders designed and undertaken			
		Sub-total	LDCF	5,087,546	10,049,724
		Project management cost (including M&E)	LDCF	267,000	1,169,276
		Total project costs		**5,354,546**	**11,219,000**

B. PROJECT FRAMEWORK

Project Objective: Reduce the impact of climate change on vulnerable groups and on critical natural resources in rural areas as to sustain agricultural production and food security						
Project Component	**Grant Type**	**Expected Outcomes**	**Expected Outputs**	**Trust Fund**	**Grant Amount ($)**	**Confirmed Cofinancing ($)**
1. Integration of adaptation to climate change tools in the agricultural production systems	TA	1.1. Support to the integration of climate change adaptation into the agricultural production systems is reinforced	**1.1.1. Sectoral, thematic and mapping studies:** • Three (3) sectoral studies to assess the state of vulnerability of (i) the agricultural and natural resources, (ii) water resources, (iii) and rural energy; • Three (3) thematic studies on the effects of climate	LDCF	1,144,000	1,990,851

			change on agricultural production systems (animal mobility, the adaptation of the seed sector, and adapted seeds (including a study on drought-resistant varieties); • The GIS mapping studies (on the land use, on silvo-pastoral resources, on cultivated areas, on water resources) **1.1.2. Forming working groups for awareness raising and leading an exchange platform on climate change:** • Creating intersectoral working group for monitoring and leading the process • Awareness raising of policy decision makers • Setting-up an exchange platform on climate change			
		1.2 The agro-meteorological network is strengthened	**1.2.1. Supply of equipments and amenities:** • Acquisition of equipment for meteorological modern agriculture in two weather stations (Dapaong and Lomé); • Creation of a knowledge Base on climate change and agriculture **1.2.2. Training in the collection and storage of meteorological data and the system of**			

			climate data management • Training on development and utilization of mapping of vulnerable areas • Training of 40 individuals/region on meteorological data collection and storage as well as climate data management systems			
2. The vulnerable agricultural production systems are adapted to current and future climate impacts	TA	2.1 The resilience of food production (maize, rice and cassava) by the introduction of crop techniques integrating climate change adaptation is improved 2.2 Systems integrating livestock farming and agro-silviculture to reduce the impact of recurrent drought are promoted 2.3 Diversification of production systems through the development of aquaculture and fish farming associated with market gardening is	2.1.1 At least 450 households practice small animal husbandry and best practices of soil amendment and received 2.1.2 1000 hectares developed (for food crops and are equipped with an erosion control and micro-irrigation) are sown by climate-resilient varieties 2.2.1 1,000 hectares of degraded ecosystems silvopastoral are restored by a massive reforestation, including 500 hectares by communities (where 240 hectares are deferred grazing). 2.2.2 300 people involved in beekeeping 2.3.1 Annual catches of fish are rising sharply. 2.3.2 The smallholders' vegetable production increased by 60% from 2013 to 2017.	LDCF	3,263,001	6,874,048

		promoted				
3. The stakeholders animate a device of management (education, information and communication) adapted to climate change knowledge		3.1 Public knowledge and awareness on Climate change and vulnerability has increased	3.1.1 Strengthening capacity of 50% of the PO to understand and assess vulnerability 3.1.2 2000 stakeholders understand the messages received (through various communication media) related to adaptation of agricultural production systems facing the climate change	LDCF	680,545	1,184,825
		3.2 Technical modules and manuals including local knowledge on adapting agricultural production systems to climate change are elaborated, adopted, and disseminated	3.2.1 50% of decision makers and operate the MARP on the ground, master the tools and manuals of adaptation to climate change 3.2.2 At least 80% of small producers of 300 sites and their organizations have the skills to adapt to climate change			
			Subtotal		5,087,546	10,049,724
			Project management Cost (PMC)[3]	LDCF	267,000	1,169,276
			Total project costs		**5,354,546**	11,219,000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount ($)
GEF Agency	IFAD	Loan	10,000,000
National Government	Government of Togo	In-Kind	795,000
Beneficiaries	Beneficiaries	In-Kind	424,000
Total Co-financing			11,219,000

[3] PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in $)		
				Grant Amount (a)	Agency Fee (b)[2]	Total c=a+b
IFAD	LDCF	Climate Change	Republic of Togo	5,354,546	535,454	5,890,000
Total Grant Resources				**5,354,546**	**535,454**	**5,890,000**

[1] In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.
[2] Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount ($)	Cofinancing ($)	Project Total ($)
International Consultants	420,600	307,795	728,395
National/Local Consultants	981,400	620,000	1,601,400

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF[4]

The project is fully aligned with the original PIF

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

Togo faces numerous environmental challenges and problems, most due to the country's rampant demography, rural poverty and poor consideration of the environmental dimension in sector-based plans and programmes. The most visible signs of climate change include: drying up, natural disasters, outbreaks of diseases, diminishing forest cover, extended erosion, salinization of the continental terminal of the coastal sedimentary basin, a generalized drop in the quality of water, and loss of soil fertility.

Togo ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and the Kyoto Protocol in 2004. In the UNFCCC register of activities, Togo carried out a First National Communication on Climate Change (FNCCC) in 2011, the National Adaptation Programme of Action (NAPA) in 2008, and the Second National Communication on Climate Change (SNCCC) in 2010.

The FNCCC recognized the need to give priority to developing the implementation of urgent and immediate adaptations measures specific to the agricultural sector in order to respond to the recurring threats posed by the impacts of climate change. NAPA identified the reduction of maize production following the drought as a major risk to food security in the country. The SNCCC presented a more critical situation for all of the economic sectors.

The NAPA also clearly identified the links between climate change induced water shortage (from precipitation) and the increased risks of reduced agricultural production and food insecurity. Further associated risks are land degradation, reduced income generation opportunities, loss of biodiversity, etc. In the SNCCC, the Government further detailed the type of activities to be supported and revised the costs associated to adaptation activities related to agriculture and resources efficiency. This was done to reflect the increase in the adaptation costs occurred from the NAPA completion (2008) and its implementation; this revision has been reflected in the agriculture sector-related project profile that was included in the SNCCC of 2010. The adaptation priorities identified in the project profile served as basis to develop the present proposal.

[4] For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

From 1992 to date, Togo has had a large number of political and strategic options and agricultural development programmes, which have aimed to improve food security and poverty reduction. These options were gradually inspired from the policy and strategic directions adopted at the sub-regional and regional levels. In April 2007, with the support of United Nations Development Programme (UNDP), Togo developed its National Development Strategy based on the MDGs, which now serves as an anchor to the Poverty Reduction Strategies Paper (DSRP-I drafted in 2008 and DSRP-C, drafted in 2009 with the support of the International Monetary Fund). The DSRP-C is the multisector reference framework for all interventions at the national level. A number of agricultural guidance documents were consequently produced: *Programme National de Sécurité Alimentaire* (PNSA, National Food Security Programme) in 2007-2008; *Stratégie de Relance de la Production Agricole* in July 2008; *Plan Intérimaire d'Actions Prioritaires* 2008-2010 in September 2008; and *Programme National d'Investissement Agricole* (PNIA, National Investment Programe for Agriculture) in April 2009. In July 2009, Togo became the first West African country and the second sub-Saharan country (after Rwanda) to sign its Comprehensive Africa Agriculture Development Programme (CAADP) Compact. The CAADP, promoted by NEPAD of the African Union, encourages the African governments to increase the portion of their national budget dedicated to agriculture to at least 10 per cent in order to attain an agricultural growth of at least 6 per cent per year (Maputo Declaration, 2003).

PNIASA, which covers the 2010-2015 period, now constitutes the sole reference framework for the mobilization of resources, both national and external, and for the intervention of different actors in the agricultural sector. Its funding led to a Compact between Togo and the technical and financial partners (TFPs) signed in July 2009, and extended through the signing of a partnership framework in February 2010. Since this cornerstone of the PNIASA is the improvement of productivity and producers' revenue, it aims to stimulate the production of food crops, export crops, livestock farming and fishing through the following priority measures: (i) strengthening the legal and institutional framework; (ii) structuring the rural areas and improving expertise in the agricultural sectors; and (ii) sustainably improving access to productive resources and markets.

PNIASA is organized in five intervention axes or sub-programmes, each having a certain number of components. Concretely, it began through the launching of the following three major projects; these three projects, for a total amount of US$112.5 million (approximately CFAF50 billion), are the initiatives that are commencing, providing to ADAPT a large spectrum of profitable synergy and a baseline:

- PADAT, for an overall amount of US$63.5, approved in December 2010 and co-financed by IFAD (US$13.5), Global Agriculture and Food Security Program (GAFSP, US$20 million), the West African Development Bank (BOAD, US$15 million) and the Bank for Investment and Development (BID) of the Economic Community of West African States (ECOWAS, US$15 million) will provide an additional support to food production and to the development of rural infrastructures. This project is the baseline for ADAPT.
- PASA (a support Project to the Agricultural Sector, *Projet d'Appui au Secteur Agricole*), approved by the World Bank in April 2011 for an overall amount of US$37 million, under IDA (the International Development Association) grant (US$9 million), GAFSP (US$19 million) and GFRP (Fonds Mondial de Réponse à la Crise Alimentaire, US$9 million); this project aims at promoting strategic food crops, export crops, and continental fish production, relaunching the livestock farming subsector and supporting capacity building and sectoral coordination. This project is in synergy with PADAT and ADAPT.
- WAAPP (West African Agricultural Productivity Program), approved by the World Bank in March 2011 with the mobilization of a US$12 million IDA grant for supporting agricultural research and extension. This project is in synergy with PADAT and ADAPT.

Togo also took the initiative to join the platform of the Terrafrica partnership to strengthen its capacities and set up a favourable context for the support of PNIASA through a better integration of the environment and the natural resources into agricultural sector activities. Here is where PNIERN of Togo began, whose objective is to strengthen, design, target, sequence, and monitor investments, and to improve the current management of the environment and the natural resources in order to create a more effective impact and a better cost-efficiency ratio of ENRM in Togo. Finally, PNIERN is an operational response to overcome environmental and socio-economic challenges that the country faces. Through its action, it is possible to combat poverty by ensuring economic and social development, combat desertification, conserve biodiversity and adapt to climate change. It will, finally, contribute towards developing a national level of the CAADP of NEPAD.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

The project is aligned with the NAPA priorities and LDCF criteria for project proposal. The IFAD-supported NAPA implementation proposal has been developed in compliance with the principles of country ownership and drivenness. Extensive consultations have been made with the Government, civil society, and local communities as to ensure that these principles were respected. Also, the activities supported through this project have been identified as priorities in Togo's NAPA and fully responds to current and urgent national needs for adaptation for climate change. The GEF/LDCF criteria for project design and co-financing have been respected. Project management costs represent 10% of total LDCF requested budget and co-financing ratio exceeds LDCF requirements. Also, adaptation benefits have been clearly defined. Finally, the project takes into account other ongoing activities in the country to ensure coordination and synergies on the ground.

In line with LDCF additionality principle, the identified activities are additional to baseline interventions without duplicating them and are based on the NAPA indications and other climate-related policies and strategies. PADAT focuses on the most vulnerable communities to food insecurity, while the LDCF component expands PADAT's scope by resorting to climate change adaptation as promoted by NAPA.

A.3 The GEF Agency's comparative advantage:

IFAD has been present in Togo for long with several large scale beneficial projects in the field of agricultural and rural development. With PADAT, IFAD will have financed six (6) projects in Togo with investments totaling US$75 million. And the present LDCF project opens the country onto a new type of investment advantageous for the resilience of population livelihoods it creates at no additional cost and to new opportunities aimed at strengthening the staff capacities and revenues of the poor. This project is fully aligned with the IFAD-supported baseline investment, namely the "*Projet d'Appui au Developpement Agricole au Togo (PADAT)"*. The project is aligned with the Agency's three operational strategies/policies (country strategy, Climate Change strategy, and targeting policy). The contribution of IFAD's climate change strategy in this context is what prolongs the project relevance to the country due to saving on yearly losses of quantities of seeds and the sustainability characters (additionality benefits) it brings about to the baseline (PADAT) activities and Agency's program whilst reinforcing/valorising its staff capacities. The project will rely on the expertise of the following professionals present in the country: the operational coordination of PADAT (based at the General Secretariat), regional members of the operational coordination of PADAT (based in the Regional Department Directorate of Agriculture, Livestock Farming and Fisheries), the monitoring and evaluation specialist (based at the Directorate of Planning and Agricultural Cooperation), the infrastructure specialist (based at the Department of Development and Rural Facilities), the agriculture and rural development specialist (based at the Department of Agriculture), the financial management specialist and the national accountant (based at the Administration and Finance Division of the Ministry of Agriculture, Livestock and Fishery). A climate change specialist will be selected to manage the proposed adaptation measures.
IFAD's operations are consistent with both the poverty reduction strategy paper (DSRP-C) and the National Programme for Agricultural Investment and Food Security (PNIASA). The main strategic axes around which IFAD's operations are articulated are: (i) raising productivity of three staple food crops; (ii) enhance value-added/marketing of their outputs; and, (iii) community development. The NAPA recognizes agriculture and food security as two major sectors for adaptation and this offers a unique opportunity to couple agriculture and rural development, that are undertaken by IFAD with adaptation needs and climate proofing activities. In addition IFAD's activities are guided by a clear targeting policy which ensures that they reach poor rural women and men, who are usually the most vulnerable to climate change, and that they have maximal impact in reducing rural poverty and hunger in each context. In line with "Mainstreaming gender at GEF", and to ensure successful impact and sustainability of its work, IFAD promotes women's empowerment and gender equality in all its field operations.

Additional advantages are represented by the fact that the LDCF project will be fully integrated into the IFAD supported PADAT, therefore cost-effectiveness will be ensured by: (i) a common management structure that will contribute at reducing the transaction costs; (ii) a single M&E framework; and (iii) reduced risks of overlapping with other activities.

A.4. The baseline project and the problem that it seeks to address:

The IFAD supported *Projet d'appui au développement agricole (PADAT)* aims at raising productivity of small-scale growers of three staple food crops: cassava, maize and rice; and enhance value-added/marketing of their outputs. With the support of the Government of Togo and other donors, the project will promote pro- poor rural economic growth. The project will be co-financed with others (see also A.7) through a unified project coordination unit; IFAD's support will focus on the development of agricultural crops produced by smallholders. The project will facilitate the entry of food-insecure farmers into the market economy, by enhancing self-reliance among marginally commercial small farmers and by helping rural producers' organizations develop integrated value chains for the three main staple foods, namely cassava, maize and rice).

The Project would achieve its objectives through the following two components: (i) Support to production and productivity; (ii) Enhance value added marketing.

The PADAT coverage is nationwide, starting with the areas where farmers, women, youth as well as men, are particulary vulnerable to poverty. The project will be implemented during the first phase, lasting three years, in Savanne, Kara, and Central Regions. During the first year, starter kits *(Quick start)* will be supplied to the most vulnerable segments of the target group to facilitate their access to national markets, before the main project activities are in place. Then, starting from year four (phase two), the activities will be also extended to Maritime and Plateaux Regions.

The project is consistent with both the full-poverty reduction strategy paper (DSRP-C) and the National Programme for Agricultural Investment and Food Security (PNIASA). It will establish strategic alliances with the West African Development Bank (BOAD), the Economic Community of West African States (ECOWAS) Bank for Investment and Development (EBID) and the World Bank.

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

Under a **BAU scenario**, development activities are carried out under the PADAT project. The PADAT represents the first step in the operationalization of the PNIASA that is the global framework for intervention in the agricultural sector of Togo. An early external assessment of PNIASA has highlighted its failure to take into account climate change and sustainable land management issues. That is, the PADAT does not take into consideration climate variability and its negative predicted impact on future crop production and consequently the increase of food insecurity.

Therefore, the project aims to raise the agricultural productivity of small farmers and to enhance their food security, and its design did not consider the expected reductions in productivity associated with climate variability. Therefore, neither adaptation measures nor activities directed to understand the phenomenon and its consequences for the small farmers of Togo were incorporated. As indicated, since climate change was not included in the analysis, then, no data on this issue will be collected, analyzed and/or taken into account.

Indeed, the activities proposed in the baseline will focus essentially on: (i) technical support to agricultural production ("Quick start" operation - distribution of kits); (ii) provision of improved seeds; (iii) soil and water conservation techniques and inland valley swamps development; (iv) piloting of mechanized farming techniques; (v) piloting of animal traction techniques. As mentioned above, all of these are directed to increase agricultural productivity and production while enhancing food security, but not to create resilience to climate impacts among small farmers. In fact, PADAT is focused on the most food-insecure people, not on the most vulnerable ones (in terms of climate change).

The circumstance that climate change impact was not considered in the design of the PADAT justifies the need for enhancing its scope in light of supporting climate change adaptation. This is particularly relevant because climate change is expected to further exacerbate current food security problems in the country. Most of the activities identified

in the first component of the PADAT offer an entry point for LDCF intervention[5] in support of Togo's NAPA implementation, as many of them are complementary with the NAPA priorities.

Under the adaptation scenario, the Government of Togo, in response to this defiance of food security not embedding to climate change, has prepared the National Program for Investment in Environment and Natural Ressources (PNIERN) which represents the global environment framework for investments in the country for the next five years. The PNIERN fills the gaps identified in the PNIASA with respect to environmental issues (mainly climate change and sustainable land management). As the LDCF intervention is fully integrated in the national planning framework and is in line with the priorities identified in the PNIERN, it will increase the scope of the activities carried out in the baseline, to make them less vulnerable to expected climatic changes. Also, the LDCF intervention will contribute at integrating and disseminating knowledge on climate change at both the national (Farmers' Organizations) and local level. With the proposed LDCF intervention, support will be given to mainstreaming adaptation tools in selected agricultural production systems (maize, rice and cassava) and to economic diversification in order to improve livelihood resilience 'integrated livestock-crop systems and aquaculture). This would contribute at achieving the objective of making crop yields not just more productive, but also resilient to climate change as to lessen the impact of climate change on food production. Support will also be provided to climate-proofing tools to reduce climate change risks in development programmes, such as thematic studies, climate vulnerability mapping, and bringing agro-meteorological information to help informing decisions. As part of this activity some support will be provided in the rehabilitation of meteorological stations equipment.

The LDCF intervention will therefore contribute to create the capacity at the national level to respond and monitor climate change impacts, as well as increasing the awareness of local communities on climate change. The requested LDCF budget will also cover the cost of improving data collection and monitoring by mapping vulnerable areas and establishing basic weather stations in relevant sites.

The main objective of the proposed initiative will be to lessen the impact of climate change on vulnerable rural groups, as well as on natural resources critical for sustaining agricultural production while ensuring food security.

The proposed project is articulated around four components embedding various NAPA priorities. These components are impact-oriented targeting at the same time sectors, ecosystems, and the groups most vulnerable to climate change; they are:

1. Mainstream climate change adaptation tools into agricultural production systems

This component aims at adequately diffuse adaptation strategies and tools to ensure both impact and sustainability. The rationale for this component relies on the recognition that climate change will not only influence the precipitation amount at their spatial/temporal distribution, therefore affecting Togo rain-fed agriculture. This will be addressed by mapping and characterizing vulnerable areas of rice, maize and cassava production and by collecting, analyzing and disseminating weather and climate information critical for agriculture. To improve observation and monitoring of climate variability and impact on agriculture, modern weather measurement and observation equipment for agriculture will be provided to two weather stations .

2. Vulnerable agricultural production systems adapted to current and future climate impacts

This component will address the risk of possible reduction in crop productivity and quality as a consequence of climate change impact. Promotion of climate resilient production will be pursued trough improved cultivation methods and introduction of new drought resistant and short cycle varieties. In addition, the component will promote diversification as an adaptation strategy by focusing on: (i) integrated crop-livestock systems, which are currently very limited in Togo. The existing livestock farming systems are mainly goat farms where feeding is based on an extensive grazing, and use of manure as fertilizer is not common; and on (ii) piloting aquaculture and fish-farming in selected communities. A thorough assessment of the potential to develop aquaculture and fish farming will be undertaken in Savanes, Maritimes and Central regions in order to identify suitable sites, and its impact on improving nutrition standards and food security will be carefully monitored for potential diversification and scaling up. The activities under the associated PADAT project will strengthen the sustainability of the

[5] *Here, LDCF, LDCF intervention, LDCF component, IFAD/LDCF project, IFAD initiative, ADAPT component, adaptation component, and proposed initiative are all inter-changeable and refer to the same project in formulation.*

outcomes of this component; in particular, Component 1 (support to production and productivity) and Component 2 (Enhance value added marketing) will facilitate the entry of climate resilient products to nationals market through the development of integrated value chains.

3. Information, Education and Communication on climate change

This component will target national stakeholders , in particular Farmers' Organization and local level actors to create awareness on the implication of climate change in agricultural production. Impacts on rural livelihoods will be also considered. Sensitization and awareness at local level will be carried out through seminars and workshops adopting a community-based approach, and with targeted inclusion of women and youth, as well as by producing and disseminating learning materiel.

Information and education are essential components to empower farmers, as they are central tools to adapt to climate change. In this sense, the activities under this component will enhance and potentiate those of Component 1and 2 since they will help the different actors to comprehend the implications of climate change on their lives and, therefore, enhance the adoption of adaptation strategies with more compromise and commitment. Specific training to small scale farming on risk management approaches and techniques will contribute to better resilience and sustainability of the project results. Furthermore, knowledge that is generated under component 3 would also contribute to better implementation under components 1 and 2.

Climate proofing PADAT: PADAT will mainly work on rice, corn and cassava. Its overall objective is to address food security and to increase farmer's income. The main focus of PADAT is on productivity of crops and the improvement of small scale farming through a value chain approach targeting better valorization of crops and linkages to markets. PADAT will entails "quick start" agricultural packages and input for farmers, training on specific production techniques and provision of small agricultural infrastructure for production and stocking. Capacity building efforts under PADAT are targeted and cover mainly training on improved production systems and techniques. Within this effort and this value chain approach, the IFAD/LDCF initiative will use specific entry points to climate proof baseline by mainstreaming climate factors (otherwise not included) at many levels. At the level of mapping, vulnerability assessments, data collection and weather information and knowledge management. This will add a significant element for decision-making at policy and farm levels. At the level of production, the LDCF will contribute to resilient value chain by adding investment that help farmers get resilient varieties, better (or more adequate production systems – not only based on intensification but considering climate trends characteristics and mapping of CC-related risks vulnerability areas). The LDCF will also contribute to the development of the capacity of extension services to integrate resilience and adaptation in the services they offer to farmers (this aspect is not considered in PADAT's capacity building efforts as they tend to focus on productivity and increase in yields). Support to integration on livestock and cropping systems is also an additional effort that the LDCF project will mainstream in PADAT. The efforts contributing to income generation/diversification will bring more resilience to the linear value chain approach that is adopted by the baseline and equip beneficiaries with more options for better adaptation.

4. Project Management and M & E

This component comprises both the establishment of an M & E system and the project management. It will promote activities aiming at ensuring that the project impact is systematically monitored and that evaluations of the project are undertaken in a timely manner as to sustain project implementation. Lessons learned will also be developed and disseminated through IFAD and partners' knowledge networks.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

Identified risk	Mitigation measures
Complexity of the institutional framework that may slow down project implementation, considering the many partner agencies and the number of initiatives associated with PADAT.	▪ Efforts will be put in ensuring a good inter and intra sectorial dialogue in order for the project to build on comparative advantages and strengths of each of the agencies involved. ▪ A strategy and plan for collaboration with the partner agencies and ongoing inititatives is addressed through providing ADAPT with more accountability and independence for achieving effective adaptation to climate outcomes
Low beneficiaries' participation in the project activities and follow up are possible risk, associated with farmers' cultural resistance to change	▪ The project will adopt demand-driven and participatory approaches at all levels in order to ensure participation of relevant stakeholders during project planning and desiging. ▪ Involvement and sensitization of Farmers' Based Organizations will help ensuring ownership. ▪ The approach to capacity building will be based on training village-based extension workers who will in turn train the producers' groups. ▪ Recognizing the value of local knowledge and linking it with innovations will also help to overcome Farmers' resistance to change.
Limited capacity at national and community level to understand and assess climate change impacts	▪ Information, Education and Communication on Climate Change will be a key mitigation strategy to which a whole project component will be dedicated
Poor governance in the capacity-building activities and in training on climate change.	▪ The Climate Committee will provide assistance to simultaneously identifying the independent qualified trainers and selecting the trainees and the work groups members in Component 1.
Resistance to gender and youth leadership and the involvement of women in the project activities.	▪ The gender aspect will be an explicit part of the criteria for accessing project activities. ▪ The income-generating activities (IGAs) will be exclusively reserved for women and youth.
Duplication of other projects' activities.	▪ "Additionality" and "climate-proof" characters advocated by the project rule out the possibility of duplicating other projects. ▪ The exchanges developed within the alliance will supervise this duplication risk upstream, notably in the shared Annual Work Plans & Budgets (AWPB)

A.7. Coordination with other relevant GEF financed initiatives

This project is presented as part of the NAPA implementation in Togo and focuses on the priorities that were identified through NAPA consultations. The proposed initiative is supporting (i) the national environment and natural resources investment programme (PNIERN); (ii) the national agricultural investment and food security programme (PNIASA), which includes a detailed agricultural development programme (PDDAA) aiming at achieving intensification and sustainable development of production systems, promotion of diversified agrobusinesses, professionalization of agricultural producers and promotion of the right to food, (iii) the United Nations Development Assistance in Togo (UNDAF), in its focus on increasing production capacity, especially of youth and women.

In addition, through its baseline PADAT, the project will establish strategic alliances with the West African Development Bank (BOAD), the Economic Community of West African States (ECOWAS), the Global Agriculture and Food Security Programme (GAESP), and the World Bank, as they all co-finance and coordinate their interventions,

based on their comparative advantages, on different sub-programmes of the PNIASA (agriculture, livestock, fishery, agricultural research, sectoral capacity building and coordination).

The project will build on the lessons learned from relevant initiatives carried out in the country. The project will also be based on lessons learned from other initiatives such as: Development and Rehabilitation of Agricultural Land in the Tové Mission Area *(Aménagement et réhabilitation des terres agricoles dans la zone de Mission Tové - PARTAM)* and Hydro-agricultural Development of the Lower Mono River Valley *(Projet d'aménagement hydroagricole de la basse vallée du fleuve Mono - PBVM)*, funded by the Arab Bank for Economic Development in Africa (BADEA); and the Project of strengthening the foundations of food security for vulnerable farm families in Togo *(Projet de Renforcement des bases de la sécurité alimentaire des ménages agricoles vulnérables au Togo)* implemented by FAO and funded by the European Commission. The initiatives in the projects activities are diverse and varied; they essentially belong to the alliance within PNIASA focusing on natural resources management.

The project will coordinate and establish synergy with currently ongoing projects:

- Support Project to the Agricultural Sector (PASA) that aims to promote strategic food crops, export crops, continental fish production, and to relaunch the livestock subsector thru genetic crossing, increased control of the product supply chains, and to improving the zootechnical conditions of traditional breeding.
- West African Agriculture Productivity Program (WAAPP) that aims to develop and disseminate technologies to improve agricultural production focussing on generating, adapting and disseminating an array of improved technologies for the sustainable production of maize, rice, and animal products (poultry, small ruminants) via support to infrastructures and equipment of ITRA and ICAT, researchers and operators involved in the transfer of technologies, and facilitate access to improved genetic material.
- Integrated Disaster and Land Management (IDLM) that aims to address in flooding and flood-risk areas via (i) strengthening and raising public awareness; (ii) promoting adaptation to climate change; and (iii) implementing early warning system and early tracking.
- Strengthening the Conservation of Togo's National Protected Areas (STSPA) that aims to conserve the globally important biodiversity in the biomes of the Togo savanne and to ensure the connectivity of protected areas while addressing uncontrolled fires and overgrazing.
- National Programme of Decentralized Actions on Environnement Management (PNADE) developing and strengthening human competences particularly at local levels.
- Support Project for the Preservation of Ecosystems and Biodiversity through the Agropastoralism (PAPEBA) in the Savannah, Kara, Central, and Plateau Regions in the context of Decentralization**.**
- The project will also ensure close coordination (from its design, implementation, to evaluation phases) with the activities that will be financed under the "Sahel and West Africa Programme in Support of the Great Green Wall Initiative"). While establishing synergy and linkages with "Sahel and West Africa Programme in Support of the Great Green Wall Initiative (SWA/S/GGWI)", the project will be focusing on in-the-ground investments via activities that are carried out by the regional initiative as a way to seek harmonization of approaches and technologies. the project will establish operational linkages with the SWA/S/GGWI by promoting mainstreaming climate change adaptation tools into agricultural production systems and adaptation of vulnerable agricultural production systems to current and future climate impacts. This entails integrating climate into national planning mechanisms, efficient soil restoration and conservation, sustainable agricultural practices and conservation and enhancement of biodiversity.

Practical synergies and opportunities of linkages with the activities of some ongoing projects are given in the following table (table 1).

Table 1. Potential and opportunities of synergy and linkages with ongoing initiatives

LDCF activities	PASA	WAAPP	IDLM	STSPA	PNADE
	Integration of livestock farming	Increasing productivity	Integrated soil Management	Protected resources	Capacity building
• High-performance and adapted seeds		✓	✓		
• Strengthening of technical capacities	✓	✓	✓		✓
• Mitigation of climate change impacts			✓	✓	✓
• Reduction of human pressure on the forest resources			✓	✓	✓
• Promotion and development of water and soil conservation practices and improvement of soil fertility	✓	✓	✓	✓	
• Management of wildland fires	✓		✓	✓	✓
• Development and enhancement of lowlands and support to the development of sustainable aquaculture	✓		✓		
• Development and management of the protected pastoral areas and the promotion of the cultivation of fodder crops	✓		✓	✓	✓

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

The project is expected to directly benefit some 25,000 small farmers, that will be reached through approximately 1,500 producers' organizations (PO). The implementation of all of the activities will be on a contractual basis with the specialized agencies and institutions, CSOs as well as PO with the required competences, experience and qualifications. Based on management manuals including the implementation manual that have been prepared by PADAT. Agencies and partner institutions may be public operators, private or civil society, or public agencies.

The project will be focusing on those farmers that are vulnerable to climate change (according to currently available climate change projections) considering the region where they live and the susceptibility of their farming system (lowland rice, maize, cassava, livestock, fishing) as analysed by the SNCCC (2010). More specifically, the analyses at the country level show a monthly decrease in rainfall, a monthly increase in temperatures and in extreme weather events over the last half century. At the same time, climate models are indicating that the average annual temperature increase will range from 0.66°C in the south to 0.80°C in the north by 2025, and that by 2050 temperature increases will range from 1.5°C in south-west to 1.8°C in the north-east, while precipitation will decrease in south (-3%) and increase (+2%) in the north. For the scenario 2075, temperature variations will be very important in both north and south, and rainfall will be on average lower by -5% *vis à vis* 1971. In 2100, the impact of climate change will be significant throughout the country, rainfall will decrease by -8% in the south and increase in the most northern region from 1% to 5%.

It will strengthen the capacity of 1,500 farmers-based organisations ("Coordination togolaise des organisations paysannes et Producteurs agricoles 'CTOP", "Reseau national des organisations paysannes au Togo 'RENOP)" that may benefit also as services providers. The total number of indirect beneficiaries will be 175,000. The project will adopt a participatory and Community based approach, with a view to ensuring that implementation of project activities is undertaken by beneficiary households. The targeting strategy of the project will be similar to PADAT and will reach the small farmers, women, youth and particularly vulnerable segments like poor people with chronic food insecurity, widows head of families and HIV

youth and families.

Climate risk/impact or vulnerability to climate of the rural producers and groups will be introduced in the targeting strategy in the aim to reinforce their income and food security resilience. Women will be particularly targeted as their agricultural activities and livelihoods are more exposed to climate change impacts.

Other key stakeholders include: (i) the Ministère de l'Agriculture, Elevage et Pêche (MAEP), (ii) Ministère de l'Environnement et des Ressources Forestières and their regional decentralized structures; (iii) Ministère chargé du développement à la base, de la jeunesse, de l'artisanat et de l'emploi des jeunes, for support and coordination in community-based development activities; and (iv) Institut togolais de recherche agronomique (ITRA) for agricultural research and improved varieties. Private associations and NGOs are identified as service providers in the area of capacity building and agricultural training. All these stakeholders are in need of capacity building on climate change and the project will provide equipment, tools, and training.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

The project will deliver socio-economic benefits in the following areas: (i) reduced food insecurity; (ii) improved livelihoods and local economies through improved agricultural productivity and raised incomes; (iii) new and diverse income generating opportunities created; (iv) enhanced decision-making of small-scale farmers based on agro-meteorological data; (v) empowerment of small scale farmers to cope with climate variability and natural disasters; (vi) contribution of agriculture to local and national economy made less unstable.

The project socio-economic benefits will be felt primarily by women and youth that represent 50 to 60% of the most vulnerable small scale farmers exploiting areas from 0.5 to 1 ha, as the Project will be fully aligned to the gender strategy implemented by PADAT. This strategy aims at ensuring equitable access to project resources and activities to target groups (men and women) and is based on the "Politique Nationale pour l'équité et l'égalité de genre" on IFAD Gender Plan of Action. It is articulated around the following pillars:

- Support access of women and youth to agricultural training and capacity building activities
- Develop tailored approaches based on specific needs for women and youth
- Encourage women and youth participation in decision making processes

The expected adaptation benefits from the IFAD/LDCF intervention are the following:

- Agricultural production and crop: enhanced adaptive capacity of the agricultural production system to changed and changing climatic conditions, and decreased climatic vulnerability of crops.
- Small farmers: improved livelihood resilience of the small scale farmers who are more vulnerable to expected climate changes.
- Natural resources: Strengthened sustainable management of key natural resources by users.

The adaptation benefits per component are given in table 2 below.

Monitoring and information: improved observation and monitoring of climatic variability and its impacts on agriculture. Projects design will be based on strong assessment of vulnerability. The assessment will be based on earlier studies under NAPA and completed through consultations at all levels and the targeted communities. Further consultations that the PPG stage will bring more informations and details on the benefits with respect to the vulnerability of people and agricultural production systems that project will target.

Table 2. Adaptation Benefits

LDCF Components	Adaptation Benefits
COMPONENT 1. Integration of tools to adapt to the climate risks in the agricultural production systems	▪ Better understanding of climate change implications in agricultural and livestock production systems for senior policy makers and other stakeholders at national and local levels. ▪ Integration of climate change issues into agriculture policies. ▪ Enhanced decision-making capacities of small scale farmers based on agro-meteoroligical data; ▪ Increased knowledge, dissemination and awareness of the small scale farmers on links between climate change and agricultural production systems. ▪ Increased resilience of vulnerable groups via communication campaign on adaptation to climate change ▪ Developing the skills of local technicians in identifying climate risks in agricultural production and animal husbandry, sustainable management of meteorological services, improved knowledge on the impacts of CC in production systems, policy makers, aware, ready to play a role in encouraging the implementation of adaptation measures to climate in the country.
COMPONENT 2. Adaptation of agricultural production systems that are vulnerable to climate impacts	
Sub-component 2.1. *Resilience of agricultural production*	▪ Contribution of improved agriculture production to local and national economy ▪ Sustained livelihoods and local economies through improved agricultural productivity and generated incomes ▪ Reduced food insecurity. ▪ Enhanced adaptive response of agricultural production systems via resilient crop varieties and farmers' seeds losses due to rains patterns ▪ Adaptation to water scarcity of small scale farmers through distribution of appropriate irrigation and water-saving devices while providing livelihoods equipment ▪ Increased technical capacity of local technicians via training on maintenance of adaptation oriented kits, namely micro gravity low pressure irrigation device ▪ Increase and diversify incomes and reducing the risk of loss of agricultural production, improving the level of food security, capacity building in technical development and maintains withholding water, poor soil regeneration through reforestation, promotion of agricultural production systems and livestock adapted to climate change, rural employment in the field of aquaculture, biodiversity conservation mainly through reforestation and beekeeping, reduced erosion due to water protection activities of river banks and lakes, reducing conflicts between pastoralists (transhumance) and farmers
Sub-component 2.2. *Livestock farming and agro-silviculture*	▪ Diversification activities focusing on women direct favored activities as vegetables, apiculture and aquaculture
Sub-component 2.3. *Aquaculture and fish farming associated with market gardening*	▪ New and diverse income generating opportunities created for farmers ▪ Diversification activities creating new opportunities horizons for women and the markets
COMPONENT 3. Information, Education and Communication on climate change	▪ Improved knowledge on improved sustainable use of natural resources (including water and forests), capacity training of local technicians improved disclosure of increased knowledge and awareness of the relationship between climate change, agricultural production and livestock

Sub-component 3.1: Promotion of aquaculture associated with vegetable gardens Sub-component 3.2: The fichery-based exploitation of community water catchments.	▪ Enhanced adaptive capacity of production systems. ▪ Enhanced knowledge on sustainable production systems via diversification, aquaculture, apiculture
COMPONENT 4. Project management, Monitoring and Evaluation	▪ Better understanding of the impacts of CC activities padat through analytical tools for adaptation to climate change

B.3. Explain how cost-effectiveness is reflected in the project design:

The cost effectiveness of the project activities is documented in the Annex 1 of the project document (Annex 1: The operating accounts of income generating activities), where costs and benefits of the two scenarios with the project and without the project are compared. **The operating accounts** corresponding to the production systems of the intervention area were built on the basis of data collected by the mission and exchanges with the beneficiaries. The analysis aims to: (i) study the financial viability of the technologies promoted and the increase in incomes generated by the investments; (ii) study, in an appropriate and detailed manner, the budget for the investment activities promoted by ADAPT; and (iii) study the additionality with respect to the baseline situation (without the intervention of the FPMA project). The basic hypotheses of this analysis are based on the elements of the projection that will mainly rely on the PADAT results. In real terms, besides what is said below on IGA, improved knowledge on the production systems for cereals stems from limiting the yearly seeds losses occurring from farmers' assumption that the first drop of rain will continue; and hence, a decision is made to seed while the rain fails to arrive and even last a longer moment inducing these quantities to lose their germination capacities and for the farmer the necessity to repeat his operation again and again, losing henceforth his/her seeds. This may even be repeated several times as long the rain variability continues. With ADAPT the farmers will no longer base their decision on the first drop but will hold their seedling activity until a go-ahead is provided by meteorological services (with alternative scenario) for the right moment the precipitation will take place providing the farmer an opportunity to save his/her seeds quantities and animal energy used for plowing at the wrong time. This is how it demonstrates cost-effectiveness of ADAPT as an alternative to PADAT that rely rather on providing its "quick start" encouraging hereby the farmer to quickly start his/her farming operations. The same reasoning applies (i) to the decision-makers who will act, from now-on, on the basis (adapt) that their support services are bound to climate information; and this introduces a cost-effective device for saving energy (for the farmer and the animal traction) and cost of acquisition of seeds; (ii) agricultural production systems using long term variety assuming it produces more than short term variety and then that the rain pattern is continuing to be sufficient as before; in these circumstances ADAPT will promote the use of short term variety but more performant as to produce as much as the farmer uses to gain reinforcing henceforth his/her resilience to climate impacts.

Data. The statistical data on the prices in rural areas are based on the field surveys and interviews with farmers in the five ADAPT project regions visited by the mission as well as other documents of projects funded by IFAD.

Types of analysis: Two financial criteria deserve to be pointed out: (i) The ***additional net benefits*** were derived with respect to the baseline situation. (ii) The investments were enhanced by using the ***internal rate of profitability (IPR)*** compared to a discount rate that cancels the current net value of a series of financial flows (generally, related to a project having an initial investment followed by a positive cash flow). If the IPR is higher than the capital discount rate (see also capital cost), then the current net value of the project is positive (and therefore the project is profitable).

Income-generating activities. The project will promote IGAs for developing agricultural, apiculture and aquaculture. In all the cases, a detailed analysis of investments needed for the launch was carried out prior to determining the net benefits. The results were compared with the baseline without ADAPT intervention. This analysis shows the profitability of all of the IGAs proposed. Concerning market gardening, the operating accounts of a surface area of 1 ha were developed for tomato, pepper and okra crops. The base hypothesis is that the introduction of these crops would be linked with the dam rehabilitation activities. The soil occupation is 12 months for okra, 5-7 months for tomato, and 6-8 months for pepper. The same investments for rehabilitation will also serve for developing a small fish farming unit, whose added value was also demonstrated with a return of $US.16 per US$1 of investment. Table 3 summarizes the financial results.

With respect to the promotion of apiculture, it is planned that the kit needed for the start-up of activities will be made

available by the project for the proposed reforestation activities. This is not only an activity that aims to safeguard the environment, but also an activity that aims to increase the incomes of trained groups with an expected financial benefit of US$0.25 per US$1 invested.

The sustainability of the project will be guaranteed by integrating it with the PADAT project, notably through: (i) a common management structure that will contribute towards reducing the management and supervision costs, as well as costs of transactions; (ii) the integration of the monitoring-evaluation framework; and (iii) the creation of synergies on the field.

The expected benefits of the ADAPT intervention are linked to the increase in the scope of activities carried out in the PADAT project (baseline situation) to render these activities less vulnerable to climate change. More specifically, the following benefits will be achieved as a result of the additionality and the complementarity between the two projects:

- *Component 1. The integration of climate change adaptation tools into the agricultural production systems:* development of the competences of local technicians in the identification of climate risks in agricultural production and livestock farming; sustainable management of meteorological services; improved knowledge on the impacts of climate change in the production systems; and policy decision-makers are informed and ready to act as the driving force in promoting the set-up of climate change adaptation measures in the country.
- *Component 2. Adaptation of agricultural production systems that are vulnerable to climate change*: increase and diversification of income and reduction of the risk of agricultural production loss; improvement in the level of food security; creation of technical capacities in the development and maintenance of water reservoirs; regeneration of poor soils through reforestation; promotion of agricultural production systems and livestock farming systems adapted to climate change; creation of rural employment in the fields of fish farming and biodiversity conservation, above all, through forestation and apiculture activities; reduction of water erosion through activities for protecting the banks of water courses and bodies; and conflict mitigation between livestock farmers (transhumance) and crop farmers.
- *Component 3. Information, Education and Communication (IEC) on climate change:* improved knowledge and understanding on the sustainable use of the natural resources (notably, water and forest resources); improved capacities for training local technicians; and dissemination of knowledge and increased awareness raising on the relationship between climate change, agriculture production and livestock farming.
- *Component 4. Project management and monitoring and evaluation*: better understanding of the impacts of climate change in the PADAT activities through the analytical tools of climate change adaptation.

C. DESCRIBE THE BUDGETED M&E PLAN: The amounts per component are generally aligned with the initially approved allocations in the PIF (Project Identification Form). The duration of the project implementation is estimated at 60 months and is planned to begin in 2013.

The project will be funded in the form of an LDCF grant of US$ 5,354,546. IFAD will co-finance this project through PADAT with an estimated amount of USD 10 million. The Government's contribution (customs and taxes), was estimated at US$795,000. The contribution of the beneficiaries amounts to an estimated amount of USD 424,000 of in-kind contribution. The following table gives the amounts by component/sub-component and by contributor.

Table 3. Financing Plan

	LDCF	Government	IFAD	Beneficiaries	Total
A. Integration of tools to adapt to the climate risks in the agricultural production systems	1 144 000	157 451	1 780 000	53 400	**3 134 851**
B. Adaptation of agricultural production systems that are vulnerable to climate impacts					
1. Resilience of agricultural production	1 330 315	182 093	5 125 000	65 000	**6 702 408**
2. Livestock farming and agro-silviculture	1 228 377	177 807	560 000	75 000	**2 041 184**
3. Aquaculture and fish farming associated with market gardening	704 309	132 048	455 000	102 100	**1 393 457**
C. Information, Education and Communication on climate change	680 545	114 825	980 000	90 000	**1 865 370**
D. Project management and monitoring and evaluation	267 000	30 776	1 100 000	38 500	**1 436 276**
Total funding	**5 354 546**	**795 000**	**10 000 000**	**424 000**	**16 573 546**

Review of procurement-related decisions

At the start of the project, the Procurement Plan for 18 months shown below, referring to the first 18 months of implementation will be updated by the Project Coordinator and subject to the non-objection of the dcofinaonor. For each procurement, he or she will indicate the method and thresholds proposed. This Procurement Plan will be one of the prerequisite conditions of funding disbursement. Each year, an annual procurement plan will be developed and integrated into the Annual Work Plan and Budget (AWPB). It will be subject to approval by the Steering Committee and to the non-objection of the donor prior to its implementation.

Flow of capital and project supervision

There will be separate accounting for the LDCF grant in order to simplify the management, the financial operations, the audits and the monitoring. A separate account will be set up for the ADAPT funds. IFAD will sign a separate financial agreement with the Government for the LDCF grant. The flow of capital will follow the PADAT modalities. The project will be implemented by the Project Management Unit (PMU) of ADAPT, in line with the same conditions, rules and procedures applied to the project management of PADAT. IFAD will be in charge of the supervision of the project. This supervision will be unique and applying to both, LDCF component and PADAT; yet, for the LDCF component there will be a representative of IFAD/ECD.

The operations of the M&E systems are designed and will be implemented by using the suitable components from IFAD's Manual on Results Monitoring and a list of acceptable indicators. It is also highlighted that each M&E

operational system is in line with GEF's specific demands. The participatory approaches to M&E are highlighted at all levels, concerning in particular, investments directly benefitting beneficiaries.
In the case of the LDCF project, a detailed plan (AWPB) is prepared for the first 18 months and will be prepared each year in order to identify the activities that must be implemented during the following 12 months. Each report will be sent to IFAD with copies to national counterparts so that it may propose revisions and recommendations they deem necessary.
Similarly, as regular activities of the organization, IFAD's technical team and the project consultants will meet on the project sites and draft the detailed reports on progress, achievements, project results, as well as lessons learned. These field reports will be transmitted, upon request, to the donor as well as other collaborative projects and partners.
The project's participatory approach will attract the local institutions to play an important role in monitoring. This role will be formalized and structured through the association of Ministry of Agriculture, Livestock and Fishery (MAEP) and its regional structures, the Ministry of Environment and Forestry resources (MERF) structures, as well its regional representations (DREF) and beneficiary associations of the pilot areas, which will be involved each year in the monitoring of the implementation and results, as actors of participatory M&E of PADAT. All of the implementation institutions will ensure the monitoring of activities of which they are principally responsible. The methodology of participatory evaluation will be developed at the beginning of the project and will consist in an important commitment of national institutions in mid-term assessment. In order to facilitate this, an appropriate support will be provided to the national counterpart in order that it may be able to conduct M&E activities in line with planning.
The meetings of the project's Steering Committee will also be convened periodically. A progress report, concisely estimating the implementation level of the programmed activities, the results produced and the advancements made in achieving project objectives, will be prepared and disseminated two weeks before each Steering Committee meeting, which will conduct an analysis of the report and make recommendations for all necessary monitoring actions to improve project performance.

The results of the M&E system will also contribute to strengthening overall knowledge on climate change adaptation. More specifically, it will contribute to enriching the knowledge base by drawing on lessons learned from the cost-effectiveness of the models of adaptation activities as well as the need to best use and extend these activities to the entire country. Finally, it will contribute to developing LDC strategies by indicating the implementation framework for: (i) changes at the level of the project area; (ii) successful practices in re-qualification and improvement of knowledge on climate change adaptation; and (iii) inter-sectoral strategies, notably climate change adaptation.

The M&E function will be integrated in the overall M&E system of the PADAT operation. Total costs of the M&E system are reflected in project costing. LDCF financing will cover monitoring of ground and surface water and impact in terms of adaptation through component 4 at a total cost of $ 300,000 . Daily monitoring is undertaken through the VCSP through its overall M&E system. The LDCF component is an integral part of the VSCP Project and co-financing will mainly cover the M&E of this project as a blended component of the baseline.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):): (Please attach the Operational Focal Point endorsement letter(s) with this form. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Mr Folly Yao Dziwonu	GEF Operational Focal Point	MINISTERE DE L'ENVIRONNEMENT ET DES RESSOURCES FORESTIERES	06/28/2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
Mr Kevin Cleaver, Associate Vice-President, PMD			Naoufel Telahigue	+390654592572	n.telahigue@ifad.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Outcomes hierarchy	Indicators	Means of verification	Assumptions
Goal: Reduce the impact of climate change on vulnerable groups as well as on critical natural resources in rural areas	▪ The incidence of poverty in the target areas is reduced by 30% between 2013 and 2017	▪ Various supervision reports of IFAD/GEF ▪ Project reporting	▪ Socio-political and economic context ▪ Continued support from the Government of Togo to the PNIASA ▪ Synergy and complementarity between the projects/programmes partners.
Environmental objective: Mainstreaming into the planning process the climatic parameters and integrating agriculture good practices resilient to Climate Change	▪ Agriculture good practices as articulated with rainfalls patterns are integrated into 50% of professionals' agenda	▪ Monitoring and evaluation reports ▪ Mid-term evaluation and progress report	▪ The institutional framework is conducive to the implementation of the ADAPT project. ▪ The public decision makers wish to adopt the policy recommendations; notably, they accept to undergo the training and to integrate climate risk into the sectoral strategies.
Development objective: Sustainably improve food security and incomes of farmers	▪ Institutions involved in food security of vulnerable households improve their capacities by more than 25% ▪ 80% of farmers and their households improve their income by 40%	▪ Impact assessment surveys (mid-term and final career) ▪ PADAT evaluation Report	▪ The project develops and implements means to generate income, increase productivity and ensure food security resilient to climate change ▪ There are potential conflicts from increasing productivity without taking into account climate disruption and impacts on the natural resources.
<u>Component 1</u>: The integration of climate change adaptation tools into agricultural production systems	▪ At least 60% of producers (by sex and age) supported by PADAT indicate a good understanding of the climate change ▪ The number of farmers adopting Integrated Soil Fertility Management (ISFM) practices has increased more than 50%	▪ Mid-term review	▪ The structuring of small-scale grassroots organizations into unions representing their interests may induce ownership by the elites and the large producers ▪ Problems of governance and leadership of producer organizations ▪ Availability, competence and interest of service providers and technical services in participating in Project implementation.
Outcome 1.1: Support to the integration of climate change adaptation into the agricultural production systems is reinforced	▪ Reports on the thematic studies and mapping of the vulnerable production areas (especially for rice, maize and cassava vulnerable) are available for 90% of the targeted areas	▪ Cartographies & surveys reports	▪ Climate change adaptation strategy applied. ▪ Climate projections considerations taken from the IPCC

Outcome 1.2: The agro-meteorological network is strengthened	▪ 70% of meteorological personnel have gained the necessary skills in the field of monitoring and analysis of CC and on the articulation of climate change and farming	▪ Monitoring reports (M / E cell) ▪ Project reporting ▪	▪ Capacity of local providers to distribute the equipment and ensure training while monitoring the use of equipment according to project modalities ▪ Capacity of local private operators to be in charge of managing the equipment
		▪	▪
<u>Component 2</u>: Adaptation of vulnerable agricultural production systems to current and future climate impacts	▪ Between 2013 and 2017 smallholder farmers in the target area increase their production of 8 to 10% for maize and 5% for rice through adaptation measures	▪ Mid-term review	▪ Flexibility of PADAT to integrate ADAPT ▪ Comprehension and adoption of the climate change adaptation approach by COD-PADAT and its collaborators on the ground
Outcome 2.1: The resilience of food production (maize, rice and cassava) by the introduction of crop techniques integrating climate change adaptation is improved	▪ At least 450 households practice small animal husbandry and best practices of soil amendment ▪ 1000 hectares developed (for food crops and are equipped with an erosion control and micro-irrigation) are sown by climate-resilient varieties	▪ Training manuals and planning	▪ Capacity of ICAT to assimilate the climate change adaptation approach.
Outcome 2.2: Systems integrating livestock farming and agro-silviculture to reduce the impact of recurrent drought are promoted	▪ 1,000 hectares of degraded ecosystems silvopastoral are restored by a massive reforestation, including 500 hectares by communities (where 240 hectares are deferred grazing). ▪ 300 people involved in beekeeping	▪ Project reporting ▪ Reports of services providers ▪ Reports on training, study tours and exchange of experiences made	▪ Beneficiaries are committed to the restoration of degraded ecosystems. ▪ Motivation of the apiculture activities to stimulate reforestation.
Outcome 2.3: Diversification of production systems through the development of aquaculture and fish farming associated with market gardening is promoted	▪ Annual catches of fish are rising sharply in the community water catchments via IAA model ▪ The smallholders' vegetable production increased by 60% from 2013 to 2017	▪ Project reporting ▪ Reports of services providers	▪ Availability of appropriate water sources for aquaculture. ▪ Expression of a local demand for aquaculture.
Component 3: Strengthening the promotion of education, information and communication (IEC) on climate change	▪ At least 80% of the stakeholders from the rural sector (small producers, operators, extension workers ...) participate in the management (collection, processing, dissemination and use) of information related to climate change	▪ Mid-term review	▪ Level of literacy of the producers. ▪ Cultural reluctance to change.
Outcome 3.1: Public knowledge and awareness on Climate change and vulnerability has increased	▪ Strengthening capacity of 50% of the PO to understand / assess vulnerability and to adapt ▪ 2000 stakeholders understand the messages (received through various communication media) related to adaptation to climate change of agricultural production systems	▪ Reports of services providers ▪ Reports on training, study tours and exchange of experiences made	▪ Simplicity of training manuals and modules for participants. ▪ Availability of qualified trainers in the languages spoken in the rural areas
Outcome 3.2: Technical modules and manuals including local knowledge on adapting agricultural production systems to climate change are elaborated, adopted, and disseminated	▪ 50% of decision makers and 1500 farmers on the ground receive training on adaptation to climate change, tools/manuals, and impacts ▪ At least 80% of small producers of 300 sites and their organizations have the skills to adapt to climate change and to disseminate traditional knowledge	▪ Reports of services providers ▪ Modules and technical handbooks	▪ Beneficiaries agree to dedicate time for training. ▪ Ease in assimilating educational contents of manuals and modules

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

The project document accommodates comments that have been received – It was also shared with the government of Togo prior to submission and cleared through the IFAD internal quality control processes. The project proposal is aligned with the original approved PIF. Only a slight reduction in the co-financing estimates to be noted.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS[6]

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF:			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent Todate***	***Amount Committed***
Assessment of gaps on information and tools	9000	9400	0
Assessment of vulnerability of maize cassava and rice	8000	3500	0
Assessment of vulnerability of livestock	8000	3000	0
Assessment of vulnerability of aquaculture	8000	4200	0
Project strategy and IEC activities	8000	5000	0
Project costing	8000	0	0
Design of adaptation strategy and finalise all project documents	30000	21743	2432
Travel	13000	20941	0
Translation	8000	9324	0
Total	100000	77108	2432

USD 20,460 were not used – they will be returned to the Trustee.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

NA

[6] If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

Republic of Togo

International Fund for Agricultural Development

Adapting Agriculture Production in Togo (ADAPT Project)

Project 4570

PROJECT DOCUMENT

January 2013

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Exchange rate
(24 May 2012)

Currency unit	=	CFA franc
1 US$	=	CFAF500
1.00 FCFA	=	US$0.002326

Weight and measures / metric system

1 kilogram (kg)	=	2.204 pounds
1,000 kg	=	1 metric tonne (t)
1 pound (lb)	=	450 grams (gr)
1 kilometre (km)	=	0.62 miles
1 metre (m)	=	1.09 yards
1 square metre (m^2)	=	10.76 square feet
1 acre (ac)	=	0.405 hectares (ha)
1 hectare (ha)	=	2.47 acres
1 arroba (@)	=	11.5 kilograms
1 quintal (qq)	=	45.3 kilograms
1 gallon (gl)	=	3.785 litres (l)

Acronyms and abbreviations

AfDB	Africa Development Bank
ANR	Assisted natural regeneration
ANSAT	*Agence nationale de sécurité alimentaire du Togo* (National Food Security Agency of Togo)
APO	Agricultural Professional Organization
BID	Bank for Investment and Development (ECOWAS)
BOAD	West Africa Development Bank
CAADP	Comprehensive Africa Agriculture Development Programme
CC	Climate Change
COD-PADAT	*Coordination Opérationnelle Déléguée* (PADAT Delegated Operational Coordination Unit)
CWIQ	Core Welfare Indicators Questionnaire
DAER	*Direction de l'aménagement et de l'équipement rural* (Directorate for Rural Development and Equipment)
DGSCN	*Direction générale de la statistique et de la comptabilité nationale* (General Directorate of Statistics and National Accounts)
DPCA	*Direction de la planification et de la coopération agricole* (Directorate of Planning and Agricultural Cooperation)
DRAEP	*Direction régionale de l'agriculture, de l'élevage et de la pisciculture* (Regional Directorate of Agriculture, Livestock and Fish Farming)
DSID	*Direction des statistiques agricoles, de l'informatique et de la documentation* (Directorate of Agricultural Statistics, Information and Documentation)
DSRP	*Document de Stratégie de Réduction de la pauvreté (Poverty Reduction Strategy Paper)*
ECOWAS	Economic Community of West African States
ENRM	Environment and natural resources management
FNC	First National Communication
GAFSP	Global Agriculture and Food Security Program
GDP	Gross domestic product
GDT	Sustainable land management
GEF	Global Environment Facility
GoT	Government of Togo
IAA	Integrated Aquaculture and Agriculture
ICAT	*Institut de Conseil Agricole du Togo* (Togo Extension National Services)
IDLM	Integrated Disaster and Land Management
IEC	Information, Education, Communication
IGA	Income-generating activity
IPPM	Integrated production and pest management
ISFM	Integrated soil fertility management
ITRA	*Institut togolais de recherche agronomique* (Togolese Institute of Agronomical Research)
LDCF	Least Developed Country Fund
M&E	Monitoring and evaluation
MAEP	Ministry of Agriculture, Livestock and Fisheries
MDG	Millennium Development Goal
MDB	Ministry of Grassroots Development, Crafts, Youth, and Youth Employment
MDMAEPIR	Delegated Ministry to the Ministry of Agriculture, Livestock, and Fisheries in charge of Rural Infrastructure
MEAHV	Ministry of Water, Sanitation and Village Water Supply
MERF	Ministry of Environment and Forest Resources

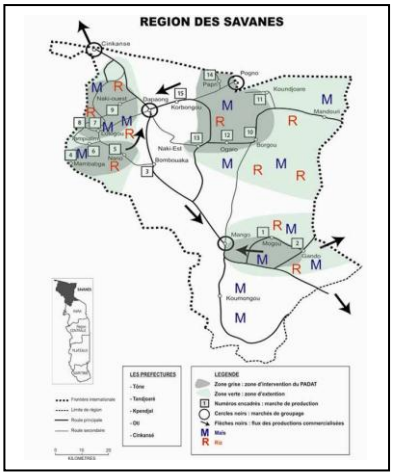
MFI	Microfinance institution
NAPA	National Adaptation Programme of Action
NEPAD	New Partnership for Africa's Development
NGO	Non-governmental organizations
PADAT	Project to Support Agricultural Development in Togo
PASA	*Projet d'Appui au Secteur Agricole* (Project to Support the Agricultural Sector)
PNASA	*Projet national d'appui aux services agricoles* (National Agricultural Services Project)
PNSA	*Programme National de Sécurité Alimentaire* (National Food Security Programme)
PNIASA	*Programme National d'Investissements Agricoles et de Sécurité alimentaire* (Togo National Investment Program for Agricultural Development and Food Security)
PNIERN	*Programme national d'investissements pour l'ERN* (National Environment and Natural Resources Investment Programme)
PO	Producer Organization
RC	Regional Coordination
RIMS	Result and Impact Management System
SCCF	Special Climate Change Fund
SLFT	Specialized Livestock and Fishing Technicians
SLM	Sustainable Land Management
SNCCC	Second National Communication on Climate Change
UEMOA	*Union économique et monétaire ouest africain* (West African Economic and Monetary Union)
UNCDF	United Nations Capital Development Fund
WAAPP	West African Agriculture Productivity Program
WFP	World Food Programme
WSC	Water and soil conservation

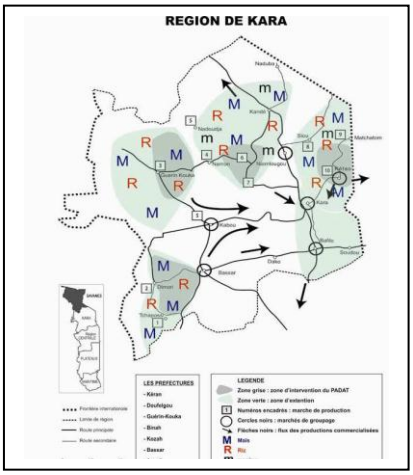
GOVERNMENT OF TOGO

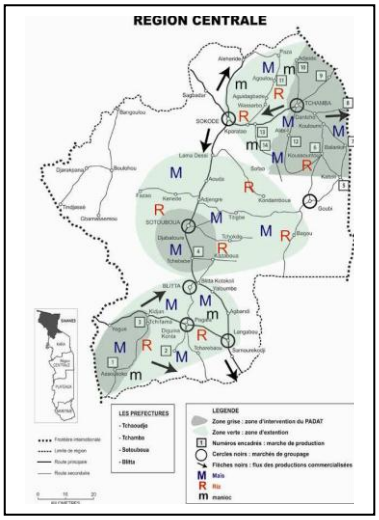
Fiscal year

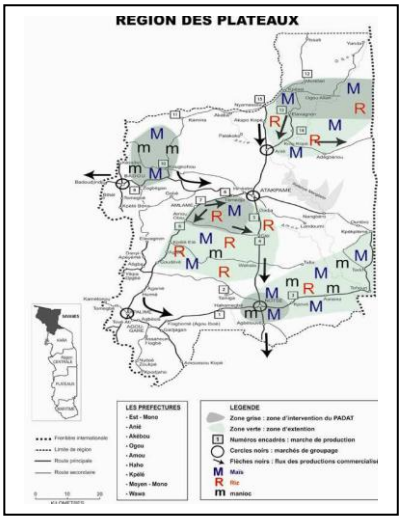
1 January – 31 December

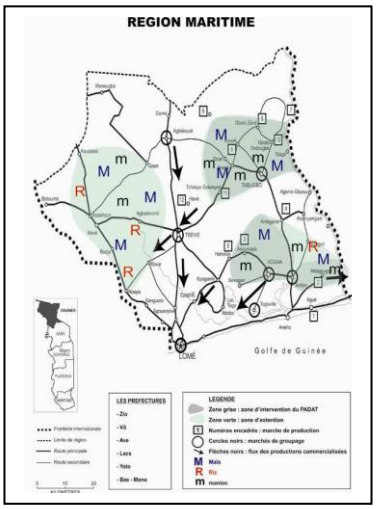
TOGO
ADAPTING AGRICULTURE PRODUCTION TO CLIMATE CHANGE IN TOGO (ADAPT PROJECT)











MAP 1 – ADAPT PROJECT AREA

PROJECT DOCUMENT

Executive Summary

The formulation of the Support Project for the Agricultural Development in Togo (PADAT) took place in July 2010 and fits into the logic of relaunching cooperation between the International Fund for Agricultural Development (IFAD) and the Government of Togo as a result of (i) the adoption of the Togo's Poverty Reduction Strategy Paper and the National Program of agricultural investment and food security (PNIASA), and (ii) the guidance of the IFAD country's strategic opportunities program (COSOP) prepared in July 2009. Yet, PADAT activities do not take into account additional costs caused by the impacts of climate change. In particular, the project does not seem to consider that a decrease in agricultural production is linked to increased climate variability. This implies the need to expand the scope of activities in the business as usual scenario up to integrate climate change risks and effects. The costs to support such additional activities are not taken into account in the design of PADAT.

Adapting Agriculture Production to Climate Change in Togo (ADAPT) is a joint initiative of Togo and IFAD supported by The GEF/Least Developed Countries Fund (LDCF) aimed at increasing the scope of PADAT by rendering its activities less vulnerable to climate change and therefore more sustainable over time. That is, in terms of targetting: (i) to contribute to integrating and disseminating knowledge on climate change at the local and national levels (rural organizations); (ii) to support the integration of tools as to adapt the selected agricultural production systems (maize, rice and cassava); (iii) to diversify activities in order to improve agriculture producers' resilience through integrated crop, livestock and fish farming systems. This will contribute to achieving the objective of rendering the crop yields resilient to climate change and to mitigate the impact of climate change on food production. Finally, the IFAD/LDCF intervention will contribute to creating the capacity to respond to and monitor the impact of climate change at the national level, as well as raise awareness on climate change among local communities.

The main objective of ADAPT will be to reduce the impact of climate change on the vulnerable rural groups, as well as on the essential natural resources for supporting agricultural production and increasing food security.

The proposed project is divided into four components integrating different NAPA (the National Adaptation Programme of Action) priorities of Togo: (i) integrating adaptation to climate change tools within agricultural production systems; (ii) adapting vulnerable agricultural production systems to current and future climate impacts; (ii) provision of information, education and communication (IEC) on climate change; and (iv) project management, monitoring and evaluation.

The socio-economic benefits will mainly be realized by women and youth, who represent around 50 to 60 per cent of vulnerable small-scale producers and who farm a surface area of 0.5 to 1 ha. The project will be completely aligned with the PADAT gender strategy, which is based on the national policy for gender equity and equality, and with IFAD's Action Plan on the integration of gender equity issues. The gender equity strategy will be participatory and inclusive. It will aim to ensure that the target groups (men and women) have equal access to project resources, activities and benefits. It will focus on the following elements: (i) facilitating access of women and youth to support and capacity-building activities, and responding to their individual needs; (ii) encouraging their participation in all the collaboration and decision-making platforms; and (iii) supporting the income-generating activities (IGAs) promoted by women and youth by investing in processing/conservation technologies in order to reduce their work load and to improve the quality of end products for a better added-value.

The adaptation expected benefits from ADAPT are: (i) an improvement in the capacity of small-scale farmers to face growing climate variability; (ii) an improvement in the capacity of monitoring climate variability and its impacts on agriculture; (iii) a better resilience of production systems; and (iv) a strengthened sustainable management of natural resources by the key actors.

PART I. ANALYSIS OF THE INITIAL SITUATION

1.1. General context

Location. Togo is located in West Africa at latitude of 6°-11° N and longitude of 0°-1° 50' E. It has an estimated surface area of 56 600 km². It is a 650-km long narrow strip with a coast of around 50 km; its greatest width is 150 km. This configuration explains the great geographical, climatic, biological, economic and human diversity. Togo borders Ghana to the west, Benin to the east, the Atlantic Ocean to the south, and Burkina Faso to the north.

With respect to its **geographical features**, the territory of Togo is part of the West African flatlands consisting of primary rocks supporting relatively recent sedimentary layers, and as such, does not have very defined topography. The Togo Mountains that make up the main part of a larger chain of the Atakora wrap the country from southwest to northeast. The typical landscape consists of deep and narrow valleys that take the form of plateaux. In the extreme north of the country, a vast eastern plain, drained by the Oti River and its tributaries, extends between 9°20 and 11° N. There is an eastern plain from south to north that continues south through the plateau of *Terre de Barre*, which overlooks the lagoon area and covers over two-thirds of the Maritime Region. The plateau of the *Terre de Barre* is deeply cut diagonally by the Lama Depression and wide valleys of the Mono River and the Zio and Haho Rivers. The coastline consists of a lagoon area and a coastal plain. The lagoon area, whose altitude in places is below the sea level, has a discontinuous water body. The low and sandy coastal plain has low bluffs in places due to coastal erosion.

Population. The population of Togo was estimated at 6.191 million in 2011, growing at 2.7 per cent annually. Almost 75 per cent of the active population of Togo is employed in agriculture, a sector that represents over 40 per cent of the gross domestic product (GDP). The population density increased from 48 inhabitants per km^2 in 1981 to 108 inhabitants in 2010, i.e. by 2.28 times in 29 years. The age breakdown of the population shows that: (i) 60 per cent of the population are under 25 years old; (ii) 42 per cent are under 15 years old; (iii) 54 per cent are 15-65 and are potentially active; and (iv) elderly people represent 4 per cent.

1.1.1. Biophysical context

Bioclimate. According to PNIERN, National Environment and Natural Resources Investment Programme *(Programme national d'investissements pour l'Environnement et des Ressources Naturelles)* 2010, Togo has a contrasting climate, with diversified soils and distinct ecological areas. It benefits from an inter-tropical climate, which varies considerably in the southern regions (with four seasons) to the northern regions (with two seasons). The average rainfall over the last 20 years is 1,100 mm per year, but its spatial distribution is highly uneven at the national level (see Table 1). There are, therefore, two different rainfall patterns:

- The tropical Sudanian system in the north, with a rainy season from May to October and a dry season from November to April. In this area, the annual rainfall fluctuates from 900 to 1,100 mm, and the plant growth period is under 175 days;
- The Guinean tropical systems in the south characterized by two dry seasons and two rainy seasons of unequal duration. The average annual rainfall ranges from 1 000 to 1 600 mm.

Table 1. Climate factors: average annual values (1980-2006)

Climate parameters		Maritime Region	Plateaux Region	Centrale Region	Kara Region	Savanna Region	Togo Total
Precipitation	Depth (mm)	776	1 292	1 315	1 347	1 026	1 151
	No. of days	78	110	115	113	82	100
Temperature	Minimum	24.1	22.3	20.9	21.7	22.7	22.3
	Maximum	31.4	32.8	32.6	33.8	35.3	33.2
	Average	27.7	27.6	26.8	27.7	29.0	27.8
Evaporation (mm)		161	155	159	168	218	172
Relative humidity (%)		81	72	67	64	59	69

Source: *Direction Générale de la Météorologie Nationale (DGMN)*

The following observations can be drawn from Table 1:

- Togo has an average of 1,151 mm of rainfall per year, with a slight inter-regional variation. Contrary to popular opinion, according to the data in Table 1, it would rain more in the Centrale Region and in Kara Region than in the other three regions and the Savanna Region would record over 1 026 mm of rainfall and over a greater number of days (82 days) than the Maritime Region (MR), with 776 mm in 78 days.
- The average temperatures range from 27°C (Centrale Region) to 29°C (Savanna Region). The Centrale Region appears to be relatively the coolest in Togo.
- Evaporation is relatively higher in the north (168 mm in the Kara Region and 218 mm in the Savanna Region) than in the centre (159 mm) and in the south (155 mm in the Plateaux Region and 161 mm in the Maritime Region).
- The south seems relatively more humid (81 per cent in the Maritime Region and 72 per cent in the Plateaux Region) than the centre and the north.

Climate change in Togo. In Togo, manifestations of climate change observed over the last 37 years (from 1961 to 1997) are as follows: (MERF, 2009; MERF, 2010; MERF, 2011):

- A constant increase in temperatures: Over this period, there were increases of 0.5°C to 0.8°C in the Maritime Region and the Savanna Region, respectively;
- An overall negative rainfall trend: reductions of 3.5, 2.75 and 2.22 mm/year, for the Maritime Region, the Plateau Region and the Savanna Region, respectively;
- Increasingly late rainfalls that stop too early: the number of rain days of the regions is reduced. In the Maritime, Plateaux and the Savanna Regions, the reduction was 14.4, 15.9 and 06 days, respectively;
- The irregularity and the poor distribution of the rainfall.
- The increase of temperatures and evapotranspiration;
- The intensity, concentration and large quantity of rainfall over a relatively short period, which causes disastrous floods;
- The increase in the frequency and violence of the winds.

The hydrographic network. Togo is drained by a more or less dense hydrographic network of around 1 780 km, whose main rivers are the Oti, Kéran and Kara, in the north, and the Mono, Haho, Zio and Yoto, in the south. The southern river network flows into Lake Togo, in the country's deep south. Togo shares its main water resources with its neighbouring country, Benin. Indeed, Oti (in the north) originates in the Atakora in Benin where it is called Penjari. The Mono originates in Togo, but flows into the Atlantic Ocean at Grand Popo in Benin, after having formed the natural border between the two countries for 100 km (Atlas JA, 1981, Vanden Bossche and Bernacsek, 1990). The Togo territory is

formed by three main watersheds drained by water course networks, the most important of which are the Oti River and its tributaries (47.7 per cent of the territory), Mono (37.7 per cent), Haho and Zio, and Lake Togo (14.6 per cent). The alternation of seasons (dry and rainy seasons) leads to a more or less marked seasonal variation in the flow of most of the water courses. The water courses are bordered by flood plains or lowlands, which are generally marginal lands that are often unfarmed. The main floodplans are those of the Oti (around 60 000 ha), the Mono, the Zio, and the Haho (Vanden Bossche and Bernacsek, 1990, ITRA, 2003).

There are abundant surface waters, with an average annual volume of 8-12 billion m^3, and almost all of the water resources of the country come from rainfall, whose waters are drained on the surface by four main water courses (Oti, Mono, Haho and Zio). The volume of the groundwater is estimated at over 9 billion m^3 per year, for an estimated annual consumption of 3.4 billion m^3.

Pedology. Togo has several major types of soils that differ in number from one classification to another. According to their very different agricultural capabilities, these soils are characterized in general by a deficiency of organic matter and potassium, above all in the Maritime Region on the *Terres de barre*, and mostly of phosphorus in the northern part of the country. They are affected by erosion and a continuous reduction in their fertility.

The *soils of the offshore bar* are deep and sandy, and highly exposed to coastal erosion. The raw mineral soils from erosion, slightly developed, can be observed in the rugged massive topography. These lands have little agricultural and pastoral possibilities, and should be protected. In any event, the sandy soils that extend over a width of 2 to 5 km along the coast have a very limited agronomic value.

Ferruginous soils cover around 48 per cent of the surface area of the country and show extremely high variability. They are generally gravelly and not very deep on the hills, but become deeper towards the base of the slope. Their planting without organic matter restitution rapidly leads to important decline of their fertility as a consequence of erosion and leaching of mineral elements. These soils are the most threatened by degradation and require urgent protection and restoration actions.

The *weakly ferralitic soils* cover almost 12 per cent of the total surface area of the country and constitute most of the surfaces of the south regions. They are red sandy soils or sandy-loamy soils on the surface, and clayey sand at greater depths. They have very good agronomic and physical qualities, which makes it easy for soil tillage. By contrast, their chemical quality is often mediocre (frequent and major deficiency of potassium; very low level of organic matter and exchange capacity). Nevertheless, these soils have a relatively high improvement potential of productivity.

According to Lévêque (1981), Togo has five major types of soils, which can be grouped into two categories:

- The soils with weak agricultural potential, which include the tropical ferruginous soils, lithosol, vertisol and hydromorphic soils to high clay content;
- Soils with high agricultural potential on which good yields can be obtained: the ferralitic soils.

This contrasting climatic, hydrographic and pedological context corresponds to distinct ecosystems characterized by various plant formations, consisting mainly in dry s, semi-deciduous dense forests, dry dense forests of the plains, dense forests of the mountains, and mangroves in the coastal area. The latter are distributed in five ecological areas from the north to the south (Ern, 1979):

- *Area I or the plains area of the north.* This area extends from the peneplain of Dapaong to the southern edge of the Volta Basin, following approximately the Bendjeli-Kpessidè axis. The Sudanese s dominate this area with, in places, dry Anogeissus forest and gallery forests. Moreover, there are several agro-forestry Parkia biglobosa, Adansonia digitata or Vitellaria paradoxa parklands.

- *Area II or the northern mountain area*. This area is the essential domain of the dense dry Anogesissus leiocarpus or Monotes kesrtingii and uapaca togoensis forest. There are also open Isoberlinia doka and isoberlinia tomentosa forests. This area extends from the Sokodé to the Défalé-Kanté latitude.
- *Area III or central plains area*. The dominant vegetation of this area consists in vast extents of dry Anogeissus leiocarpus forest and a Guinean having a relatively varied flora, dominated by Combretaceae. Also, gallery forests are found along the main water courses.
- *Area IV or southern area of the Togo Mountains*. This is the current semi-deciduous forestland. A Guinea mountain climate prevails in this area. The main species are: Khaya grandifoliola, Antiaris africana, Milicia excelsa, Terminalia superba, Parinari glabra, Erythrophleum suaveolens. There are also s that intersect these forests with species such as Lophira lanceolata Terminalia glaucescens, Pterocarpus erinaceus, Hymenocardia acida, Vitex doniana, etc.
- *Area V, or the coastal area of Togo*. This is characterized by highly degraded plant formations; nevertheless, there are some patches of disparate forest islets and gallery forests. Also, there are halophile or swamp prairies and mangroves. These latter formations are grouped together within some protected areas and forests reserves.

The ecosystem analysis carried out as part of the PNEIRN (2010) reduces these five areas into three sustainable investment pools with the following criteria or differentiation filters: (i) the level of land degradation; (ii) the agricultural production potential; and (iii) biological diversity.

- *priority areas with strong and medium degradation;*
- *lowlands with strong agricultural potential;*
- *the ecosystems rich in flora and fauna and with ecosystemic richness to conserve: (i) land ecosystems (ii) water ecosystems); (iii) river and lake ecosystems; (iv) marine ecosystems; (v) mangroves; and (vi) protected areas: "hotspots" of biodiversity to safeguard.*

Indeed, it is vital to understand these different types of soils because they provide guidance and indications on the nature or volumes of investments to make in order to strengthen the resource's resilience to climate. Today, the sustainable land management (SLM) tools are a great aid for determining, by soil type, the appropriate practices and measures to render the soil resilient to climate change.

1.1.2. Environmental context

Togo is faced with numerous environmental challenges and problems, the main ones being due to the growing demography, poverty, the gap between the consumption of resources and their rate of renewal, and the low consideration of the environmental dimension in the sectoral plans and programmes. The most visible manifestations of environmental degradation are the drying climate, the shrinking forest cover, the extension of erosion in all its forms, the filling of the waterways and water courses that presents serious problems of availability of water resources, and the salinization of the continental terminal water table of the coastal sedimentary basin.

Togo ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and the Kyoto Protocol in 2004. In the UNFCCC register of activities, Togo carried out a First National Communication on Climate Change (FNCCC) in 2011, the National Adaptation Programme of Action (NAPA) in 2008, and the Second National Communication on Climate Change (SNCCC) in 2010.

The FNCCC recognized the need to give priority to developing the implementation of urgent and immediate adaptations measures specific to the agricultural sector in order to respond to the recurring threats posed by the impacts of climate change. NAPA identified the reduction of maize production

following the drought as a major risk to food security in the country. SNCCC presented a more critical situation for all of the economic sectors.

1.1.3. Socio-economic context

The **macro-economic framework** is marked by a gross domestic product (GDP) in current francs that increased from CFAF921.4 billion in 2000 to CFAF1,182.3 billion in 2007, i.e. a 3.6 per cent annual increase. The GDP structure in 2000 in current prices is represented in the following proportion: the primary sector (35.1 per cent), the secondary sector (18.3 per cent), market services sector (28.3 per cent) and the non-market services sector, e.g. non-market gross value added (GVA), value-added tax (VAT) and import duties and taxes (20.2 per cent).

The agricultural sector plays a dominant role in the Togolese economy, accounting for 35.1 per cent of the GDP in 2000, and 38 per cent on average over recent years, and has provided over 20 per cent of export revenue; two thirds of the active population live from it. The main agricultural crops are cereals (maize, sorghum, millet and rice), legumes (groundnut and cowpea), tubers (yam and cassava) and export crops (coffee, cocoa and cotton). In addition to these crops, there is livestock, mainly cattle, goats, sheep, pigs and poultry, as well as fisheries products of marine origin and inland. In 2000, the contribution of the energy sector to the GDP was 12.3 per cent, and 66.9 per cent as compared to the secondary sector. The main energy subsectors in Togo are: hydrocarbons and electricity, biomass energy, and renewable energy. The energy balance shows that the biomass remains the main source of consumed energy (70 to 80 per cent of total final consumption). In 2000, the transportation sector contributed 5.2 per cent of the GDP and 18.5 per cent of the services sector's GDP (SNC, 2010).

Depending mainly on agriculture, which represents 43.5 per cent of GDP, the Togolese economy is characterized by a low rate of growth of 1.1 per cent of GDP in 2008 as compared to 2011 (3,8%). The Togolese population reached 6 191 000 in 2011 (51.3 per cent female and 48.7 per cent male). In 2009, the natural growth rate was 2.84 per cent as compared to the average growth rate of 1.1 per cent over the previous decade, increasing henceforth pressure on the population's demand for well-being (DSRP C, 2009). The continued growth of the population therefore increases needs, in particular, food needs, which require a rapid and effective response. With respect to the issue of poverty in Togo, it would be advisable to deploy all efforts for the poorest populations in general, and the vulnerable populations in particular, in both the rural and urban areas, by optimizing the use of the natural resources.

Poverty. Togo ranks 139 out of 178 in the 2010 Human Development Index (HDI). Almost 62 per cent of the population lives below the poverty threshold at the national level, with a stronger poverty rate in the rural areas. The poverty rate in 2006 was 61.7 per cent, of which 74.3 per cent lived in rural areas and 36.7 per cent in the urban areas. In 2006, the unemployment rate (underemployment included) was estimated at over 33 per cent.

Extreme pressure exerted on the environment and the natural resources is shown through a deforestation assessed at 15,000 ha per year, accelerated soil degradation, siltation of water courses, the rarity of several wildlife species, the increase in pollution and all kinds of negative effects. This situation has accentuated the drop in agricultural productivity and thus of income, and caused precarious living conditions. At present, the country is trapped in a vicious circle of poverty and of the impoverishment of the natural resources.

The two surveys, the Core Welfare Indicators Questionnaire (CWIQ) and the Multiple Indicators Cluster Survey (MICS3) of 2006, showed that over 60 per cent of the Togolese population lives under the poverty threshold, or almost 3 242 257 individuals divided in 535,486 households. The poverty rate is very high in the rural areas where three quarters of the households are poor, compared to two fifths in the urban areas. Rural poverty is effectively very pronounced in the northern regions: Savanna, Centrale and Kara. It is relatively moderate in the Plateaux Region, with a rate of 60.2 per cent, and in the Maritime Region, where 71.1 per cent of the rural population is poor.

Table 2. Incidence of Monetary Poverty in Togo, by region (in %)

		Lomé	Maritime	Plateaux	Centrale	Kara	Savanna	Togo Total
% of the population		19.9	21	23	10.3	13.3	12.5	100
Poverty incidence in %	Urban	24.5	54.3	36.5	60.2	60.9	76.8	36.7
	Rural	__	71.1	60.2	84	80	92.4	74.3
	Total	24.5	69.4	56.2	77.7	75	90	61.7
Poverty contribution		7.9	23.7	20.9	12.9	16.2	18.4	100

Source: Direction générale de la statistique et de la comptabilité nationale (DGSCN); Profil de la pauvreté 2006 (determined by the CWIQ survey)

Linked to production and agricultural revenue, the purchase power of the rural populations has gradually weakened with the significant reduction of food crop products that has been recorded since 1996. Added to this massive poverty is an unprecedented rise in vulnerability, correlated to exogenous shocks, such as floods in 2007 and 2009. With respect to the poverty situation in Togo, it seems improbable that the objectives of poverty reduction, including the fight against hunger, disease, illiteracy, environmental degradation and discrimination against women, as set in the UNDP's Millennium Development Goals (MDGs), would be reached by 2015. The urgency of an intervention to mitigate the impacts of this phenomenon has directed short-term efforts and priorities in relaunching agricultural production to ensure food security of the country.

Rural poverty. The analysis of poverty in Togo shows disparities. The Maritime Region (including the Lomé-Gulf) and the Plateaux Region, which are more urban and have a relatively low incidence of poverty, and the Savanna, Centrale and Kara Regions, which are more rural, have a high incidence of poverty (source: Appendix 1 Map on Poverty per Prefecture – DSRP-C, 2009). These latter regions alone share the ten poorest prefectures in Togo. These disparities lead to a movement of the population from north to south, and from rural to urban areas. In terms of demography, in the Maritime Region (including Lomé-Gulf) and the Plateaux Region, which only constitute 40 per cent of the national territory, almost 67 per cent of the national population is concentrated. The direct consequence of this situation is that the potential of the northern regions (Savanna and Centrale) is not optimized, nor is that of the rural areas. Moreover, the demographic pressure caused by this movement contributes to a gradual pauperization of the southern regions and of urban areas.

Rural poverty and food insecurity. The World Food Programme (WFP) study carried out in 2007 showed that almost 47 per cent of the populations in the peri-urban and rural areas suffer from food insecurity and are incapable of meeting their basic food needs during the year. Twenty per cent of them are currently in a critical situation, and slightly over one third of households (37 per cent) are highly vulnerable to food insecurity, i.e. they already suffer from critical food insecurity, with relatively low domestic expenditures, an overall income that is dependent on the main income (derived from little diversification of income) and insufficient own resources. These are the households that have recovered the least from the consequences of different climatic fluctuations. This food insecurity problem is closely linked to poverty, notably in the rural areas. It is also marked by an inadequate diet as well as poor hygiene conditions.

The Savanna Region, whose capital is Dapaong and which has five prefectures, is by far the poorest region of Togo, with a poverty incidence estimated at over 90 per cent. Kpendjal is the prefecture where

poverty is felt the most, affecting 96.5 per cent of the population, or 90.5 per cent of households. The Tandjouaré Prefecture is the second poorest, with a poverty incidence of 90.3 per cent, or 82.8 per cent of households, followed closely by the Oti Prefecture, with a poverty incidence of 89.3 per cent, or 75.1 per cent of households. The fourth poorest, Tône Prefecture, has a poverty incidence of 99.4 per cent, or 79.6 per cent of households. The population of the Savanna Region, with its 628 000 inhabitants, an area of 8 470 km² (or 15 per cent of the national territory) and a population density of 74.1 inhabitants per km², accounts for 11.2 per cent of the total population of Togo.

The Centrale Region, whose capital is Sokodé and which has five prefectures, is the second poorest region of Togo (77.7 per cent) with, notably, Sotouboua Prefecture, with a poverty incidence of 85.2 per cent, Tchamba Prefecture, with a poverty incidence of 80.2 per cent, and Blitta Prefecture, with a poverty incidence of 79.1 per cent. The Prefectures of Tchaoudjo and Sotouboua, taking into consideration demographic weight, contribute the most to poverty in the Centrale Region, at almost 29 per cent each. The Prefecture of Tchamba, with only 18.1 per cent of the population, is the least poor. With 509 300 inhabitants in an area of 13 317 km^2 (or 23 per cent of the national territory) and a population density of 38.2 inhabitants per km² the population of the Centrale Region accounts for 9.1 per cent of the total population of Togo.

The Kara Region, whose capital is Kara and which has seven prefectures and is the third poorest region of Togo, with a poverty incidence of 75 per cent, which includes Binah Prefecture, which is by far the poorest, with a poverty incidence of 87.1 per cent, followed by Basara Prefecture (81.3 per cent), Kéran Prefecture (80.5 per cent), Doufelgou Prefecture (76.7 per cent) and Dankpen Prefecture (76.2 per cent). The Assoli Prefecture, with a poverty incidence of 73.4 per cent and Kozah Prefecture, with at 65.9 per cent, are the least poor of the region. The population of Kara Region, with its 689 000 inhabitants, an area of 11 738 km² (or 21 per cent of the national territory), and a population density of 56.7 inhabitants per km², accounts for 12.3 per cent of the total population of Togo.

1.1.4. Technical context

In order to ensure consistency with the implementation of PNIASA and its component "sustainable management of natural resources,", the investment priorities established by the PNIERN focus on amplifying best practices of GERN. The diagnostic study carried out on GERN techniques in Togo sets the following non-exhaustive list:

- practices of water and soil conservation (WSC)/soil restoration and protection (SRP)(stone barriers or stone walls, composting, terrace farming, and agroforestry using the *toungya*[1] approach);
- sustainable crop practices such as: the choice of varieties and types of crops according to the soil capability and their adaptation to the climate; crop rotation; integrated soil fertility management; lowlands development; large-scale irrigation; integrated production and pest management (IPPM);
- the sustainable pastoral practices, such as: respecting the load capacity according to the pastureland host areas; planting and managing the forage crops (choice of species) and the lowlands crops; developing the pastoral areas (including managing pastureland and water points; reseeding; creating firewalls, etc.); respecting the schedule for herding animals in the crop areas; and defining and managing migration corridors, and transhumance routes and polycropping; integrated livestock farming;
- sustainable fishing practices with the development of sustainable fish farming and of water areas;
- practices in sustainable forest management through: compliance to forest legislation and regulations; the protection of forests against fires; reforestation and small-scale agro-forestry; management of traditional agroforestry systems (e.g. Park Systems in Karité, Néré, Vitellaria); riverbank protection through reforestation/rehabilitation of gallery forests; the development and

[1] Also taungya refers to a type of association of annual crops and tree fairly widespread in Southeast Asia - which is one of the most promising strategies for sustainable land use in Vietnam, has the largest proportion of the total area of the Ha Hoa district.

management of natural forests; wildlife management and protection; the recognition of the value of sacred community forests; the conservation and protection of medicinal resources (plants, animals, rocks, etc.); assisted natural regeneration (ANR) for the restoration of degraded lands; and the reforestation of mangroves.

The same study indicated that the production of organic matter, the fight against bush fires and reforestation are well-known techniques, but their scope should be increased with improved strategies and investments.

Moreover, some practices such as forest development plans, reforestation and anti-erosion schemes are relatively costly techniques, but become profitable in the long term.

Finally, IPPM is a technique in full expansion in some sub-Saharan countries and should be promoted, because it has proven to be successful in reducing the consumption of chemical fertilizers and pesticides.

However, in contrast to Sahelian countries, ANR and local agreements, which are not costly techniques, do not exist in Togo. It would therefore be advisable to study the possibility of developing them when the decentralization process will be in effect.

Added to these ENRM techniques are new innovative experiences in Togo (e.g. direct seeding with hand jab planters into the mulch with no tillage) should be capitalized on through the Adapting Agriculture Production in Togo (ADAPT) project.

1.1.5. Institutional framework

A mapping of the main stakeholders in the agricultural sector was drawn. These stakeholders are the MAEP with its Central Directorates, Regional Directorates (DRAEP) and Prefectoral Directorates (DPAEP) and its autonomous institutions, and since the end of 2010, its Ministry of Agriculture, Livestock, Fisheries and Rural Infrastructure (MDMAEPIR), which is the leading institution for public investments in agriculture.

The other state partner bodies for environmental and natural resources management and climate change adaptation are:

i. The Ministry of Environment and Forestry Resources (MERF), the main mobilizer of funds earmarked for climate change adaptation (LDCF, GEF, Adaptation Funds AF, etc.) for the country;
ii. The Ministry of Water, Sanitation and Village Water Supply (MEAHV);
iii. The Ministry of Grassroots Development, Crafts, Youth, and Youth Employment (MDB);
iv. The Ministry of the Economy and Finance (MEF);
v. The Ministry of Planning, Development and Land Use Planning (MPDAT).

The **gender approach**. Women play an essential role in all processes of production (weeding, seeding, harvesting, transportation, storage) and in food security (processing and marketing of products). Despite their important contribution to agricultural production, they only draw 10 per cent of the monetary revenue from the fruit of their labour (*Document de politique nationale de population*, 1998). The reasons for this situation are due to the inequality of access to the factors and means of production (land, inputs, equipment, support and credit), to control of the resources, and to economic and social opportunities. Consequently, it is difficult for them to obtain equal social redistribution. This applies to youth, who are a marginalized segment of the population and who are particularly vulnerable to poverty. For those who work with their parents in family farming, they only have rights to individual fields or activities separate from that of their parents when they marry and start a family. On the contrary, young members of groups can be allocated with plots of land, and the sale of production will essentially be used to meet the vital needs of the family.

Civil society. Together with these state structures, there are a number of non-governmental actors, whose capacities are generally, at the moment, limited in terms of human and technical, financial, logistics and management resources. These bodies are: (i) the Agricultural Professional Organizations (APOs); (ii) the civil society organizations, NGOs or apex bodies such as the Union of NGOs of Togo (UONGTO), the National Federation of NGOs of Togo (FONGTO) and associations; (iii) the microfinance institutions (MFIs); (iv) the private sector, (v) the Research Centres, etc.; (vi) the unions, etc.); and (vii) the Chambers of Agriculture, the territorial authorities and the traditional chiefs. Those working for the promotion of gender are still relatively weak, notably the *Conseil consultatif de la société civile* (CCOST, Advisory Board of Civil Society), *Conseil consultatif des femmes du Togo* (CCoFT, Advisory Board of Women of Togo) and *Women in Law and Development in Africa* (WiLDAF-Togo), which are facing problems due to inadequate institutional, technical and financial capacities. Generally, there is a lack of national gender expertise, although this does not apply to all the associations.

1.1.6. Strategic context

From 1992 to date, Togo has had a large number of political and strategic options and agricultural development programmes, which have aimed to improve food security and poverty reduction. These options were gradually inspired from the policy and strategic directions adopted at the sub-regional and regional levels. In April 2007, with the support of United Nations Development Programme (UNDP), Togo developed its National Development Strategy based on the MDGs, which now serves as an anchor to the Poverty Reduction Strategies Paper (DSRP-I drafted in 2008 and DSRP-C, drafted in 2009 with the support of the International Monetary Fund). The DSRP-C is the multisector reference framework for all interventions at the national level. A number of agricultural guidance documents were consequently produced: *Programme National de Sécurité Alimentaire* (PNSA, National Food Security Programme) in 2007-2008; *Stratégie de Relance de la Production Agricole* in July 2008; *Plan Intérimaire d'Actions Prioritaires* 2008-2010 in September 2008; and *Programme National d'Investissement Agricole* (PNIA, National Investment Programe for Agriculture) in April 2009. In July 2009, Togo became the first West African country and the second sub-Saharan country (after Rwanda) to sign its Comprehensive Africa Agriculture Development Programme (CAADP) Compact. The CAADP, promoted by NEPAD of the African Union, encourages the African governments to increase the portion of their national budget dedicated to agriculture to at least 10 per cent in order to attain an agricultural growth of at least 6 per cent per year (Maputo Declaration, 2003). PNIASA, which covers the 2010-2015 period, now constitutes the sole reference framework for the mobilization of resources, both national and external, and for the intervention of different actors in the agricultural sector. Its funding led to a Compact between Togo and the technical and financial partners (TFPs) signed in July 2009, and extended through the signing of a partnership framework in February 2010. Since this cornerstone of the PNIASA is the improvement of productivity and producers' revenue, it aims to stimulate the production of food crops, export crops, livestock farming and fishing through the following priority measures: (i) strengthening the legal and institutional framework; (ii) structuring the rural areas and improving expertise in the agricultural sectors; and (ii) sustainably improving access to productive resources and markets.

PNIASA is organized in five intervention axes or sub-programmes, each having a certain number of components. Concretely, it began through the launching of the following three major projects; These three projects, for a total amount of US$112.5 million, or around CFAF50 billion, are the initiatives that have already been launched to provide the ADAPT project under formulation with a synergy and a baseline:

- PADAT, for an overall amount of US$63.5, approved in December 2010 and co-financed by IFAD (US$13.5), Global Agriculture and Food Security Program (GAFSP, US$20 million), the West African Development Bank (BOAD, US$15 million) and the Bank for Investment and Development

(BID) of the Economic Community of West African States (ECOWAS, US$15 million) will provide an additional support to food production and to the development of rural infrastructures.

- Projet d'Appui au Secteur Agricole (PASA, Project to Support the Agricultural Sector),9 supported by the World Bank in April 2011 for an overall amount of US$37 million, funded by International Development Association (IDA) grant (US$9 million), GAFSP (US$19 million) and Fonds Mondial de Réponse à la Crise Alimentaire (GFRP, US$9 million); this project aims at promoting strategic food crops, export crops, and continental fish production, relaunching the livestock farming subsector and supporting capacity building and sectoral coordination;
- West African Agricultural Productivity Program (WAAPP),10 approved by the World Bank in March 2011 with the mobilization of a US$12 million IDA grant for supporting agricultural research and extension.

Togo also took the initiative to join the platform of the Terrafrica partnership to strengthen its capacities and set up a favourable context for the support of PNIASA through a better integration of the environment and the natural resources into agricultural sector activities. Here is where PNIERN of Togo began, whose objective is to strengthen, design, target, sequence, and monitor investments, and to improve the current management of the environment and the natural resources in order to create a more effective impact and a better cost-efficiency ratio of ENRM in Togo. Finally, PNIERN is an operational response to overcome environmental and socio-economic challenges that the country faces. Through its action, it is possible to combat poverty by ensuring economic and social development, combat desertification, conserve biodiversity and adapt to climate change. It will, finally, contribute towards developing agriculture through its support to the implementation of the PNIASA (national level of the CAADP of NEPAD).

1.2. Vulnerability of the sectors to climate change

Vulnerability to climate change was analysed by the SNCCC (2010) for the energy, water resources, agriculture, human settlements and health sectors, as well as for the coastal area, due to their degree of sensitivity.

The **threats** and manifestations of this sector's vulnerability are as follows:

- **Energy sector**. On the basis of an analysis of results of the climate scenarios obtained with MAGIC-SCHENGEN models (SNC-CC-2010) and the cross-checking between the high and low values of the climate parameters, it was possible to create three specific scenarios and to deduce the "extreme scenarios". In taking this analysis further, it has been deduced that, for the energy biomass, by 2025, the natural formations and plantations will experience a significant reduction in productivity. This drop could vary between 18.3 and 27 per cent in the worst case scenario (upper scenario). The situation will tend towards scenarios that could be qualified as "extreme" before the 2050s. The projections show that the drop could reach 46.4 per cent for the extreme scenario, or almost half of the potential. The classification of regions on the basis of total vulnerability indices ranks the Centrale Region as the most vulnerable and the Plateaux region as the least. Concerning hydro-electricity, in the Oti Basin in the north of the country, there will be an increase in rainfall of 120 mm by 2025. In the other regions, the reduction of rainfall will affect the hydro-electric potential by 7.2 per cent. A larger deficit in hydro-electric energy will be observed, which could vary between 27 and 36 per cent by 2050. In the field of renewable energies, the increase of solar energy will lead to a growth in the yield of photovoltaic installations, which constitute, de facto, a positive impact on the solar energy potential.
- **Water resources sector**. Vulnerability to the impacts of climate change is manifested by an overexploitation of the aquifers in the Lomé area, which notably results in an increase in water salinity in the pumped aquifers. The climate change also leads to a trend towards a significant drop

in the run-off and in the level of the groundwater. A simulation of a reduction of water potential of 5 per cent by 2025 and 10 per cent by 2050 would lead to a deficit, which would be accentuated in the same proportion in all the economic regions of the country. The occurrence of main risks ─ floods, a rise in temperatures, drought and/or rainfall deficit ─ attest to the vulnerability of the water resources to climate change impacts. This vulnerability is manifested in each of the following water resources in Togo: the surface waters (rivers and dam reservoirs), the wetlands and the lowlands, the groundwaters from the basement, and groundwaters from the coastal sedimentary basin.

- **Agriculture sector.** In the coffee and cocoa areas, climate change leads to an upsurge of harmful pests such as mirids and variegated grasshoppers, and the emergence of diseases, the main ones being the necrotic wilting of coffee trees, and the swollen shoot virus and brown rot of the cocoa tree. The cereals (maize and sorghum specifically), which constitute the staple food of the Togolese population, are particularly vulnerable due to their strong sensitivity to water stress, above all at the flowering stage. Therefore, the impact of water deficit on the crops can cause a loss in productivity, leading to a reduction of the food availability, which will be accompanied a surge in prices. Moreover, excess of rain will lead to the proliferation of parasitical micro-organism parasites and pests in the flooded areas; also, in these areas, there will be a growth in fungi and specific bacteria, which will attack the root system of the plants, leading to a wilting of the flooded crops.

- **Livestock farming sector.** In the livestock farming sector, water deficit and climate drying leads to a drying up of livestock water points, degradation of pastureland, the death of livestock, reduced income for the pastoralists and agropastoralists, and a rural exodus. The abundance of rain will favour the upsurge of some diseases, notably avian influenza, bovine trypanosomiasis, in particular, in zebus.

- **Fishing sector**. Climate change will strongly upset the productivity cycles of the fish, resulting in salinization of fresh water and the death of fry; in addition, the increase in the temperature of the warm sea water layer (from 25 to 29°C) could cause frequent migration of some deep-sea fish species and a reduction in the volume of pelagic resources.

- **Human settlements sector**. Precarious housing and shelters located in the low-altitude areas are mostly destroyed following floods, causing material losses and at times even of human lives. In the mountain areas, erosion caused by strong rainfalls uproots the foundations of homes, and landslides carry off some homes. The floods and the violent winds also have serious impacts on the road infrastructures and the socio-economic facilities, sometimes leading to the isolation of the local communities. In addition, with strong drought and heat, the living conditions are difficult for the poor populations while reducing the comfort of the whealthy.

- **Health care sector**. Vector-borne diseases such as malaria, which affects children 0-5 years old and pregnant women to a much greater extent, are exacerbated by the increasingly frequent floods. Diseases such as diarrhea and cholera are also aggravated by the frequency of floods. Drought and strong heat waves are responsible for meningitis, cardio-vascular and cerebrovascular diseases, and some respiratory diseases (bronchitis, pneumonia, asthmas, etc.), which affect people of all ages, but mainly the elderly and children. Regarding disease, climate risks can have the following impacts: (i) malaria ─ the number of people affected could reach 1,300,000 by 2025 and 2,200,000 by 2050; (ii) cholera could increase and affect 8,000 individuals by 2025 and 16,000 individuals by 2050; and (iii) respiratory, cerebrospinal and cerebro-vascular diseases will intensify due to climate global warming.

- **The coastal ecosystem.** The coastal area is vulnerable to severe rainfalls; indeed, the soils are prone to water logging, run-off and drainage. The area is the receptacle basin for the water systems of three hydrographic basins supported by the rains of three seasons (two in the south and one season in the north of the country). By 2030, the rainfall forecast, i.e. a 10 per cent increase, will lead to a

flooding situation in the entire coastal plain and violent run-off that is sufficient enough to transport sediments from the Mono and Volta Rivers to increase the littoral cells of the longshore drifts. The floods resulting from these rains would affect large areas, including 20 to 35 per cent of the areas that are usually not flooded, mainly the area of two barriers (the lower town of Lomé between the lagoon and the sea) where 40 to 50 per cent of the populations live and 80 per cent of the industrial and hotel infrastructures and facilities are located, and would have major consequences. In addition, the coastal erosion together with a fast retreating beach, 12 m/year, will mobilize volumes of sand in the sediment cells.

- **Predicted climate scenarios for 2025, 2050 and 2100**. The impacts would cause a reduction in the levels of production of the main crops by 5, 7 and 10 per cent, respectively. The losses of agricultural revenue for the small-scale producers resulting from the scenarios are therefore: maize – CFAF6.16 billion in 2025, CFAF23 billion in 2050, and CFAF87.6 billion in 2100; and rice – CFAF1.4 billion in 2025, CFAF9.1 billion in 2050, and CFAF58.5 billion in 2100.

- **The risks of disasters.** In Togo, according to the geographic region, different levels of risk associated with flooding and soil and coastal erosion can be observed. The north is characterized by sparse s. The centre is dominated by the Togo Mountains, which stretches across the south-west to north-east. In the south, shrub s and patches of community forests of the coastal area consist of lagoons and extensive marshland. The rural and urban areas of Togo are vulnerable to floods. The mid-north of the country shares the Volta River Basin with Ghana and Burkina Faso, and is vulnerable to the decisions on water resources management taken in these countries. The regions along the coast, such as the capital Lomé, are subject to coastal floods due to the high levels of coastal erosion. Togo experiences floods almost every year; however, from 1983 to 2010, it experienced ten major floods, and from 2007 to 2011, floods were particularly generalized and devastating, which resulted in the destruction of infrastructures, croplands and losses of human lives. The climate changes could probably aggravate this flooding trend. In 2008, around 11 688 ha of cultivated land were swept away by the waters, four schools and 11 main bridges were destroyed, and over 300 km of rural roads were seriously damaged. The destruction of the roads and bridges devastated the national economy. The large companies operating in Togo were negatively affected by the surge in transportation costs, which in turn affected state tax revenues. Moreover, Togo lost out on customs fees and entry fees from the landlocked countries, such as Burkina Faso, Mali and Niger, which depend on the Port of Lomé for the importation and exportation of goods. Several rural famers lost an enormous part of their annual revenue, and the affected regions suffered from food deficits. The proliferation of waterborne diseases is a permanent threat when flooding occurs. Accurate figures of damages and losses caused by the floods of 2010 are available from the Assessment of Impacts and Needs of Post-Disaster Reconstruction (PDNA) carried out by the Government with the financial support of the World Bank.

- **Land degradation** affects at least 85 per cent of cultivable land; a critical level has been observed in the Savanna Region, in the west mountainous areas of the Plateaux Region, and in the Maritime Region in the south. According to Brabant *et al*.,[2] 63 per cent of the land is slightly degraded, 21 per cent moderately degraded and 2 per cent seriously degraded. The environmental profile of Togo indicates that the coffee and cocoa plantation on the deforested lands in the south-west rapidly lead to erosion (MERF 2007). Farmers point out the increasing degradation of soils in the cotton-growing regions. In addition to land degradation, there is a loss of protected areas, which threatens the habitats. Togo has a rich biodiversity, including a variety of favourable ecological conditions for the habitats of several plants and animals. The inventories list 3 752 plant species and 3 458 animal

[2] Brabant P, Darracq S, Egué K and V. Simmonneaux, 1996. Togo. État de dégradation des terres résultant des activités humaines. Note explicative de la carte des indices de dégradation. Collection Note Explicative n°112, ORSTOM Ed, Paris, 66 pp.

species. The populations of these species are clearly reduced; some species have disappeared or are under threat of extinction. In 1938, a Decree officially delimited 83 protected areas totalling 810 000 ha, or 14.2 per cent of the national territory. Nevertheless, during the period of social unrest in the 1990s, several protected areas were lost. The exploitation of forests and fauna, deforestation, overgrazing, and the development of the agriculture and the human settlements have reduced the integrity of protected areas in such a way that, at present, several protected areas only exist in name. Out of 810 000 ha of initial protected areas, 215 000 ha have been irreversibly lost or their rehabilitation is costly. Togo restructured its Protected Areas system, which currently covers 578,000 ha.

1.3. The causes and impacts of the vulnerability of the sectors (SNCCC, 2010)

The causes and impacts of vulnerability are felt differently in terms of agricultural production and food security. Indeed, the demographic weight heavily influences the market when expressed as needs or demands for cereals and other food productions. It is continually rising because it follows demographic growth. The impact of the other factors, mainly climate, result in a reduced production and thus a reduced supply from the national market; the climate change forecast scenarios foresee, moreover, a reduction in rainfall accompanied by an increase in temperatures. These two factors are partly the source and cause of vulnerability of economic sectors in the medium and long term.

Demographic growth

In Togo, the current population is estimated at 6 million and the annual growth rate is around 2.4 per cent. Accordingly, this population, estimated at 5 465 000 inhabitants in 2007, will reach 6 607 000 inhabitants by 2015, and 8 892 000 inhabitants by 2030. In 2007, 67 per cent of the total population was concentrated in the southern regions (Maritime and Plateaux, together with Lomé), i.e. over 41 per cent of the national territory. These figures, if translated into the demand for cereals and food security in general, exert strong pressure on the market, aggravating the causes of vulnerability.

Climate warming

According to the scenarios, the state of climate change for the projected time horizons were analysed with respect to the variations observed from 1971 to 2000. It emerges that, by 2025, a 1 per cent variation in rainfall will be observed in the north at 11°N to -1.5 per cent in the south at latitude 5°N; the change in the average annual temperature will range from 0.66°C in the south to 0.80°C in the extreme north of the country. By 2050, the temperature variations will range from +1.46°C in the south-west to +1.76°C in the north-east of the country, while there will be a decrease in rainfall in the south of the country (-3%) and an increase in the north of the country (+2%).

By 2075, the temperature variations will be very strong in the north and in the south of the country, and there will be a significant reduction in rainfall in the south, ranging from up to -5 per cent with respect to the 1971-2000 average rainfall. Finally, by 2100, the impact of climate change will be notable throughout the country; climate warming will be felt throughout the country. A reduction in rainfall will be -8 per cent in the south, whereas there will be an increase ranging from +1 to +5 per cent in the extreme north. It emerges from the sectoral studies on Human Settlements and Health, carried out in 2007, that within the framework of developing the NAPA, during the last 45 years, there has been a drop in rainfall and in number of rain days, as well as an increase in temperature. Moreover, the Potential Evapotranspiration/Precipitation Ratio, an aridity index, is also dropping, which shows a trend towards a drying of the climate.

Cereals, which are the staple food of the Togolese population, are particularly vulnerable due to their strong sensitivity to water stress, above all, at the flowering stage. Thus, the impact of water deficit on these crops can cause a reduction in productivity, leading to a reduced supply of food, which will accompany a surge in prices. In the climate scenarios for 2025, 2050 and 2100, the impacts would cause

a reduction in the levels of production of the main crops, by 5, 7 and 10 per cent, respectively. The losses of agricultural income for the small-scale producers resulting from the scenarios are therefore: maize – CFAF6.16 billion in 2025, CFAF23 billion in 2050, and CFAF87.6 billion in 2100; and rice – CFAF1.4 billion in 2025, CFAF9.1 billion in 2050, and CFAF58.5 billion in 2100.

In the livestock farming sector and the fishing sector similar impacts are drawn (see section 1.2 above).

Droughts and strong heat are responsible for meningitis, cardio-vascular and cerebro-vascular diseases and some respiratory diseases (bronchitis, pneumonia, asthma, etc.), which affect people of all ages, but mainly the elderly and children.

Floods. The excess of rain leads to a proliferation of parasitic micro-organisms that attack plants and of pest insects in the flooded areas; also, in these areas, there was a growth in fungi and specific bacteria, which attack the root system of the plants, leading to a wilting of the flooded crops. The heavy rain has promoted the upsurge of some diseases, notably avian influenza, and bovine trypanosomiasis, in particular, zebus. In the Human Settlements and Health sectors, precarious housing and shelters located on the low-altitude areas are mainly destroyed, following floods, causing material losses and at times, losses in human lives. In the Health sector, vector-borne diseases such as malaria and other existing and emerging infectious diseases are observed, which mostly affects children 0-5 years old and pregnant women, and are exacerbated by the increasingly frequent floods. Diseases such as diarrhea and cholera are also aggravated by the frequency of floods.

Coastal erosion. In the mountain areas, erosion caused by strong rainfall sweeps away the foundations of houses, and landslides also uproot some habitats. The coastal erosion together with a fast retreating beach, 12 m/year, will mobilize volumes of sand in the sediment cells. The segment of the 20 km coastline of the littoral cell, from Keta to the Port of Lomé, will experience a hydro-sedimentary dynamic towards the accumulation area of Lomé. The sedimentary transit area, starting from the border, over 3 km, will be marked by progressive erosion. The current conditions of coastal, physical oceanography combined with likely situations (spring tides, storms, rising sea level) will cause, on the 30 km of coast between the Port and Agbodrafo, a retreat calculated at between 160 m and 240 m by 2030.

1.4. Baseline analysis

1.4.1. NAPA and PNIASA context

According to a scenario based on maintaining the status quo, it is clear that, in most sectors, climate change is perceived to be a question of destiny and as being incomprehensible. In this context, the PADAT project was formulated and its activities by their nature advocate the development approach. PADAT is indeed the first step in rendering PNIASA operational, which is the overall framework of action for the agriculture sector in Togo. An external evaluation of PNIASA had highlighted the low consideration of the issue of climate change and sustainable land management. PADAT in fact ignores the fact that climate change will negatively affect the future of agricultural production and therefore increase food insecurity. Indeed, the project aims to increase agricultural productivity of small-scale farmers and improve their food security, and its design does not take into account predictable reductions in productivity associated with climate change. Therefore, neither adaptation nor activities that include the phenomenon and its repercussions for small-scale farmers in Togo have been taken into account. Thus, when analysis excludes climate change, it is obvious that the related data will not be collected, analysed and/or taken into account. This is why the activities proposed in the PADAT concern: (i) technical support to agricultural production ("Quick-Start Operation") for the distribution of kits); (ii) the provision of improved seeds; (iii) techniques for water and soil conservation and the development of lowlands; (iv) pilot activities in agriculture mechanization; and (v) pilot activities in animal traction. While the above mechanisms aim to increase or maximize agricultural productivity and improve food security, they fail to ensure sustainability by neglecting to strengthen the resilience of the sources and

resources of small-scale farmers. Ultimately, PADAT focuses more on the populations that are the most vulnerable to food insecurity rather than those that are the most vulnerable to climate change. Consequently, PADAT is not aligned to NAPA eventhough this food insecurity is induced by climate change impacts. The fact that the impact of climate change has not been taken into account in PADAT design amply justifies the need to expand its scope by resorting to climate change adaptation as promoted by NAPA. This is especially true when all the forecasts show that climate change will aggravate current problems of food security in the country and NAPA was elaborated as a Togo response strategy to reverse and mitigate climate change impacts. Yet, most of the activities identified in the first component of PADAT can be covered by the LDCF intervention as an implementation of Togo's NAPA, given that many of them are similar or complementary to NAPA priorities.

1.4.2. The PADAT project as baseline for ADAPT

PADAT objective and general strategy. The development objective of the PADAT project is to contribute towards improving the food security and incomes of small-scale agricultural producers. This objective will be achieved by improving the targeted small-scale farmers' production and productivity of rice, maize and cassava as well as through the enhancement and marketing of targeted agricultural productions.

Intervention areas. The project has a national scope, but in its implementation will be sequenced in intervention areas covering pockets of poverty where vulnerable small-scale female and male farmers are concentrated.

Target groups. The target group of PADAT is essentially composed of small-scale male and female producers, individually or grouped together within the POs in the three targeted food crops. Two main sub-groups were identified: (i) the vulnerable small-scale producers who farm surface areas from around 0.5 to 1 ha, among which women and youth are classified as being particularly underprivileged; and (ii) the small-scale producers who farm surface areas from 1 to 3 ha.

Principles of intervention. The project is implemented by following these general principles:

- The project relies on a public private /civil society partnership, focusing on the outsourcing of project activities in a contractual, competitive and transparent framework, and on the results of support and advice bodies.
- The intervention is based on the development of a public-private partnership (PPP): the project involves the private sector for the provision of services and for carrying out most of the activities within its field, while the technical services of the state will be redirected to assuming their sovereign roles.
- Activities in outreach, training and the implementation of works are outsourced to the private service providers;
- The project interventions and geographical coverage are sequenced and progressive, and organized in two three-year phases (before and after the mid-term).
- Micro-infrastructure projects on production, storage and marketing are funded at the request of grassroots actors, through producer organizations that provide project management.
- The project relies on the major principle of developing partnerships between, on the one hand, co-financiers, i.e. WAAPP funded by the World Bank and other projects working in the same field, and on the hand, public services outside the MAEP (e.g. the National Directorate of Rural Roads).
- A parallel project is funded by IFAD, BOAD, BID, and the World Bank.
- The strategic coordination of the project by the Secretary-General of the MAEP is supported by a single operational management unit and characterized by:
  - shared by all funding sources;
  - parallel external funding;

- common management manuals (administrative and financial management, implementation, monitoring and evaluation);
- separate designated accounts for each source of funding, and
- a joint and coordinated supervision between members of the alliance.

Project components. The project is organized into two technical components and one coordination/management one, as follows: (i) support to production and productivity; (ii) product enhancement; and (iii) coordination and management:

- *Support to production and productivity component*. This component aims to improve the productivity of targeted agricultural farms planting rice, maize and cassava through: (a) the Quick-Start Operation, which supplies input kits to 50 000 vulnerable people (fertilizer, improved seeds, in particular) to enrich 0.5 ha of maize and 0.25 ha of rice; (b) technical support and assistance for the male and female producer beneficiaries of the kits; (c) organizational and technico-economic training plans for members of 3 000 groups and their apex organizations (whose training modules are joint and cross-cutting and/or specific and directly applicable to the production and post-production chains of the three targeted crops; (d) training and set-up of 100 rural micro-entrepreneurs; and (e) the establishment of small-scale infrastructures (5 000 ha of simple plans for water and soil conservation; 3 000 ha of lowlands small-scale facilities). These actions directly benefit approximately 107 500 farmers.
- *Product enhancement component*. This component aims to improve the income of producers, particularly women, who play a key role downstream production, through the better use of production. Specifically, in the three crops (rice, maize and cassava), it is aimed at: (a) reducing the rate of post-harvest loss and improving the quality of consumer products; and (b) improving labour productivity and reducing the difficulty of the tasks related to post-harvest and processing activities in which women with low incomes are the main actors, through support in setting up storage facilities and purchasing processing equipment.
- *Coordination and management component*. This component aims to create the necessary conditions for the effective implementation of the project in terms of coordination, management, monitoring and evaluation, supervision and knowledge management, as well as supporting the implementation of the sector approach. To achieve this, the project is coordinated by the Secretary General of the MAEP, which, for the daily management activities, relies on a delegated National Coordination unit consisting of national experts and international technical assistants. An international firm is responsible for building the COD (Operational Coordination Unit) of PADAT. The mandate of the specialists from the delegated National Coordination is, inter alia, the training of national counterparts and officials from the central and regional departments to prepare them for assuming their responsibilities in the implementation of the sector approach. To this end, the project finances the services of the international firm, the equipment, the training, specific studies and the operating costs of the delegated National Coordination.

Project phasing. The phasing of the project interventions is organized as follows:

- *Phase 1, from the first to the third year*: PADAT began with the Quick-start Operation throughout the country with the aim of responding to the immediate needs of the most vulnerable male and female producers. At the same time, the project concentrated all of its activities on the three poorest regions of the country: Savanna, Kara and Centrale. At the end of the third year, the project will draw the necessary lessons in order to consolidate achievements in view of an eventual introduction of the sector approach during the second phase; and
- *Phase 2, starting from the fourth year*: According to the results obtained at the end of the first three-year phase, the project will be extended to the two remaining regions, the Plateaux and Maritime Regions, where all of the actions will be implemented.

Project costs and breakdown by funding source. The total cost of the Project is estimated at US$75.4 million, or CFAF 40.5 billion. The funding breakdown reflects the focus of interests stated by the co-financiers and takes into account their comparative advantages with respect to the themes covered by the Project and the amount of resources that can be mobilized by the donors:

- *IFAD provided a grant of around US$135 million grant, i.e. 18 per cent of the total cost.*
- *Global Agriculture and Food Security Program (GAFSP) would provide a grant of around US$20 million, i.e. 26 per cent of the total cost.*
- *West African Development Bank (BOAD) provided a grant of around US$15 million, i.e. 20 per cent of the total cost.*
- *BID of the ECOWAS provided a grant of around US$15 million, or 20 per cent of the total cost.*
- *The contribution of beneficiaries, in kind, is estimated at US$13.5 million, i.e. 1.8 per cent of the total costs; this cost corresponds to their contribution (manpower, construction materials) towards the building of storage warehouses and other infrastructures.*
- *The Government contribution to the Project funding is estimated at US$10.7 million, i.e. 14.2 per cent of total costs. This amount includes exemptions from duties and taxes on the goods and services.*

The Quick-Start operation, the technical support to food crops, and the facilitation to marketing, will all draw their funding from IFAD resources; the funding of rural infrastructures in the Savanna and Kara Regions will be by BOAD while the rural infrastructures in the Centrale Region will be by BID. Finally, GAFSP will support the agricultural sector, the infrastructures of the Maritime Region and FAO's support/technical assistance.

1.5. The institutions and partner organizations

The institutions and organizations of the ADAPT project are quite similar to those of the PADAT project. The principal difference comes from ADAPT requirement to implicate those institutions with added value in terms of climate proofing.

Ministry of Environment and Forest Resources (MERF). Being responsible for the development, implementation, monitoring and evaluation policies, strategies, initiatives and tools of natural resources sustainable management, the MERF ensures the promotion and taking into consideration of environmental issues in the sectoral strategies and programmes. It is also responsible for the monitoring and implementation of NAPA and, more generally, of climate change and its impact on the economic and natural resources of the country. It will play a dominant role in this component on climate change adaptation, in particular, in the monitoring and evaluation of the impacts of climate change adaptation. In the silviculture and agroforestry sector, it is also specialized in reforestation.

Ministry of Water, Sanitation and Village Water Supply (MEAHV). The Ministry manages policy on water, the essential resource for life. The Department of Rural Development is also partly responsible for the management of surface waters. These bodies will play important roles in the supply of water and in lowlands infrastructure developments.

The Ministry of Grassroots Development, Crafts, Youth, and Youth Employment (MDB) works intensely with the grassroots communities in order to reduce poverty, as much as possible, in the country. Its activities are cross-cutting with all the ministries and concern education, microfinance, IGAs, support to female and male agricultural producers, etc. An important point raised by this Ministry relates to climate change, which has had negative impacts on producers' resilience capacities (reimbursement of credits).

Togo Extension National Services (ICAT, Institut de Conseil Agricole du Togo) aims to contribute to supporting rural life through extension of appropriate technical procedures and support to the structuring of professional organizations. Well-established in the territory through its Regional Delegations,

Prefectoral Agencies, cantonal focal points and agricultural advisers supported by the specialized technicians (STs), ICAT will be one of the key operators of the mechanism through which the information on and the investments in climate change adaptation will be retransmitted to producers.

The rural organizations and agricultural producers, like CTOP (Togoleese Coordination of Agriculturers and Producers' Organizations) and RENOP (National Agriculture Organizations Network in Togo), will be essential partners in the implementation of PADAT, notably in project steering, capacity building of the Producers' Organnizations (PO), the set-up of the Quick-Start Operation, the pilot operation of distributing fertilizer in the private system, and the development of small agricultural schemes, etc.

Service providers, such as NGOs, independent consultants, and/or research consultancy services, who are PADAT partners, consist of operators with different and proven skills in the areas of: (i) leadership; (ii) training on organization and management; (iii) support to POs; (iv) marketing support; (v) support in the preparation of action plans of the POs; (vi) training in IEC for women and youth from partner villages; (vii) technical advice (agriculture and rural engineering) in microfinance; and (viii) the conduct of various studies. Togo has over one hundred NGOs working in various areas of rural development: support, assistance, advice, food security, the social economy, community development, and technical and organizational capacity building of POs, among others. They are unevenly distributed throughout the territory. Two networks uniting Togolese NGOs are the Federation of NGOs in Togo (FONGTO) and the Union of NGOs of TOGO (UONGTO). PADAT selected a total of ten NGO providers to cover all support /assistance activities of the Project based on the three themes within the following framework: (i) technical support for food crops; (ii) support for production and marketing infrastructures and for processing/marketing; and (iii) capacity building of stakeholders. NGOs will be composed so that there will be three contact persons with the following profiles: (i) agronomist; (ii) specialist in organizing producers; and (iii) a rural engineer.

The farming sector. Since the late 1990s, faced with the gradual withdrawal of the state and the continuing deterioration of rural incomes, farmers have adopted many coping strategies, notably the development of grassroots groups and their apex organizations (cantonal, prefectural and regional unions). The most important apex organizations are: (i) The *Coordination togolaise des organisations paysannes et producteurs agricoles* (Togolese Coordination of Rural Farmer Organizations and Agricultural Producers), established in 2001, which brings together about 80 per cent of the national apex organizations in Togo, and currently brings together 12 farmer /apex organizations, or about 300 000 producers (70% men and 30% women). Among these 12 organizations are the *Fédération nationale de la Centrale des producteurs de céréales du Togo* (CPC Togo, National Federation of the Central Grain Producers in Togo), founded in December 2008, which includes a national federation, five regional apex organizations, 63 unions and 1 096 grassroots POs, gathering together 25 900 producers (44% women) distributed throughout the country, most of whom practise both rice and maize farming; and (ii) the *Réseau national des organisations paysannes au Togo* (RENOP, National Network of Peasant Organizations in Togo), established on 15 January 2004. The farming sector will, in fact, be the partner and key stakeholder in the implementation of PADAT and ADAPT. In the PADAT project, the choice of sectors to be supported and intervention areas of the project, as well as the definition of the modalities of Quick-Start Operation implementation, including the determining criteria for awarding the kits to beneficiaries, involved the active and resolute participation of the POs.

1.6. Analysis of stakeholders

In total, the project should directly affect about 25 000 small-scale farmers and producers who are the most vulnerable to climate change, taking into account regions where they reside and available climate projections. The project will strengthen the capacity of 1 500 organizations (POs) and their apex organizations. The total number of indirect beneficiaries will be 175 000. The project will apply a participatory approach with the grassroots community with the aim to transfer the implementation of

activities to the beneficiary households. Other key stakeholders in the project include: (i) the MAEP, the MERF, and their decentralized structures; (ii) the MDB; and (iii) the MEAHV, for its supervisory function in water resources management; and (iv) *Institut togolais de recherche agronomique* (ITRA, Togolese Institute for Agronomic Research) for agricultural and varietal research. Private associations and NGOs could be identified later in their role as service providers in capacity building and agricultural training.

PART II. THE ADAPT PROJECT AND STRATEGY

2.1 Justification and coherence with the policies and strategies of GEF/LCDF focal areas

BAU scenario. In an external review of the recently conducted PNIASA, the developmental nature of the activities of the PADAT and low consideration of climate change and sustainable land management were highlighted. In three major projects already initiated by the Government and its partners to render PNIASA operational (PADAT, PASA and WAAPP), particular emphasis was given to the maximization of production and productivity towards better food security. Development activities are carried out without taking into account the additional costs of the impacts of climate change. In particular, the PADAT project does not appear to consider that agricultural production is expected to decrease by increased climate variability. This implies the need to extend the scope of the activities of the base scenario that might otherwise be insufficient. It is also important to improve the collection of data related to climate change. Costs to support these activities are not considered in the design of the PADAT. Most of the activities identified in the first component of the PADAT represent an entry point for the intervention of the LDCF because many of them are complementary with the priorities of the NAPA. Indeed, the activities in the baseline are focused on: (i) technical support to agricultural production (Quick-Start Operation for the distribution of kits); (ii) the provision of improved seeds; (iii) water and soil conservation; (iv) lowlands development; (iv) pilot experiences in agriculture mechanization; and (v) pilot experiences in animal traction.

The LDCF component. The objective of the LDCF component is to increase the scope of baseline activities carried out to render them less vulnerable to climate change. Moreover, the LDCF component will contribute to integrating and disseminating knowledge on climate change at the local and national levels (rural organizations). Support will also be given to integrating tools to adapt the selected agricultural production systems (maize, rice and cassava) and to economic diversification in order to improve resilience through integrated crop, and livestock and fish farming systems. This will contrbute to achieving the objective of rendering the crop yields resilient to climate change and to mitigate the impact of climate chance on food production and food security. A climate-proof-type of support will also be provided by the project through thematic studies and by providing agro-meteorological data to assist in informing producers' decisions in a continuous manner. Finally, the LDCF component will contribute towards creating capacities to respond to and monitor the impact of climate change both at the national and local level as a result of constant awareness raising. The LDCF will also cover the costs for improved data collection and monitoring by a regular mapping of the vulnerable areas. The main objectives of the IFAD/LDCF project proposed will therefore be to reduce the impact of climate change on the vulnerable groups in the rural areas and the natural resources for a better support to agricultural production and improved food security.

2.1.1. Coherence of the project

The project is in line with:

- The policies and strategies of the focal areas of GEF/LDCF/SCCF:

The GEF/LDCF criteria for project design and co-financing were respected. The project management costs represent 10 per cent of the total budget, and the co-financing share complies with the criteria for

the LDCF. Moreover, the benefits of adaptation were clearly defined. Finally, the project takes into account other ongoing activities in the country in order to ensure coordination and synergies on the field, such as PASA, *Projet de développement communautaire* (PDC, Community Development Project), WAAPP and *Projet d'urgence pour la réhabilitation des infrastructures et des services électriques* (EIREP-PURISE, Emergency Project for the Rehabilitation of Infrastructures and Electric Services).

- The eligibility criteria and priorities of the LDCF/SCCF:

In agreement with the LDCF criteria, the proposal of the implementation of NAPA co-financed by IFAD responds to the main priorities of the Government for adapting to climate change. In line with LDCF principles, the activities identified are additional to the PADAT interventions (baseline) and are based on the indications in NAPA and in other strategies and relevant policies for climate change.

- The strategies and national plans resulting from environmental agreements:

The most visible manifestations of environmental degradation are *inter alia* the generalized lowering of the water quality, the loss of soil fertility, the lowering of the fish regeneration capacity of the water bodies and water courses of the country, an unbalanced urban development, and the upsurge in diseases and natural disasters.

Togo ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and the Kyoto Protocol in 2004. In the first phase, a National Committee on Climate Change was set up, a campaign was organized to improve awareness on the negative impacts of climate change at the national level, an inventory of greenhouse gas emissions was compiled, and a study on the climate change vulnerability and adaptation was carried out. The second phase focuses on the building of national capacities, for which a workshop was organized on the evaluation of technological needs as well as on the compilation of a list of adaptation priorities and the development of a national UNFCCC implementation strategy.

The current proposal assumes the implementation of adaptation priorities linked to agricultural production systems, as identified by the Government in its national policies. The Initial National Communication on climate change (2001) had already recognized the need to develop adaptation measures to respond to threats represented by the impacts of climate change on the agricultural sector, which is the main economic activity for about 65 to 70 per cent of the population. In particular, the reduction of maize production caused by drought was identified as a major risk to food security in the country.

NAPA's vision is to improve the adaptation capacity in the communities that are faced with the negative impact of climate change, by identifying the immediate and urgent adaptation needs and the response options, as well as developing strategies aimed to build capacities of actors and local authorities. More precisely, NAPA identifies the following major strategic axes, which are: the building of capacities of rural farmers and producers exposed to climate change through support to production and diversification; the rational management of the threatened natural resources; the protection and securing of infrastructures and structuring equipment at risk; and finally, early warning on climate disasters. The adaptation priorities as shown in project profiles of Annex F of Togo's NAPA served as a basis for developing this proposal.

The adaptation measures identified in the NAPA are in synergy with the provisions of the three Rio Agreements and the full Poverty Reduction Strategy Paper (DSRP-C). The first priority of the project within NAPA is the adaptation of agricultural production systems in the three regions through techniques integrating climate change and improving agro-meteorological information. The second priority of the NAPA project is the development of an Early Warning System (EWS) to provide information in real time on floods in the Maritime and Savanna Regions.

2.1.2. Value added with the LDCF alternative compared to PADAT

The baseline. PADAT, financed by IFAD, aims to contribute towards improving food security and the income of small-scale agricultural producers. This objective will be achieved through an improvement in production and productivity of targeted farms cultivating rice, maize and cassava, as well as through the enhancement and marketing of targeted agricultural productions. The project will focus on two technical components and one coordination/management component, which are: (i) support to production and productivity; (ii) enhancement of products; and (iii) coordination and management. The project is compatible with the DSRP-C and the PNIASA. Moreover, the project is based on the Interim Strategy Note for Togo (ISN, 20 May 2008, Report No. 43257-TG) with the long-term aim to improve the efficiency and sustainability of natural resources management. It will establish strategic alliances with the World Bank, BOAD, BID of ECOWAS, and the Africa Development Bank (AfDB).

The LDCF intervention. PADAT is the first milestone in rendering the PNIASA operational, which is the global framework for action in the agricultural sector in Togo. The external review of the PNIASA highlighted its low consideration of climate change and sustainable land management. PADAT therefore does not also take into consideration that climate variability will affect negatively the future agricultural production and as a result will increase food insecurity. In response to this concern, the Government of Togo has developed the national investment programme for the environment and natural resources (PNIERN), which constitutes the overall framework of environmental interventions in the country for the next five years. The PNIERN complements the inadequacies in the PNIASA with regard to taking into consideration the environment (climate change and sustainable management of land in particular). This project is part of the national planning and integrates perfectly with the priorities identified by both the PNIERN and the NAPA. The additionality of the LDCF intervention will focus on: (i) the integration of tools for climate change adaptation into agricultural production systems; (ii) vulnerable agricultural production systems adapted to current and future climate impact; and (iii) IEC on climate change.

Indeed, this will result in the increase of the scope of activities in the baseline, in order to make them less vulnerable to climate change through various and multifaceted but complementary actions such as: (i) integrating and disseminating knowledge on climate change at the local and national level (peasant organizations); (ii) integrating adaptation tools in selected agricultural production (maize, rice and cassava) systems; (iii) diversifying the investments to improve the resilience of integrated systems of crop and livestock farming and aquaculture; (iv) contributing towards achieving the objective of rendering crop yields resilient to climate change and mitigating the impact of climate change on food production; (v) supporting producers by providing them with meteorological information that might help them make decisions; (vi) contributing to building the capacity to respond to and monitor climate change impacts at the national level, as well as awareness raising among the local communities on climate change; and (vii) covering the cost of improving data collection and monitoring through the mapping of vulnerable areas, etc. The main objective of the proposed IFAD/LDCF project will be to reduce the impact of climate change on the rural vulnerable groups and essential natural resources and on the ecosystems to support agricultural production and enhance food security.

2.2 Project description

2.2.1. Project context

Agricultural production in Togo strongly depends on climate, water resources and edaphic conditions, and is consequently highly sensitive to climate change. The choice of the agricultural sector as a priority of Togo in the implementation of climate change adaptation measures is justified by its vulnerability with respect to climate change, its important contribution to the GDP (38 per cent) and by the portion of the active population in this sector (around two third).

The NAPA paper, submitted to the UNFCCC Secretariat in September 2009, selected four major climate risks to which the livelihoods in the agricultural sector are exposed: floods, rises in temperature, drought and the poor distribution of rainfall. Within the framework of relaunching the national economy, the agricultural sector was selected as one of the priority sectors that is affected by climate risks, a sector on which Togo relies to consolidate the bases for a strong and sustainable growth. It is for this reason that PNIASA was drafted and validated in November 2009, which constitutes the foundation paper of the agricultural sector and whose objective is to achieve an annual agricultural growth of at least 6 per cent by 2015. It is within the framework of implementing the PNIASA that PADAT was developed and financed by IFAD. This project did not, however, take into account the additional costs of the impacts of climate change. In particular, the PADAT project does not appear to consider that agricultural production is expected to decrease by the increased climate variability. This implies the need to extend the scope of the activities of the baseline and to improve the collection of climate change data. Costs to support these activities are not considered in the design of the PADAT. Most of the activities identified in the first component of the PADAT represent an entry point for the LDC intervention because many of them are complementary with the priorities of the NAPA. The ADAPT project was initiated in view of responding to this lack and rendering PADAT sustainable by taking into account climate change, notably, improving the resilience of maize, rice and cassava production through the setting up of crop techniques integrating the climate change adaptation.

Project Location. The ADAPT project will cover the same project area as PADAT; i.e. the five regions of Savanna, Kara and Centrale in phase 1, and Plateaux and Maritime of phase 2. ADAPT will be implemented in the PADAT areas. Accordingly, there will be a national scope but it will be implemented in a sequenced manner in the intervention areas covering the pockets poverty where vulnerable small-scale male and female producers are concentrated. It is likely that ADAPT would actually intervene right from the first year in the two regions, Plateaux and Maritime, because its implementation would occur around 2013, the year that corresponds to the second year of Phase 1 and the start of Phase 2 of PADAT. However, another reason is, above all, that building capacities in the field of climate change cannot be delayed nor postponed without the risk of incurring additional costs and impacts.

For the first phase (the first three years), it will cover the Savanna, Kara and Centrale Regions. Table 3 below shows the areas to be targeted per region.

Table 3. Indicative target areas for the project launch

Region	**Prefectures**	**Target areas**
Savanna	Tône	Naki-West, Nano, Tantigou,
	Kpendjal	Naki-East, Mandouri
	Oti	Koumbéloti, Sadori
Kara	Binah	Pagouda
	Dankpen	Guéri-Kouka
	Kéran	Kantè
	Assoli	Kpéwa
Centrale	Tchamba	Tchamba, Kaboli
	Sotouboua	Seed farm

During the second phase, the project will extend to the Plateaux and Maritime Regions.

Climate in the project Area. Togo is under the influence of two systems: (i) the tropical Sudanian-type climate in the north, with two seasons and an average annual rainfall ranging from 850 to 1400 mm; (ii) the Guinean tropical system in the south, characterized by four seasons and an average annual rainfall from 1,000 to 1,600 mm. The average temperature is 28°C in the northern areas, 27°C in the coastal area, and ranges from 24 to 26°C in the other areas. In general, throughout the country, the temperatures

are increasing and the annual accumulative rainfall shows a downward trend. The rains are concentrated over a short period and the dry periods are felt more strongly, with temperature thresholds exceeding all averages. A reduction in rainfall is observed from the south to the north of the country. The temperatures of the very hot months of February, March and April can reach 35°C (SNCCC, Nov. 2010).

The average relative humidity is also high in the southern areas (73 to 90 per cent), but low in the northern regions (53 to 67 per cent). The average wind speed is 1.93 m/s and the average duration of sunshine is 6 hours and 37 minutes per day. The average evapotranspiration is 1 540 mm/year. In the past 45 years, a reduction of rainfall and of the number of rainfall days, as well as an increase in temperature have been observed leading towards climate dryness.

Vulnerability to climate change in the project area. According to the results of the studies carried out as part of the Second National Communication on Climate Change of Togo (November 2010), by 2025, Togo has basically two main types of tropical climates (type of Guinea to the south and Sudanese type in the north) undergoing currently change over time. The analysis of data provided by the National Weather Service over a period of 45 years shows not only a periodic variation linked to natural climatic hazards, but also a tendency to increase in temperature and a gradual decline in rainfall in the country. The trend is continuing and suggests the likely climate changes patterns. Simulation results obtained confirm the change more or less important depending on the horizons considered (page 55). Indeed, for the scenario 2025, changes in annual temperature and precipitation were compared to observed changes from 1971 to 2000; studies reveal that the scenarios of climate change will already be evident in 2025, at both temperatures and precipitation. It is indeed observed a variation in rainfall of 1% in the north (11° N) and -1.5% at latitude 5°N in the south of the country. The Savannah Region is going to experience a slight increase in rainfall while other areas (Maritime, Plateaux, Centrale and Kara) will be marked by lower (0 to -1.5%). The average annual temperature variation will range from 0.66° C South to 0.80°C in the far North. Average high temperatures are recorded in Savannas in April (32.6° C). The results of the scenarios 2050 show that the variations become more important with respect to variations of 1971-2000. Temperature variations will go up from 1.46 ° C in southwestern to 1.76 ° C in the north-eastern of Togo, while precipitation will decrease in southern countries (-3%) and increase (+2%) in the North. The highest temperatures are found in the Savannah Region and the highest rainfall deficits will be recorded in the Maritime region and part of the Highlands. The Savannah region is the wettest.For the scenario 2050, the results of the scenarios show that the variations become more important with respect to variations of 1971-2000. Temperature variations will go up from 1.46° C in southwestern to 1.76 ° C in the north-eastern of Togo, while precipitation will decrease in southern areas (-3%) and increase (+2%) in the North. The highest temperatures are found in the Savannah Region and the highest rainfall deficits will be recorded in the Maritime region and part of the Highlands. The Savannah region is the wettest. For the scenario 2075, Temperature variations will be very important in both North and South. Decreases in rainfall in the South will experience large amplitudes up to -5% on average from 1971 to 2000. In the year 2100, the impact of climate change will be significant throughout the country. The global warming will be felt across the country. Compared to the current climate it will be very hot in the South and North. The rainfall will decrease by -8% in the South, while the most northern region record an increase from 1% to 5%. The same studies (carried out as part of the Second National Communication on Climate Change of Togo in November 2010), by 2025, the biomass energy, the natural formations and the plantations will experience a significant reduction in productivity due to reduction in rainfall patterns, seasons irregularity, and drying climate. The classification of regions on the basis of total vulnerability indices ranks the Centrale Region as the most vulnerable and the Plateaux Region as the least. Concerning hydro-electricity, in the Oti Basin in the north of the country, there will be increased rainfall of 120 mm by 2025 (for more of this see section 1.2 above).

With respect to the water resources, vulnerability to climate change impacts is manifested by an overuse of the aquifer in the Lomé region, which would notably result in an increase in water salinity of the

pumped aquifers. Climate change also leads to a marked downward trend in the flow and level of groundwater recharge. A simulation of a reduction in 5 per cent of water potential by 2025 and 10 per cent by 2050 would show a deficit that would be accentuated in the same proportion in all the economic regions of the country.

Climate drying leads to a reduction in the plant cover of the soil. It has been observed that, in the absence of a soil-stability plant cover, a run-off erosion phenomenon occurs, which reduces the cultivable surface upstream due to the reduction in the arable layer where the nutritional elements of the plant are found. Consequently, there is a drop in the productivity of the crop, whether it is annual, food or perennial. In the most sensitive periods during which the climate drying produces harmful effects are during seeding, flowering and heading. At seeding, the germination rate is low and results in a weak level of emergence of the plants, which require re-seeding actions to maintain an optimal plant density and to guarantee the expected level of crop productivity and production. At flowering, the lack of rain combined with an increase in the ambient temperature are not conducive to the flowering of cereals (maize and sorghum, which are the most sensitive) or cause blossom drop in the tomatoes. Indeed, in this period, these crops are highly sensitive to water stress, resulting from a water deficit. As a result, according to the case, there is a drop in the plant's fruiting rate, a weak level of heading and a low seed filling rate. The result is a drop in yields of crops concerned.

The specific impacts of climate change on some crops in terms of increased temperature or reduced rainfall can be therefore summarized as:

- *Concerning rainfed and lowlands rice, the water deficit results in a rapid drying out of the lowlands and their late immersion in water. This affects the fruiting and thus leads to a low productivity with respect to the plant cycle, compared to the normal duration in the rainy season. The insufficiency of water also lowers the rice flowering. This results in a weak seed filling rate of the paddy because some panicles are not in the leaf sheath.*
- *Concerning cassava, in some production areas, the stem cuttings are laid flat; the drying up of soils resulting from increased temperatures and a reduction in rainfall leads to problems in digging up tubers/roots, some of which are broken or remain on the ground. This results in a drop in productivity.*
- *Maize, the staple food of the Togolese population, is particularly vulnerable due to the strong sensitivity to water stress, above all, at the flowering stage. Therefore, the impact of a water deficit on this crop depends on the vegetative stage in which it occurred and can cause a reduction in productivity (agricultural yield) due to the low fruiting rate of the crop. This could result in a reduction in food crop supply, which would be accompanied by a surge in prices.*

In the livestock farming sector, the abundance of rain will cause outbreaks of some diseases, notably avian influenza and bovine trypanosomiasis, particularly, among zebus.

In the fishing sector, climate change will strongly upset the productivity cycles of the fish, salinization of fresh water and the death of fry; in addition, the increase in the temperature of the warm sea water layer (from 25 to 29°C) could cause frequent migration of some deep-sea fish species and a reduction in the volume of pelagic resources.

In the climate scenarios forecast for 2025, 2050 and 2100, the impacts would cause a reduction in the levels of production of the main crops, by 5, 7 and 10 per cent, respectively.

The main observations of the recent formulation field mission confirm what is above as follow:

- *In Togo, climate change is a growing threat to the socio-economic development and to the agricultural production systems and food security.*
- *A state of the degradation of biophysical elements has begun in the PADAT project area, which was caused by climate factors.*

- *A critical state of vulnerability to climate change of livelihoods was observed in the PADAT project area of the Savanna Region.*
- *A massive deforestation of the woody cover was observed throughout the territory.*
- *Transhumance is the cause of gradual natural resources degradation and conflicts between crop and livestock farmers.*
- *The water resources are, in terms of volume of abstracted water, in clear decline due to massive siltation.*

These observations confirm the most visible signs of the impacts of climate change reported in the Second National Communication (2010): climate drying, natural disasters, outbreaks in diseases, reduction of forest cover, erosion and prolonged salinization in the continental terminal of the coastal sedimentary basin, which would lead to a generalized reduction of water quality and a loss of soil fertility. And because of this area sensitivity to climate vulnerability and change, there will be an updated assessment of the vulnerability in activity 1.1.1 below.

2.2.2. The target groups and areas of the ADAPT project

The targeting strategy is identical to that of PADAT, which focuses on small-scale producers, women and young people, especially the most vulnerable poor on the fringes of society, living with chronic food insecurity, including female-headed households, youth and families with AIDS. With the socio-economic targeting criteria, the main focus in the ADAPT project will be on the margins of the population that are particularly vulnerable to climate change ─ farmers, market gardeners, livestock farmers, fish farmers, fishers, foresters, etc. in the Savanna, Kara and Centrale Regions, but also those of the Plateaux and Maritime whose livelihoods resilience is greatly weakened due to the effects of climate change. The project will be implemented nationally, but in a sequential manner following the PADAT, in intervention areas covering pockets of poverty where most of the small-scale female and male producers are vulnerable to climate change.

2.2.3. Project goal and objective

The goal of the project is to reduce the vulnerability of agricultural production and food security to the impacts of climate change and variability based on the NAPA principles and strategy.

The main objective of the ADAPT project is to reduce the impact of climate change on vulnerable groups, as well as on the natural resources that are essential to support agricultural production and increase food security.

2.2.4. The components of the Adapt project

The ADAPT project is focused on four components integrating the different NAPA priorities and the observations listed above: (i) mainstreaming climate change adaptation tools into the agricultural production systems; (ii) the vulnerable agricultural production systems are adapted to current and future climate change impacts; (iii) IEC on climate change; and (iv) project management and monitoring and evaluation.

Component 1. The integration of climate change adaptation tools into agricultural production systems

Outcome 1.1: Support to the integration of climate change adaptation into the agricultural production systems is reinforced

Sustainable solutions must address the constraints and gaps identified in terms of information and planning and decision-making tools to integrate the parameters linked to: the impact of climate change on agricultural production; the data and equipment needs; sources of information and the process of planning and management of the natural and agricultural resources; and the necessary elements for

establishing a knowledge base on agricultural production and the impact of climate change in Togo. To achieve this, the following activities are recommended.

1.1.1. Sectoral, thematic and mapping studies

Sectoral studies. The impact of climate change is manifested in a number of socio-economic sectors. Here, an analysis must be conducted to assess the state of vulnerability of the agricultural and natural resources, the vulnerability of the water resources, and sustainable rural energy. This assessment of the policy and agricultural capacities (the gaps and overlapping, the possibilities and constraints of analysis) will allow for a better integration of climate change adaptation into the agricultural sector policies, including agricultural biodiversity and the pastoral sector. Three studies are planned:

- *Study on the state of agricultural vulnerability and of the natural resources. This study will allow bettering the determination of the degree of vulnerability of the agricultural sector and of the natural resources.*
- *Study on the state of vulnerability of the water resources. The water resources are indispensable to agricultural, livestock farming and fishing activities. However, a very pronounced drying up of dams and water reservoirs has been observed. This study will therefore not be of a descriptive nature, but rather, will highlight the extent of the phenomenon in time. Even if a continued monitoring of water resources is planned in the Third National Communication, both in terms of quantity and quality, it is not specified which mechanisms will be set up to do so (equipment and capacity building of the institution responsible for monitoring). If additional resources are needed, PADAT must recur to the principle of state sovereignty to request them from the responsible institutions. The PADAT project will therefore oversee this issue that remains closely linked to sub-component 1.2 (Strengthening of the Agro-Meteorological Network) as well as the Mapping activity (within sub-component 1.2).*
- *Study on sustainable rural energy. The populations concerned recognized the negative consequences from using forest sources for energy. The study proposed will allow identifying the causes and approaches for a sustainable solution.*

Thematic studies. They will allow to better determine the problems of climate change adaptation in terms of mobility of livestock (inducing the development of a pastoral code that depicts an accurate and realistic outline of the situation), and adaptation of the seed sector, and to conduct a survey on the adapted seeds. Three studies are planned:

- *Study on animal mobility. Transhumance was identified as a major problem affecting all the regions, especially in the and border regions, resulting in disputes between the rural people and the livestock farmers that even lead to the loss of human lives. This study will allow bettering the identification of this highly recurrent phenomenon as to lead to an adapted pastoral code.*
- *Study on the adaptation of the seed sector. The impacts of climate change have strongly upset the cycle and nature of seeds, resulting in a lowering of productivity and a threat to food self-sufficiency. This study will propose adaptation solutions for the seed sector, such as the improvement of the species' resistance in order to adapt them to drought, and to delays in and irregularities of rainfall.*
- *Survey on adapted seeds. The different agricultural services and research institutions experiment improved often high-yielding seeds. This proposed study will provide information on the existing catalogue of improved species according to the regions capable of best adapting to climate change. It will be jointly carried out by ITRA and ICAT.*

The mapping studies. Knowledge of vulnerable areas mitigates the uncertainties and facilitates an appropriate adaptation. In order to achieve this, the activity proposes producing a general GIS mapping on the land use, a GIS mapping of silvo-pastoral resources, and a mapping of water resources. These

activities would benefit from upstream vulnerability and assessment studies of the agricultural sector, to be carried out within the framework of the Third National Communication, which concerns both natural resources and rural groups/communities of all the areas concerned.

The activity also aims to provide support to the mapping of bushfires and the dissemination of bulletins. Bushfires are devastating to the ecosystems in place in all the regions of the country. The bushfires are used to clean the area for crop farming, hunting, livestock breeding, which results in savanization, the loss of soil organic matter, a too-strong insolation, depletion of moisture reserves, intense evaporation, heating of atmospheric temperature, and the destruction of plant cover. In the latter case, bushfires contribute to increasing run-offs, soil erosion and soil leaching.

1.1.2. Forming working groups for awareness raising and leading an exchange platform on climate change.

Working group for monitoring and leading the process. The set-up of a good institutional framework is indispensible to the success of the project. This activity will create intersectoral working groups to define the programmes integrating climate change adaptation and adapting them to sectoral planning. This will build institutional collaboration between the ministries concerned (MAEP, MERF and MEH) in applying key tools such as climate proofing and in monitoring he climate change adaptation processes in the agricultural sector. Above all, it will entail organizing long-lasting, continuous workshops throughout all the regions on the use of climate change models and scenarios, and on the analysis of climate data, as well as providing pedagogical support and organizing field visits.

Awareness raising of policy decision makers. The policy decision makers play a major role in the socio-economic development of the country. It is therefore highly important that they be well informed in order to make the best decisions on climate change adaptation. This activity will entail developing an advocacy package aimed at the policy decision makers and civil society organizations (NGOs, grassroots communities, unions, employers' organizations, traditional chiefs, and women's and youth organizations) on the use of climate change models and scenarios, the analysis of climate data, and field visits. This activity will include a certain number of training sessions on climate change:

- *One-week training session in Lomé;*
- *One-week training session per region;*
- *15 training days for 30 specialists (in meteorology, economics, finance, MAEP, MERF and MAEHV);*
- *One month of training on climate data analysis integrating the Adaptation Monitoring and Assessment Tool (AMAT), Measurement, Reporting and Verification (MRV) and GIS tools (training for ICAT, MAEP, MERF and MEH, for a total of 40 specialists).*

Although the supervision of the awareness-raising activities on climate change is the responsibility of the MERF, ADAPT will ensure that the civil society organizations are more involved as per the recent recommendations of the LDCF/SCCF Board, which underlines the importance of involving them in the projects implementation while reflecting their specific roles.

Set-up of an exchange platform on climate change. In order for a good policy to succeed, it is necessary to set up a retroactive/and flexible learning system or approach based on a mechanism that is flexible enough itself to allow all the actors to be able to easily have all the information, and in a timely manner, on the issues linked to climate and climate risk. Although such a mechanism is already be planned for 2012 in the Third National Communication, PADAT will ensure that this mechanism will be adapted to the one needed to provide the additionality that ADAPT desires. Such additionality requires an integration of complementary and more accurate information on climate risks, which could be available as a result of an improved down-scaling of climate models, and thus allow to take into account uncertainties in climate projection. Such a learning approach would make it possible to fine-tune agricultural advice, sustainable processes and inputs, and to improve best practices in PADAT

activities. The set-up of a national platform and the creation of a database on the information sharing on climate change involve the following:

- *The platform will group together all stakeholders (institutions, private sectors, crop and livestock farmers, fishers, civil society, the traditional authorities, NGOs, negotiators, researchers, seed companies, etc.) in order to have an exchange and information-sharing framework on climate change, in general, and on adaptation, in particular, relying on an appropriate networking system. It is suggested that this platform be hosted by the MERF.*
- *An inventory will be performed on good practices in climate change adaptation at the national level. For several years, the populations have already been carrying out adaptation practices. This activity would entail listing them, then developing a collection of good operational practices and lessons learned in a context of an increased need of climate adaption of the agricultural sector for the dissemination and replication at the national and regional level supporting the development of planning policies. Some regional, national and/or international experiences in adaptation in some sectors and/or certain themes were successful. The activity proposes to present these case studies in French and in the national languages to serve as examples.*
- *This platform will be led by a team of six students, who will be recruited for three months to oversee the data input for the platform.*

Outcome 1.2: The agro-meteorological network is strengthened

The information and quality of the meteorological data are indispensable for a better consideration of climate conditions. To have good quality data, there must be the necessary capacities; for this reason, sub-component 2 includes the provision of appropriate supplies and equipment supported by continuous and long-lasting capacity training.

1.2.1. Supply of equipments and amenities

Developing the appropriate monitoring systems for monitoring the progress achieved towards the adaptation objectives requires the appropriate equipment. This activity consists in conducting a survey to map the agro-climatological areas and to equip the different agro-meteorological areas with automatic meteorological stations and small agro-meteorological equipment (US$12,000 per region to buy rain gauges, thermometers and hygrometers). This activity works in synergy with Component 1 of the Integrated Disaster *and* Land Management *(IDLM) project and will complete the institutional capacity building of the key national, regional, local and community bodies involved in reducing disaster risks and in sustainable land management.*

1.2.2. Training in the collection and storage of meteorological data and the system of climate data management

It was observed that one of the factors that do not facilitate good adaptation in different PADAT areas is insufficient capacities. The training planned in this activity in all the areas concerned is a sustainable process, carried out in a continuous and repetitive manner. This training concerns the meteorological data collection and storage as well as climate data management systems (training of 40 individuals/region + an allocation of US$10,000 per region to buy software and computer equipment for the management of the agro-climatic data). This activity will strengthen the activities of Component 3 of the World Bank IDLM project on training.

Component 2. Adaptation of vulnerable agricultural production systems to current and future climate impacts

This component is divided into three subcomponents or outcomes including: (i) Resilience of food production (maize, rice and cassava) improved by the introduction of farming techniques integrating adaptation to climate change, (ii) Promotion of systems integrating livestock to agroforestry while

reducing the impact of recurrent droughts and (iii) Improved opportunities to diversify production systems through the development of aquaculture and fish farming.

Outcome 2.1: The resilience of food production (maize, rice and cassava) by the introduction of crop techniques integrating climate change adaptation is improved

Smallholder's access to techniques (eg small livestock, management and control of small-scale water for agriculture and improved seeds) of crops adapted to climate change (especially maize, rice and cassava) is facilitated

Climate change impacts on agriculture are shown through: (i) a reduction of rainfall and in the number of rain days; (ii) increase in temperature, which causes the drying up of natural and artificial water bodies, and an increase in evapotranspiration; (iii) a reduction of productivity and production; (iv) food insecurity; and (v) pauperization, above all, of small-scale agricultural producers.

In order to adapt current agricultural systems to these climate impacts that are becoming recurrent, the sub-component will focus on all PADAT intervention areas and, specifically, the Savanna, Kara and Centrale Regions in the first phase (i.e. the first three years) and the other two regions, Plateaux and Maritime, in the second phase.

The sub-component in turn is divided into two parts: (i) the dissemination to vulnerable groups of adapted seeds and agricultural good practices integrating small-scale livestock farming into the production systems and market gardening as an IGA; (ii) improvement of the water balance in the plots through: the promotion of efficient low-pressure micro-irrigation; water and soil conservation; the construction of small reservoirs; and improvement of soil fertility.

The activities and tasks to be carried out within the ADAPT mainly aim to contribute by additionality to the PADAT project through:

2.1.1. Strengthening the resilience of vulnerable groups through the provision of adapted seeds and good practices integrating small livestock production systems.

The seed distribution activity for the beneficiary group within the PADAT project holds on two relatively different objectives. Foremost, this new activity of seeds multiplication introduced by ADAPT to PADAT, which hitherto accounted only on the WAAPP seeds mechanisms, raises the need to reach agreements with overall seed institutions (including WAAPP why not). In the two possible instances, the seed distribution remains dependent on the adoption of new varieties by the farmers and the availability of a seed sector that can provide farmers with enough quality seed for the adoption. It is important to note the fundamental difference between the desired qualities in the PADAT-WAAPP combination and in the PADAT-ADAPT combination. Indeed, the varieties foreseen in the WAAPP for the PADAT aim at the exclusive improvement of varieties to boost productivity and thus the volume of production, whereas in ADAPT, the aim concerns varieties that are resilient to the climate and thus adapted to climate pejoration. In this latter case, the desired productivity by WAAPP is not an objective in the strict sense, even if it can have a considerable collateral advantage.

A participatory varietal selection will therefore be taken into consideration with the farmers prior to setting up demonstration protocols for the new varieties and to training pilot farmers as well as farmers known for their good quality seeds in the multiplication of these new varieties intended for different clients,. The aim is to set up a better organized seed sector. In particular, the identified seeds are of two kinds: seeds that promote growth of productivity (envisaged in the initial PADAT activities) and seeds that promote climate resilience (for sustainable PADAT outcomes). From the agronomic point of view, these are two highly distinct physiological or gene characteristics assigned to these two types of varieties. It is this additionality that is desired within the ADAPT project and which will be strengthened by the efficient, low-pressure micro-irrigation in order to take into account delayed rainfall.

Two tasks are meant to realize this activity:

- *Dissemination of adapted and high-performent seeds of both food crop and selected forage (Leucena, Albizia, Gliricidia, Mucuna).*

  These seeds should benefit the vulnerable groups in combination with adaptation good practices in agricultural production systems. The current seed catalogue will be studied and the strain that is tolerant to water stress during rainfall delays will be supported and introduced in the agricultural production systems, thanks to the micro-irrigation device.

- *Strengthening of vulnerable households involved in PADAT through a studied integration of production systems,*

  Notably through tolerant breeding stock and small livestock nucleus systems with multiple objectives, 450 households will benefit from breeding stock of three goats/sheep and four poultry per household as to promote the return to good practices of soil amendments and the creation of a nucleus system of supplementary livestock capital.

2.1.2. The improvement of the moisture balance in the parcel

- *Implementation of two 2 500 m3 water reservoirs in each region promoting the use of marginal agricultural lands*

  For rainfed agricultural areas where delays in rainfall often occur, efficient low-pressure micro-irrigation will be promoted (see Annex 3). Finally, with respect to the marginal water sources used for collecting run-off waters for the market gardeners organized into groups, the set-up of 5 ha of market gardens per region will be supported.

- *Technical support for setting up supplementary water and soil conservation and soil restoration/protection activities (WSC / SRP)*

  On non-agricultural lands that have started to become degraded in the Savanna Region, as well as the creation of 10 ha agro-forestry parks in the PADAT targeted areas for maize production in West-Naki, Kétao and Sotouboua. According to the kind of degradation, the set-up of anti-erosion mechanisms[3] (including half-moons) associated with reforestation for the protection of banks of water courses and bodies; pilot distribution of 150 kits for low-pressure micro-irrigation; and technical support for the set-up, on 1,000 ha, of anti-erosion mechanisms in the margins of the agricultural plot developed and/or enhanced by PADAT (dykes, contour farming, terrace farming).

Outcome 2.2. Systems integrating livestock farming and agro-silviculture to reduce the impact of recurrent drought are promoted

This outcome focuses on the management of vulnerable processes and systems of animal production.

In terms of vulnerability, the livestock sector has shown to be highly sensitive to climate change. The impacts of a rise in temperature and a reduction of rainfall volume lead to: (i) warming; (ii) drying up and evaporation of continental waters, which are a source of animal water points; and (iii) the disappearance of pasturelands. Moreover, Togo experiences negative externalities resulting from climate aridity of the Sahelian countries (Niger, Mali, Burkina Faso) through the transhumance of native cattle, which devour everything in their path. The animals become wasted (advanced emaciation), tired and die, or are rapidity sold to the butchers of the region. Moreover, the corridors and areas of transhumance, not accurately defined, are not respected (see Annex 4 showing the annual transhumance flow). To adapt, the native livestock farmers are constrained to practise transhumance. Year after year, the number of transhumant livestock herders increase, which accelerates the degradation phenomenon of the ecosystems along the transhumant routes and the host sites (deforestation, soil compaction, silting of water courses and reservoirs).

[3] *60 ha of surface area expressed in linear meters in the budget of the sub-component.*

Of all efforts made in the past to end the disaster caused by this phenomenon of transboundary transhumance, the only alternative is to recur to the subsidiarity principle, which brings together the local authorities and transhumant livestock farmers. Thus, an agreement will be made with the Government to introduce a fixed fee to be paid by the foreign owners of livestock who bring their herds across the Togo borders. This fee will be paid to the local authorities in charge of managing and maintaining the water points and pasturelands used by these owners and the migrating herds along the transhumant corridors. As a result, space for dialogue with the policy makers is created. In addition, an important opportunity has been created for supporting local communities and rural farmers' organizations and encouraging them to assume responsibility.

Two activities were carried out in this component for the PADAT's target regions and areas and the ecosystems that play a major role in the threatened biodiversity:

2.2.1. Improvement in the management of pastoral areas used as passage corridors for a resilient transhumance.

The main actions consist in the mapping of corridors, the discussions and planning sessions on the use of corridors, and the dissemination of the pastoral code. The corridors mapping and legislating the pastoral code (see activity 1 of subcomponent 1.1) will be supported by discussions and planning sessions on the use of corridors; and an evaluation study[4] on the load capacity of the corridors and the host areas will be conducted for the purpose of the sustainable management of these ecosystems. This assessment study would also clearly identify the main corridor, the types of necessary development, above all, the water points to install or rehabilitate and the width of the corridors. It will also analyse the land problems, i.e. how the expropriated land owners will be taken into account in the prefectoral taxes levied on the animals entering the country. This evaluation study and the follow-up study of the mapping will be both conducted in the first year of the ADAPT project (2013) while the dissemination of the pastoral code starting from its entry into force. In addition, the drafting of the pastoral code, as stated in activity 1 of sub-component 1.1, will consist in producing a legislative and technico-economic paper to regulate livestock farming in Togo, and above all, the issues of transhumance, a main cause of degradation of the Togolese ecosystems that aggravates the climate change impacts. This activity will take into account awareness raising on sub-regional integration, but also issues on the Togolese ecosystems that have shown clear degradation over these past 45 years. Each actor in the livestock sector will get a copy of the pastoral code and all transhumants will be informed every year at the entrance in the country and provided with excerpts of the code.

In addition, create five hundred (500) miles of transhumance corridors and three (03) hosting areas through: (i) the materialization of corridors every five hundred meters with tags, trees, natural features and/or infrastructure (mountains, rivers, lowmlands, slopes etc..) will also assist in defining these corridors; (ii) the set-up of livestock water points (15 pastoral boreholes) – the drilling of at least 60m deep will reach abundant aquifers; and (iii) around each water point,[5] the set-up of a monitoring and managing station to ensure the sustainability of the installations and avoid conflicts concerning water points. Moreover, three host areas will be developed, which will consist in: setting up or rehabilitating a water points; introducing forage species; and facilitating access and setting up a station for monitoring and controlling the load capacity of the area through the control of livestock populations entering in order to avoid excessive degradation of the ecosystem.

2.2.2. Restoration of degraded silvo-pastoral ecosystems

This restoration will be implemented through: (i) the reforestation of 1,000 ha of plots distributed throughout the five regions, i.e. 500 ha will be entrusted to the State, which will obtain support to this end; the other 500 ha will be planted by the communities, which will decide on the spaces to be

[4] The cost of the study is estimated at US$12 000.
[5] The cost for the monitoring and managing stations shall be taken into account in the activity costs.

reforested and will be able do so with the support provided by the ADAPT project; and (ii) 240 ha of degraded ecosystem under protection. A study[6] will precede these two activities in order to identify the sites to be reforested and the different species to grow. The aim is that, in the medium and long term, these reforested species will be used to feed livestock and will continue, at the same time, to serve in the fight against climate change factors. Clearly, these are not economic, but rather, environmental reforestations. The study will also determine the actors in the reforestation (NGOs, the community, the State through the office of forestry called ODEF). Concerning the spaces to be protected, the study must produce the inclusive and irrevocable declaration of commitment of the riparian community, which, in compensation, will benefit from IGAs. This study will also develop training plans and modules for the communities (e.g. training of communities in plant nursery techniques to allow them to produce their own plants; (iii) the fight against brush fires in the 100 sites combined with the set-up and equipping of 15 committees on fighting brush fires to allow the communities and the State to end this scourge. In addition, a participatory diagnostic and testing study must specify, for each prefecture, the exact times for prescribed burning authorization in accordance with early rainfall data.

Apiculture will be promoted to boost employment in areas where structural investments will be made for the restoration of silvo-pastoral ecosystems and thus high-intensity labour (HIL) activities; the host sites will be the restored forests and ecosystems placed under protection through the creation of ten cooperatives of 30 members (300 individuals) and the equipping of hives (1,000), nine extractors and other small equipment. Apiculture was considered an activity that would allow vulnerable populations to adapt to climate change because, irrespective of climate variability, there is a flowering plant stratum in Togo that allows farmers to use the hive products.

Outcome 2.3: Diversification of production systems through the development of aquaculture and fish farming associated with market gardening is promoted

This outcome is supporting the diversification of agricultural production through the introduction of fishing activities to address or mitigate the effects of climate change on water resources, aquatic ecosystems and vulnerable groups that are: (i) the seasonal disappearance of several water courses; (i) the drying up of the natural and artificial water bodies; (iii the trend towards the disappearance of fishing activities; (iv) the rarity of fish; and (v) the pauperization of fishing communities.

The result will be expected from 10 of the 35 prefectures of Togo and foremost in Savannah, Kara, and Central Regions in phase 1 and Marine in Phase 2 of the project. The result is in turn broken down into two (02) activities, namely: (i) promotion of aquaculture associated with vegetable gardening (see Annex 5 the integration scheme), and (ii) enhancement of community water catchments community (community plans) by a tailored fishery.

2.3.1. Promotion of integrated agriculture-aquaculture (IAA) as an adaptation method in rural areas vulnerable to climate change.

Three prior feasibility and profitability studies on the IAA approach, applied in the host sites, will be undertaken upstream of the investment activities; they all serve as a response to the vulnerability of the fishing sector in the area. These supports include: (i) the set up of fish farming units (10 units); (ii) capacity building of organized fish farmers (ten POs) on the fish farm units set up and support-advice to these same fish farmers organizations; (iii) training in fishing based on aquaculture schemes for members of ten communities (for a total of five sessions); and (iv) fish stocking of ten rehabilitated 2,500 m^3 water reservoirs; and (v) the provision of kits for monitoring the performance of Specialized Livestock and Fishing Technicians (SLFTs). In addition to this, the water drained from schemes will be

[6] The funding of this study will be provided from the budget of activities. The study shall provide information for this budget on the basis of a reforestation unit cost of US$470 per ha (CFAF235,000) for a total of 1,000 ha, and the following time frame: 200 ha in the first year (Y1), 300 ha in Y2 and Y3, and 100 ha in Y4 and Y5; the study to identify the reforestation sites: a flat rate of US$12,000 in the first year.

recycled to cultivate vegetables garden using crop not greedy in water as to improve population's intakes.

2.3.2. The fichery-based exploitation of community water catchments

This activity will involve 15 to 20 localities within 10 selected prefectures, selected for demonstration, 187 direct recipients, members of producer organizations (POs), and 935 direct dependent. The activity will also promote the production of fish in a collectively manner within Organizations and in turn will affect 10 communities sized from 500 to 1000 people.

Component 3. Strengthening the promotion of Education, Information and Com munication (IEC) on climate change

The ADAPT project aims to reduce the impact of climate change on the vulnerable rural groups as well as on the essential natural resources in order to support agricultural production and increase food security. Through the integration of options to adapt to the harmful effects of climate change, it aims at the sustainability of the PADAT project, which, from the start, only targeted the development of productivity and enhancement of agricultural products.

In order to provide Togo with good adaptation capacity and thus reduce the vulnerability of the agricultural sector with respect to the harmful impact of climate change, key factors need to concur: (i) accessibility to available technologies; (ii) the clear definition of the roles and responsibilities for the implementation of adaptation activities; (iii) the set-up of systems for training actors and disseminating reliable information on climate change; and (iv) equal access to resources.

The identification of needs in IEC on climate change and its associated required investments allow to take into account these key factors in combination with other studies planned at this formulation phase of the PPG, which are: (i) the assessment of the needs in information and tools to mainstreaming climate change into the planning and management of agricultural production systems; (ii) the assessment of the vulnerability of plant production systems (maize, rice and cassava); (iii) the assessment of the vulnerability of animal production systems, livestock/crop farmer integration; and (iv) the identification of the potential of aquaculture as a diversification and climate change adaptation activity.

The methodology used for this study is based on two approaches: (i) the collection of information through consultations with actors on their IEC needs regarding agriculture and climate change, combined with research and literature review; and (ii) the analysis of information aiming at assessing IEC needs.

The aim of this study is the drafting of the IEC strategy, which will bring additionality to the IEC strategy of the PNIASA. This will allow the project to cover the groups and areas that are most vulnerable to climate change, and thus promote their adaptation capacity by implementing four types of targeted activities for a total cost of around US$680,546.

Outcome 3.1. Public knowledge and awareness on Climate change and vulnerability has increased

Two activities are proposed as to better understand vulnerability and how to assess it:

3.1.1. Strengthening the PO's capacity to understand and assess vulnerability

Through: (i) monitoring and evaluation of climate change vulnerability via training; (ii) communications and discussions with POs' members on climate change vulnerability; and (iii) the use of appropriate awareness-raising mechanisms by the crop and livestock farmers on vulnerability, and consequently, on respecting transhumance corridors and on the fight against deforestation.

3.1.2. Development of participatory decision-making tools in climate change

This will be undertaken through : (i) initiation to simplified terroir mapping by MARP; (ii) discussion sessions at the local level on the correlation between the vulnerability of the agricultural calendar and technical procedures while teaching the producers to use the available scientific knowledge on climate within the agricultural calendar; and (iii) the strengthening of the capacities of the village development committees (VDCs) to respond to the vulnerability of annual pastures and their correlation with the fight against brush fires and with tools for integrating climate change adaption.

***Outcome 3.2. Technical modules and manuals including local knowledge on adapting agricultural** production systems to climate change are elaborated, adopted, and disseminated*

3.2.1. Dissemination of technical modules and manuals for the integration of livestock farming into agricultural production systems and training of SLFTs aquaculture adapted to climate change

This activity is in support of components 1 and 2 above and its content draws on the arguments presented in their respective sections. Modules and manuals are the best tools for disseminating over years (sustainability) this issue of adaptation to climate change.

3.2.2. Outreach of technical modules and manuals on adapted seeds and technology transfer packages

This activity focuses on the dissemination to farmers of a package on seed varieties and technology transfer adapted to the prevailing climatic conditions, through appropriate mechanisms and suitable to each audience. The activity is in support of components 1 and 2 above and its content draws on the arguments presented in their respective sections.

Component 4. Project management and Monitoring and Evaluation.

This component is integrated into PADAT's coordination unit's agenda. A specific challenge in the M&E work programme will be to overseeing the project outcomes and impacts as to maximize the project additionality prior to the mid-term review.

2.2.5. The socio-economic advantages of the project

As a result of the project, the following socio-economic advantages will be brought: (i) the reduction of food insecurity; (ii) improvement of local economies through the increase in agricultural production and revenue; (iii the creation of IGAs; (iv) improvement in the decision making of small-scale producers through the dissemination of agro-meteorological data; and (v) a more stable contribution of agriculture to the local and national economy.

The socio-economic benefits will mainly be felt by women and youth, who represent around 50 to 60 per cent of vulnerable, small-scale producers farming areas ranging from 0.5 to 1 ha. The project will be completely in line with the PADAT gender strategy, which is based on the national policy on gender equity and equality, and on IFAD's Action Plan related to the integration of gender equity issues. The gender equity strategy will be participatory and inclusive, and aim to ensure that target groups (men and women) have equal access to resources, activities and benefits of the project. It will focus on the following elements: (i) facilitating access of women and youth to support and capacity-building activities responding to their specific needs; (ii) encouraging their participation in all collaboration and decision-making platforms; and (iii) supporting the IGAs promoted by them when investing in processing/conservation technology in order to reduce their workload and improve the quality of end products for a better added value.

The benefits of adaptation expected from the IFAD/LDCF intervention are as follows: (i) an improvement in the capacity of small-scale farmers to respond to increased climate variability; (ii) a better monitoring capacity of climate variability and its impacts on agriculture; (iii) a greater resilience of production systems; and (iv) a strengthening of the sustainable management of the natural resources by the key actors.

2.2.6. Possible synergy with other initiatives

This project is presented as part of the NAPA implementation in Togo and focuses on the priorities that were identified through the NAPA consultations. Moreover, through the PADAT baseline, the project will establish strategic alliances with the World Bank, BOAD, ECOWAS (BID), AfDB and GAFSP. All of these actors coordinate their interventions on the different PNIASA sub-programmes (agriculture, livestock farming, fishing, agricultural research, the strengthening of sectoral capacities, and coordination). The project will also be based on lessons learned from other initiatives such as: *Aménagement et réhabilitation des terres agricoles dans la zone de Mission Tové* (PARTAM, Development and Rehabilitation of Agricultural Land in the Tové Mission Area) and *Projet d'aménagement hydroagricole de la basse vallée du fleuve Mono* (PBVM, Hydro-agricultural Development of the Lower Mono River Valley), funded by the Arab Bank for Economic Development in Africa (BADEA); and the *Projet de Renforcement des bases de la sécurité alimentaire des ménages agricoles vulnérables au Togo* (Project to Strengthen the Bases of Food Security of Vulnerable Agricultural Households in Togo) implemented by FAO and funded by the European Commission. The initiatives in the project activities are diverse and varied. They essentially belong to the alliance within PNIASA focusing on natural resources management. The mission visited each of the partners of the alliance to seek and strengthen synergy with the projects underway in the ADAPT project area, as provided below (a non-exhaustive list).

Project to Support the Agricultural Sector (**PASA)**. Its objectives are to: (i) rehabilitate and build productive capacities of the targeted beneficiaries in the selected sectors; and (ii) foster an enabling institutional environment to the development of agriculture in the targeted area. It aims, through these objectives, to promote strategic food crops, export crops and continental fish production through their development. It also aims to relaunch the livestock subsector through: (a) rebuilding of herds with the locally available livestock having better genetic potential in terms of growth and resistance to diseases in order to compensate for the drop in numbers and the mortalities in the selected areas; (b) animal health and the improvement of the control of high-incidence diseases (national de-worming and vaccination campaigns) on the basis of sustainable mechanisms that have already been developed in Togo in order to obtain and administer vaccines, and through an increased control of the product supply chains; and (c) improvement in the zootechnical conditions of traditional breeding in terms of habitat. This will be achieved by using locally available techniques and equipment, through training services providers, and by providing direct assistance to livestock farmers to improve traditional breeding and reduce livestock mortality due to diseases, predators and theft. Finally, it aims at providing support to capacity building and sectoral coordination by reforming and building the capacity of the MAEP, and through sectoral coordination, programme management, and the management of financial aid tools.

West African Agriculture Productivity Program (WAAPP) aims to develop and disseminate technologies to improve agricultural production by 15 per cent in order to contribute to a 6 per cent agricultural growth. The activities conducted in synergy focus on: *generating, adapting and disseminating an array of improved technologies for the sustainable production of the main plant products* (maize, rice) and animal products (poultry, small ruminants). The project aims to: (i) create the favourable conditions for regional cooperation in developing and disseminating improved technologies through the harmonization of national legislation with community regulations; (ii) support the national centre for the specialization and dissemination of improved technologies through the strengthening of infrastructures and ITRA and ICAT equipment; (iii) strengthen the capacities of researchers and actors involved in the transfer of technologies; (v) support priority programmes on adaptative research and technology transfer; (v) support the acceleration of technology adoption; and (iv) facilitate access to improved genetic material.

Integrated Disaster and Land Management (IDLM). The World Bank/LDCF/GEF project on the integrated management of disasters and degraded lands is in the PADAT area the project that aims to

address in flooding and flood-risk areas the following activities: (i) strengthening and raising awareness among institutions; (ii) promoting community activities on adaptation; and (iii) implementing early warning system and early tracking. ADAPT will seek to promote a synergy with these activities, which are, by definition, directed towards the same group of vulnerable producers and aim at climate change adaptation.

Strengthening the Conservation Role of Togo's National System of Protected Areas (STSPA). This UNDP ongoing project on protected areas aims to *conserve the globally important biodiversity in the biomes of the Togo s and to ensure the connectivity of protected areas to the eco-region centres while strengthening the management of the protected areas systems in Togo in order to improve its contribution to the conservation of the biodiversity by demonstrating effective approaches for the rehabilitation and management of the protected areas*. In order to achieve this objective, the project intervention aims at: (i) improving the policies and the legal and institutional frameworks on protected areas covering approximately 578 000 ha; and (ii) effectively managing all of the protected area of the OKM (179 000 ha), whose biodiversity is threatened by poachers, uncontrolled fires and overgrazing.

National Programme of Decentralized Actions on Environnement Management (**PNADE**), funded by the European Union, will support the National Environmental Management Agency (ANGE, *Agence nationale de gestion de l'environnement*) and new intersectoral collaboration bodies (National Committee on Sustainable Development - CNDD, Regional Committee on Sustainable Developmeent - CRDD), with the aim to: *contribute to the overall objectives of sustainable development of the country by building and supporting the capacities of different actors to integrate environmental issues into the local development strategies and actions*. To achieve this objective, the strategy is based on six focal areas: (i) developing and strengthening human competences; (ii) promoting the emergence and recognition of the subsidiarity concept of the local authorities with respect to the villages; (iii) strengthening, through continuous training, the professionalism of the NGOs and the creation of centres of environmental technical expertise in the prefectures and the regions; (iv) consolidating the approach to environmental capacity development (ECD) on the basis of learning by doing, leading to concrete achievements on the field, which are decided on and implemented by local actors; (v) creating links between the sustainable management of the natural resources and the fight against poverty; and (vi) integrating, within other current and/or planned interventions, synergies and complementarities, notably with different microproject facilities and current social achievements within other projects. The project targets eight prefectures in the country as an indicative intervention area for five years duration.

Table 4. Potential and opportunities of synergy and linkages with ongoing initiatives

LDCF activities	PASA	WAAPP	IDLM	STSPA	PNADE
	Integration of livestock farming	Increasing productivity	Integrated soil Management	Protected resources	Capacity building
• High-performance and adapted seeds		✓	✓		
• Strengthening of technical capacities	✓	✓	✓		✓
• Mitigation of climate change impacts			✓	✓	✓
• Reduction of human pressure on the forest resources			✓	✓	✓
• Promotion and development of water and soil conservation practices and improvement of soil fertility	✓	✓	✓	✓	
• Management of wildland fires	✓		✓	✓	✓
• Development and enhancement of lowlands and support to the development of sustainable aquaculture	✓		✓		
• Development and management of the	✓		✓	✓	✓

protected pastoral areas and the promotion of the cultivation of fodder crops	

Support Project for the Preservation of Ecosystems and Biodiversity through the Agropastoralism (PAPEBA) in the Savannah, Kara, Central, and Plateau Regions in the context of Decentralization. This project[7] is worth to be cited for the great synergy oppotunity it represents for ADAPT. Its overall objective is to facilitate the involvement of Non-State Actors (NSAs) in the economic and sustainable development of their areas. The specific objective of the project is to strengthen the dialogue between NSAs as to respond efficiently to local issues and national collaborative management of natural resources related to conveying feet livestock to Togo at outskirts of protected areas while facilitating the security and development of animal mobility. Two results are expected: Result 1: The associations riparian to forests and to protected areas along with breeders' associations are able via functional animation tools to consult and to take common positions on issues regarding sustainable natural resources as related to livestock mobility. Result 2: Marked trails (corridors) for transhumance and livestock marketing are secure, developed and managed jointly, inclusively and equitably between users and institutional actors with focus on strategic portions bordering protected areas.

The project will also ensure close coordination (from its design, implementation, to evaluation phases) with the activities that will be financed under the "Sahel and West Africa Programme in Support of the Great Green Wall Initiative"). The project in establishing synergy and linkages with "Sahel and West Africa Programme in Support of the Great Green Wall Initiative (SWA/S/GGWI)" will be focussing on in-the-ground investments via activities that are carried out by the regional initiative as a way to seek harmonization of approaches and technologies. By promoting mainstreaming climate change adaptation tools into agricultural production systems and adaptation of vulnerable agricultural production systems to current and future climate impacts, the project will establish operational linkages with the SWA/S/GGWI, which entails integrating climate into national planning mechanisms and efficient restoration and soil conservation, combined with sustainable agricultural practices and conservation and enhancement of biodiversity.

2.2.7. Risks and hypotheses

The institutional risks identified include: (i) the lack of adequate coordination within PADAT (since its staff is not familiar with adaptation); (ii) the lack of integration of climate issues within the public institutions; (iii) the lack of the actors' involvement in addressing climate change; (iv) the low institutional capacities to respond to a complex issue such as adaptation; (iv) financial risks (i.e. the lack of priority and the allocation of funds in the field of adaptation through the institutions, in general, and following the termination of LDCF, in particular). The *Coordination opérationnelle du PADAT* (PADAT Operational Coordination Unit) termed COD-PADAT, is placed under the MAEP and under the direct supervision of its Secretary General. At the same time, NAPA is placed under the MERF. These are the ramifications that could create some incoherence, even obstacles. However, these institutional risks are considered minor if there is Government high level support.

The other risks concern: (i) the complexity and burdensome institutional framework set up to implement the envisaged activities; (ii) the weak level of participation of the beneficiaries in the implementation and monitoring of the activities combined with the farmers' cultural resistance to change; (iii) limitations at the national, regional and local levels in understanding and assessing climate change impacts; (iv) poor governance in the capacity-building activities and climate change training; (v) resistance to leadership and the involvement of women in the project activities; and (iv) duplication of activities of other projects.

Some mitigating measures are proposed in the last column, though not exclusive.

[7] Project just formulated with support of the European Union

Table 5. Assessment of potential risks

Identified Risks	Risk assessment	Risk Mitigation Measures
The complex and heavy institutional framework set-up for the implementation of planned activities could be an obstacle if not a constraint to the project's performance.	M	Efforts will be taken to develop a good rapport and intersectoral dialogue while strengthening the comparative advantage of the agencies involved. A collaboration strategy with the partner agencies and the projects underway will be developed and implemented.
Low level of beneficiaries' participation in the implementation and monitoring of activities combined with the farmers' cultural resistance to change.	H	The project will be based on demand and on a participatory approach at all levels. The involvement and awareness raising of POs will be conducive to ownership. The capacity-building approach will be based on the training of village extension agents, who will, in turn, train the producers and the POs. Enhancing local knowledge will facilitate the removal of cultural resistance to change with regard to innovations.
Limitations at the national, regional and local levels in understanding and assessing the impacts of climate change.	L	IEC on climate change will be a main response strategy to which an entire component will be dedicated.
Poor governance in the capacity-building activities and in training on climate change.	M	The Climate Committee will contribute simultaneously with the independent trainers in identifying and choosing the participants in the training and the work groups in Component 1.
Resistance to leadership and the involvement of women in the project activities.	H	The gender aspect will be an explicit part of the criteria for accessing project activities. The income-generating activities (IGAs) will be exclusively reserved for women and youth.
Duplication of other projects' activities.	M	The "additional" and "climate change adaptative" characteristics advocated by the project rule out the possibility of duplicating other projects. The exchanges developed within the alliance will supervise this duplication risk upstream, notably in the shared Annual Work Plans and Budgets (AWPBs).
**** Risk assessment** - H (high risk), M (moderate risk), and L (low risk). Here, the risk refers to the probability that the objectives of the project will not be achieved.*		

2.2.8. Sustainability

Basically, the aim of ADAPT project formulation is to provide the key ramp to set sustainability for PADAT activities. Indeed, the project is articulated to the national action plan of adaptation to climate change which by definition seeks to prolong positive impact of actions initiated under PADAT as to strengthen the resilience of the beneficiaries and their livelihood sources. The fundamental objective of the formulation of ADAPT is therefore to provide the necessary technology package to establish a sustainability in PADAT activities and outcomes. Indeed, the project is focused at the national level on climate change adaptation, which, by definition, seeks to prolong the positive impact of actions initiated. The purpose of linking ADAPT to PADAT is inherently justified by the need to correct the restrictive

PADAT developmental approach to tap natural resources for the sole purpose of increasing productivity, rather than seeking to ensure at the same time durability of its outcomes. This will be achieved by acting on all fronts likely to ensure a sustainability of this objective.

The socio-economic sustainability of the project will be strengthened as a result of choosing and promoting appropriate technologies that are likely to respond to the adaptation of the agricultural sector and to the establishment of rules on good environmental and natural resources management. Similarly, the ownership and use of technologies to adapt to adverse impacts of climate by the beneficiaries will allow them, in the future, to break with the present and past tradition of shifting agriculture and, instead, produce in all seasons. This commitment of the beneficiaries is, in itself, a measure of sustainability since their involvement in the activities implies the consent to maintain and sustainably manage the equipment and infrastructure set up at their disposal.

The availability of a mechanism to fund activities allows beneficiaries to access financial services. And yet, often, these are the services that are needed to launch a personal or collective activity in order to allow populations to be released from their financial contribution to access basic services.

The project aims to promote an inclusive approach that combines the development efforts advocated by PADAT to the additional adaptation needs promoted by ADAPT. Whereas the former aims at maximizing production and the fight against poverty, the LDCF component aims at strengthening the resilience of this entire mechanism to climate change impacts, which results in a combination that promotes sustainability.

In order to ensure the long-term implementation of this integrated adaptation approach, the project will adopt a financial and institutional sustainability strategy. This will include pilot financial mechanisms in the project areas in order to reduce the underlying risks to sustainability and to support the implementation of some activities and the integration of the adaptation as a result of IGAs. The strategy involves a strong willingness by the populations to participate in resolving problems that affect the long-term sustainability of the natural resources and the well-being of the local communities. The strategy will capitalize on all the good practices drawn from the experiences implemented by similar projects integrating climate change adaptation and on lessons learned from similar projects in Togo in the subregion.

This is an advantageous institutional arrangement for the permanent structures: the institutional mechanism is an essential element of PADAT's exit strategy and sustainability. Indeed, the project will privilege the existing institutions as the executing agencies of the sub-components, to which the project will provide the necessary financial support. Thus, for example, the implementation of components 1 and 3 will be assigned to the competent structures of the MERF; the implementation and the infrastructure of sub-components 2.1, 2.2. and 2.3 will be allocated to the competent structures of the MAEP.

The LDCF funds are grants and do not aim to maximize, as in PADAT's objectives, the opportunity of a dollar invested or even a high internal rate of profitability of the investment, but rather, they aim to finance the incremental cost needed to ensure the sustainability of the actions.

The project will be linked to continued regional and global programmes to ensure the information sharing and dissemination at a larger scale through the use IFAD website's FIDAfrique, the UNFCCC, GEF and other experience sharing platforms.

2.2.9. Replicability

The abundance of natural resources in Togo is an illusion. It is clear that the degradation of the resources have already begun, which requires proven adaptation measures for convincing the public. Colossal efforts are needed to raise awareness among the public and decision makers in order to alert them to the seriousness of the situation. Capacity strengthening is therefore necessary at all levels.

Although soil and water are available, they are rare and can only be measured at the plot level; without the provision of water kits, the producers lose large quantities of seeds every year, which costs them dearly. These kits, once set up on the edge of the plots, allow the planted seed to benefit from soil humidity and thus mitigate the rainfall delay. There are good practices in climate change adaptation, and all that is needed is to experiment in the field to convince the population of their relevance. The aquaculture mechanism is also well known in the regions endowed with water, and there is a demand. Replicability here is only possible if water is available.

PART III. INSTITUTIONAL FRAMEWORK AND PROJECT MANAGEMENT

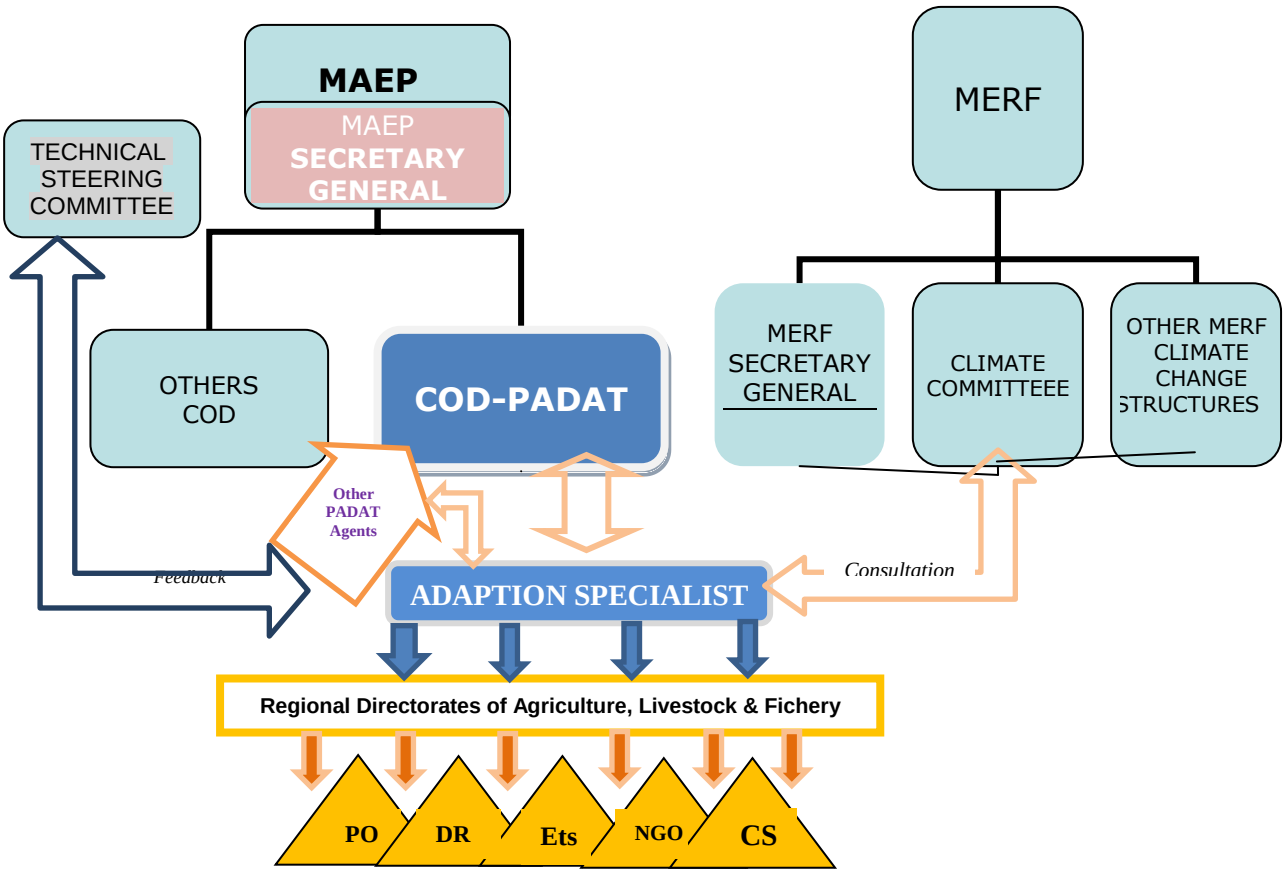
3.1. Basic commitments

All of the reference documents (DSRP-C and PNIASA) developed by the Government of Togo recommend the implementation of interventions in the agricultural sector through sectoral approach. And yet, a rapid appraisal of the operations of the MAEP institutions shows, among other things, their considerable weakness, a dismantling of the services, and a lack of codified management procedures. This situation suggests that precautions should be taken towards, notably, ensuring good management of new operations to be set up and supporting the creation of indispensable management conditions in a sector approach. One of the objectives of PADAT and PASA is to support this planned step towards the sector approach. This will be achieved when the ministerial institutions will have acquired an optimal level of competence in coordination, planning, fiduciary management, as well as sectoral monitoring and evaluation. Such an objective will be achieved in the medium and long term. PADAT will contribute towards this, in complement with PASA, through its capacity-building programme for the technical services and POs in order to prepare them to better fulfill their respective duties.

3.2. Project coordination and supervision

The specificity of the climate change adaptation will be taken into account for the coordination and supervision of the ADAPT project, which is operationally integrated into the mechanisms of PADAT implementation. The COD-PADAT remains the coordinator and supervisor of the PADAT project as a whole. For the IFAD/LDCF component, the COD-PADAT will be assisted by a MERF officer, an expert in climate change adaptation, who will be recruited within this same department under the same conditions as the COD-PADAT coordinator and supervisor (through an interministerial committee). This will guarantee the credibility of the recruitment process of CODs of PNIASA. This Assistant will have to ensure the viability of each of the components under the supervision of the Climate Committee and competence services of the MERF. He or she will then have to corroborate this viability before the CTP of PNIASA, to which he or she will report progressively on the results achieved (Figure 1). Under the supervision of the COD-PADAT, he/she will have to supervise the planning and implementation of field activities in cooperation with the PADAT local and regional structures and agencies. The LDCF grant will have its own accounting in order to simplify the management, the financial operations, the audits and the monitoring. Other implementing agents from PADAT comprise as shown in the figure 1:

Figure 1. Instititional Scheme



PO: Producers organizations DR: Other public regional directorates Ets: enterprises
NGO: non-governmental organization CS: Civil Society

3.3.Provisions for planning and implementing the project

The implementation will rely on the PADAT mechanism, which does not directly implement the components activities; to the extent possible, it assigns the implementation of all of the activities on a contractual basis to the specialized agencies and institutions with the required competences, experience and qualifications. The partner agencies and institutions can be public or private operators, independently of their nationality of Togolese or foreign community associations, such as training organizations, NGOs, research consultancy services, small- and medium-sized enterprises (SMEs), public works and other private sector enterprises and public organizations, such as *Direction de l'aménagement et de l'équipement rural* (DAER, Directorate for Rural Development and Equipment), ICAT, ITRA and the *Agence nationale de sécurité alimentaire du Togo* (ANSAT, National Food Security Agency of Togo). The specificity of climate change adaptation will be important in the choice of operators capable of implementing these and related tasks. For example, for the component related to strengthening policies on climate change adaption, PADAT will call on MERF specialists. Similarly, for the other components, the project will call on different providers, each according to its comparative advantage, i.e. consultants, research consultancy services, NGOs, PO unions, and public services and establishments. For the implementation of the ADAPT project, a MERF official, an expert in climate change adaptation, will supervise the monitoring and planning of the implementation of technical activities under the leadership of the COD-PADAT and in good rapport and collaboration with the MERF competent structures in one hand and with the PADAT agents on the other hand as shown in figure 1 above. PADAT agents are like COD PADAT part of the IFAD cofinancing baseline component and from that point of view they are engaged in the same manner as the adaptation specialist for implementing successfully the LDCF component. Most of technical work in the ADAPT component

will be initiated by the adaptation specialist and only then the rest of the PADAT personnel are put at contribution each based on his/her qualification and terms of reference in section 3.4 below, with capacitation when and where needed.

The implementation strategy will be based on targeting **criteria** varying according to themes, which can be social, economic, sectoral, and geographical within PADAT area; however, the three fundamental criteria on climate change will need to be associated with these criteria: (i) the impact of climate change; (ii) vulnerability to climate change; and (iii) the potential for adaptation to climate change. In particular, the women involved in PADAT are well represented in the rice and maize production activities, but to a lesser degree in the cassava production activities. They are predominant in the post-production activities of the three targeted crops (storage, conservation, processing and marketing). They are faced with the arduousness of production and post-production tasks in the three targeted crops; however, they are given a priority for accessing the support mechanisms and activities of PADAT, given the primary place that they hold in food security of the rural households and the fight against poverty. They have benefitted from all the PADAT project activities (input kits, advice/assistance, organizational and management capacity building, support in processing/marketing). For example, 32 500 women have been targeted as beneficiaries in the Quick-Start Operation. This will be continued and strengthened; they will be particularly privileged in the IGAs in aquaculture, market gardening and small-scale livestock farming, which are their fields of preference.

IFAD, as GEF's implementing agency, has a comparative advantage for having been involved in several projects in Togo in the field of agricultural and rural development. Together with PADAT, IFAD will have funded six projects in Togo for a total of US$75 million. The IFAD operations are in line with the poverty reduction strategy paper (DSRP-C) and PNIASA. The main strategic axes on which the IFAD operations will focus are increased productivity of three staple foods, the enhancement of products, and community development. And the present LDCF project opens the country onto a new type of investment advantageous for the resilience of population livelihoods it creates at no additional cost and to new opportunities aimed at strengthening the staff capacities and revenues of the poor. This project is fully aligned with the IFAD-supported baseline investment, namely the "*Projet d'Appui au Developpement Agricole au Togo (PADAT)"*. The project is aligned with the Agency's three operational strategies/policies (country strategy, Climate Change strategy, and targeting policy). The contribution of IFAD's climate change strategy in this context is what prolongs the project relevance to the country due to saving on yearly losses of quantities of seeds and the sustainability characters (additionnality benefits) it brings about to the baseline (PADAT) activities and Agency's program whilst reinforcing/valorising its staff capacities. NAPA recognized that agriculture and food security are key sectors for climate change adaptation, which offer a unique opportunity to link the IFAD agricultural and rural development activities with the responses to needs in terms of adaptation.

Moreover, IFAD activities are guided by a targeting strategy that ensures that they reach the rural poor, women and men alike, who are generally the most vulnerable to climate change. Just like GEF, IFAD is also a promoter of a gender approach in all of its operations on the field. Other additional advantages are shown by the fact that the LDCF project is fully integrated into PADAT; thus, a common management structure will contribute to reducing transaction costs.

3.4.Terms of reference of project personnel

COD-PADAT's task will include:

- managing the ADAPT component similarly to the PADAT project, by involving in the climate change adaptation component, in addition to the Climate Change Adaptation Assistant, each of the PADAT services, both national and regional: accounting, monitoring and evaluation, tenders, infrastructures, etc.

- Involving his/her Assistant in all stages of decision making and implementation, including budget implementation.

Under the supervision of COD-PADAT, the tasks of the Climate Change Adaptation Assistant or Specialist will include:

- planning and implementing ADAPT project activities;
- with each of the COD-PADAT services, preparing the bidding documents of the adaptation activities;
- participating in the selection of service provider agencies and operators;
- defining and monitoring the climate change adaptation indicators;
- ensuring the feasibility of each of the components with the supervision of the Climate Committee and the MERF competent services, who will then corroborate the feasibility before the CTP of PNIASA, to which it will progressively report on the results achieved;
- participating in the identification of project sites and beneficiaries with whom he/she will determine the operational method;
- Acting as signatory of all the financial papers related to the ADAPT project budget.

The PADAT accountant's tasks will include:

- keeping accounting records separate from the ADAPT project;
- strictly observing the accounting procedures of the Government of Togo, IFAD and LDCF/GEF;
- Ensuring that all expenditures are agreed on by COD-PADAT and the Assistant.

The tasks of the administration assistant or secretary will include:

- archiving of the administrative documents related to the ADAPT project;
- holding and following up on meetings of the COD-PADAT and his/her Assistant, and planning of workshops and service provision by other visitors of the project such as IFAD and others;
- classifying agreements of service providers and related documents;
- Managing all aspects of administrative communications and receiving the project's public stakeholders.

The tasks of the driver will include:

- maintaining the project vehicle in good condition;
- ensuring regular vehicle maintenance in line with the budget;
- keeping updated records of the vehicle's dashboard indicating the number of kilometres of different field missions or urban travel together with gas consumption;
- strictly complying with the regulations of the United Nations concerning travel;
- Indicating all accidents that occur during the operation of the vehicle.

PART IV. PROJECT COSTS AND FUNDING

The amounts per component are generally aligned with the initially approved allocations in the PIF (Project Identification Form). The duration of the project implementation is estimated at 60 months and is planned to begin in 2013.

Allowances for unforeseen physical contingencies. The costs were input in COSTAB in CFAF and in US dollars. Specific percentages of basic costs were foreseen to cover the unexpected physical costs according to the different categories of expenditures.[8]

Unit costs: Estimates of costs are based on field research of the project formulation mission as well as on the indications from the PADAT team. The unit costs and the breakdown of investment, operating and maintenance costs are presented in the COASTAB and Annexes (1, 2, and 5) and result from discussion with the formulation team.

Percentages of taxes and currency per category of expense. The mission defined the categories of expenditures for which the percentages of taxes and currencies in unit costs are standard and in line with PADAT. The duties and taxes are included in the activities costs, but are substracted at the end from the project costab (as the LDCF grant is not subject to taxation). The added value tax (VAT) at an 18 per cent rate, is generally applied to most of the expenditures categories used by the project, as is the case in all the Member countries of *Union économique et monétaire ouest africain* (UEMOA, West African Economic and Monetary Union). These categories with the associated rates are indicated in Table 6.

Table 6. Percentage of taxes and currencies

Categories of expenditures	Percentage of taxes on unit cost	Percentage of foreign currency
Investment costs		
▪ Means of transportation	30	60
▪ Supplies and equipment	30	60
▪ Studies, training and Workshops	18	0
▪ International consultations	0	80
▪ National consultations	18	0
▪ Audits	18	60
▪ Publications	18	20
Recurrent costs		
▪ Operations and maintenance	5	60
▪ Salaries	18	0

Provisions for rises in prices. Togo is part of the French franc region where the exchange rate of the CFAF is fixed with the euro (1 euro =CFAF655.957). Therefore, the fluctuation of the CFAF/US$ exchange rate reflects that of the euro and the US dollar. It is very difficult to make predictions on the fluctuation of the US$/euro exchange rate. There are major differences of opinion on the short- and long-term US$/ euro exchange rate. During the formulation mission of the project (May 2012), the exchange rate was CFAF500 for US$1. The mission considered it preferable to select the CFAF500 per US$1 in the COSTAB throughout the duration of the project in line with PADAT estimates. The hypotheses selected in the COSTAB are summarized in Table 7.

[8] See the tables detailed in PART IV

Table 7. Inflation and exchange rate hypotheses in the COSTAB

	Up to Negotiation	Up to Project Start	2013	2014	2015	2016	2017
Inflation (in %'s) /a							
Annual rates							
Local	0.0	0.0	3.5	3.5	3.5	3.5	3.5
Foreign	0.0	0.0	3.5	3.5	3.5	3.5	3.5
Compounded rates							
Local	0.0	0.0	1.8	5.3	9.0	12.8	16.8
Foreign	0.0	0.0	1.8	5.3	9.0	12.8	16.8
Exchange rates (Local/Foreign) /b							
Zero							
Rates actually used	500.0	500.0	500.0	500.0	500.0	500.0	500.0
Constant purchasing parity rates	500.0	500.0	500.0	500.0	500.0	500.0	500.0
% deviation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All							
Rates actually used	500.0	500.0	500.0	500.0	500.0	500.0	500.0
Constant purchasing parity rates	500.0	500.0	500.0	500.0	500.0	500.0	500.0
% deviation	0.0	0.0	0.0	0.0	0.0	0.0	0.0

\a Yearly values are within Each Project Year
\b Yearly values are at Project Year Midpoints

4.1.Cost-efficiency ratio

The **operating accounts** corresponding to the production systems of the intervention area were built on the basis of data collected by the mission and exchanges with beneficiaries. The analysis aims to: (i) study the financial viability of the technologies promoted and the increase in incomes generated by the investments; (ii) study, in an appropriate and detailed manner, the budget for the investment activities promoted by ADAPT; and (iii) study the additionality with respect to the baseline situation (without the intervention of the FPMA project). The basic hypotheses of this analysis are based on the elements of the projection that will mainly rely on the PADAT results.

Data. The statistical data on the prices in the rural areas are based on the field surveys and interviews with farmers in the five ADAPT project regions visited by the mission as well as other documents of projects funded by IFAD.

Types of analysis: Two financial criterias deserve to be pointed out: (i) The **additional net benefits** were derived with respect to the baseline situation. (ii) The investments were enhanced by using the **internal rate of profitability (IPR)** compared to a discount rate that cancels the current net value of a series of financial flows (generally, related to a project having an initial investment followed by a positive cash flow). If the IPR is higher than the capital discount rate (see also capital cost), then the current net value of the project is positive (and therefore the project is profitable).

Income-generating activities. The project will promote IGAs for developing agricultural, apiculture and aquaculture. In all the cases, a detailed analysis of investments needed for the launch was carried out prior to determining the net benefits. The results were compared with the baseline without ADAPT intervention. This analysis shows the profitability of all of the IGAs proposed. Concerning market gardening, the operating accounts of a surface area of 1 ha were developed for tomato, pepper and okra crops. The base hypothesis is that the introduction of these crops would be linked with the dam rehabilitation activities. The soil occupation is 12 months for okra, 5-7 months for tomato, and 6-8 months for pepper. The same investments for rehabilitation will also serve for developing a small fish farming unit, whose added value was also demonstrated with a return of $US.16 per US$1 of investment. Table 8 summarizes the financial results.

Table 8. Simplified operating accounts of some vegetables

	Total costs	Annual Net Benefits (in CFAF)		
		Without the project	With the project (full development)	Increase
Tomato	1 011 450	2 751 300	4 588 550	1 837 250
Okra	1 163 690	2 363 100	4 236 310	1 873 210
Pepper	621 940	1 617 900	2 258 060	640 160
Aquaculture	26 007 400	–	4 252 100	4 252 100

With respect to the promotion of apiculture, it is planned that the kit needed for the start-up of activities will be made available by the project for the proposed reforestation activities. This is not only an activity that aims to safeguard the environment, but also an activity that aims to increase the incomes of trained groups with an expected financial benefit of US$0.25 per US$1 invested.

The **sustainability** of the project will be guaranteed by integrating it with the PADAT project, notably through: (i) a common management structure that will contribute towards reducing the management and supervision costs, as well as costs of transactions; (ii) the integration of the monitoring-evaluation framework; and (iii) the creation of synergies on the field.

The **expected benefits** of the ADAPT intervention are linked to the increase in the scope of activities carried out in the PADAT project (baseline situation) to render these activities less vulnerable to climate change. More specifically, the following benefits will be achieved as a result of the additionality and the complementarity between the two projects:

- *Component 1. The integration of climate change adaptation tools into the agricultural production systems:* development of the competences of local technicians in the identification of climate risks in agricultural production and livestock farming; sustainable management of meteorological services; improved knowledge on the impacts of climate change in the production systems; and policy decision-makers are informed and ready to act as the driving force in promoting the set-up of climate change adaptation measures in the country. In real terms, improved knowledge on the production systems stems from limiting the yearly seeds losses occurring from farmers' assumption that the first drop of rain will continue and hence decide to seed while the rain fails to arrive and even last a longer moment inducing these quantities to lose their germination capacities and for the farmer the necessity to repeat his operation, losing henceforth his/her seeds. This may even be repeated several times as long the rain variability continues. With ADAPT the farmers will no longer base their decision on the first drop but will hold their seedling activity until a go-ahead is provided by meteorological services for the right moment the precipitation will take place providing the farmer an opportunity to save his/her seeds quantities and animal energy used for plowing at the wrong time. This is how it demonstrates cost-effectiveness of ADAPT as an alternative to PADAT that rely rather on providing its "quick start" encouraging hereby the farmer to quickly start his/her farming operations. The same reasoning applies (i) to the decision-makers who will act from now on the basis (adapt) that their support services are bound to climate information ; and this introduces a cost-effective device for saving energy (for the farmer and the animal traction) and cost of acquisition of seeds; (ii) agricultural production systems using long term variety assuming it produces more than short term variety and then that the rain pattern is continuing to be sufficient as before ; in these circumstances ADAPT will promote the use of short term variety but more performant as to produce as much as the farmer uses to gain reinforcing henceforth his/her resilience to climate impacts.

- *Component 2. Adaptation of agricultural production systems that are vulnerable to climate change*: increase and diversification of income and reduction of the risk of agricultural production loss; improvement in the level of food security; creation of technical capacities in the development and maintenance of water reservoirs; regeneration of poor soils through reforestation; promotion of agricultural production systems and livestock farming systems adapted to climate change; creation of rural employment in the fields of fish farming and biodiversity conservation, above all, through forestation and apiculture activities; reduction of water erosion through activities for protecting the banks of water courses and bodies; and conflict mitigation between livestock farmers (transhumance) and crop farmers.
- *Component 3. Information, Education and Communication (IEC) on climate change:* improved knowledge and understanding on the sustainable use of the natural resources (notably, water and forest resources); improved capacities for training local technicians; and dissemination of knowledge and increased awareness raising on the relationship between climate change, agriculture production and livestock farming.
- *Component 4. Project management and monitoring and evaluation*: better understanding of the impacts of climate change in the PADAT activities through the analytical tools of climate change adaptation.

ADAPT

Financing of Investment/Recurrent Costs and Financial Charges by Year

(US$)

	Financing					
	2013	**2014**	**2015**	**2016**	**2017**	**Total**
I. Investment Costs						
The Government	469 219	315 302	203 222	187 655	79 936	1 255 334
LDCF (FPMA)	1 856 120	1 318 784	869 213	748 231	326 385	5 118 734
Total Investment Costs	2 325 339	1 634 086	1 072 435	935 886	406 322	6 374 068
II. Recurrent Costs						
The Government	8 984	7 706	4 679	5 080	5 258	31 706
LDCF (FPMA)	56 666	51 395	38 178	44 016	45 556	235 811
Total Recurrent Costs	65 649	59 101	42 858	49 096	50 814	267 517
III. Financial Charges						
The Government	-	-	-	-	-	-
LDCF (FPMA)	-	-	-	-	-	-
Total Financial Charges	-	-	-	-	-	-
Total Financing of Costs	2 390 988	1 693 187	1 115 293	984 982	457 136	6 641 586

4.2. Funding and co-funding plan

The project will be funded in the form of an LDCF grant of US$ 5,354,546. IFAD will co-finance this project through PADAT with an estimates amount of USD 10 million. The Government's contribution (customs and taxes), was estimated at US$ 795,000. The contribution of the beneficiaries amounts to an estimated amount of USD 424,000 of in-kind contribution.

Table 9. ADAPT co-funding

	LDCF	Government	IFAD	Beneficiaries	Total
A. Integration of tools to adapt to the climate risks in the agricultural production systems	1 144 000	157 451	1 780 000	53 400	**3 134 851**
B. Adaptation of agricultural production systems that are vulnerable to climate impacts		-		-	-
1. Resilience of agricultural production	1 330 315	182 093	5 125 000	65 000	**6 702 408**
2. Livestock farming and agro-silviculture	1 228 377	177 807	560 000	75 000	**2 041 184**
3. Aquaculture and fish farming associated with market gardening	704 309	132 048	455 000	102 100	**1 393 457**
C. Information, Education and Communication on climate change	680 545	114 825	980 000	90 000	**1 865 370**
D. Project management and monitoring and evaluation	267 000	30 776	1 100 000	38 500	**1 436 276**
Total funding	**5 354 546**	**795 000**	**10 000 000**	**424 000**	**16 573 546**

4.3. Purchase of goods and services

Since 2008, the Government has been involved in a process of reforming the procurement regulations. Today, Togo has a new public procurement code in line with international standards and the guidelines of the UEMOA. The acquisition of goods, works and consultation services funded by the ADAPT project will be subject to the conditions established by IFAD and will strictly follow PADAT modalities.[9]

The **Procurement Plan** specifies the conditions under which these methods are used. Indicatively, concerning the procurement of supplies and works, the three following methods will be possible: (i) call for international tenders; (ii) call for national tenders; (iii) Consulting vendors nationwide; and (iv) direct contracting (mutual agreement).

The thresholds related to the procurement methods are as follows:

Procurement method	***Supplies and works***	***Observations***
1. Call for international tenders	Above or equal to US$100 000	
2. Call for national tenders	From US$20 000 to US$100 000	
3. Procurement from the United Nations institutions		Vehicles, office equipment
4. Limited Competition	Below US$20,000, minimum 3 competitions	

Concerning the procurement of the **Selection and Employment of Consultants/Service Providers**, All following methods are possible: (i) Selection Based on Quality and Cost; (ii) Selection based on Least Cost (SLC); (iii) Selection based on the Qualifications of the Consultants (SQC); (iv) Selection of Individual Consultants); (v) Selection through mutual agreement; (iv) Budget; and (vi) Quality.

[9] See Annex 9 of PADAT's concept paper.

Procurement method	*Contracts*	*Observations*
Selection based on quality and cost (SBQC)	For any amount	
Selection of consultants based on CVs comparison	For any amount	
Selection based on consultants' qualifications (SQC)	For any amount	

4.4. Review of procurement-related decisions

At the start of the project, the Procurement Plan for 18 months shown below, referring to the first 18 months of implementation will be updated by the Project Coordinator and subject to the non-objection of the donor. For each procurement, he or she will indicate the method and thresholds proposed. This Procurement Plan will be one of the prerequisite conditions of funding disbursement. Each year, an annual procurement plan will be developed and integrated into the Annual Work Plan and Budget (AWPB). It will be subject to approval by the Steering Committee and to the non-objection of the donor prior to its implementation.

4.5. Flow of capital and project supervision

There will be separate accounting for the LDCF grant in order to simplify the management, the financial operations, the audits and the monitoring. A separate account will be set up for the ADAPT funds. IFAD will sign a separate financial agreement with the Government for the LDCF grant. The flow of capital will follow the PADAT modalities. The project will be implemented by the Project Management Unit (PMU) of ADAPT, in line with the same conditions, rules and procedures applied to the project management of PADAT. IFAD will be in charge of the supervision of the project. This supervision will be unique and applying to both, LDCF component and PADAT; yet, for the LDCF component there will be a representative of IFAD/ECD.

The operations of the M&E systems are designed and will be implemented by using the suitable components from IFAD's Manual on Results Monitoring and a list of acceptable indicators. It is also highlighted that each M&E operational system is in line with GEF's specific demands. The participatory approaches to M&E are highlighted at all levels, concerning in particular, investments directly benefitting beneficiaries.

In the case of the LDCF project, a detailed plan (AWPB) is prepared for the first 18 months and will be prepared each year in order to identify the activities that must be implemented during the following 12 months. Each report will be sent to IFAD with copies to national counterparts so that it may propose revisions and recommendations they deem necessary.

Similarly, as regular activities of the organization, IFAD's technical team and the project consultants will meet on the project sites and draft the detailed reports on progress, achievements, project results, as well as lessons learned. These field reports will be transmitted, upon request, to the donor as well as other collaborative projects and partners.

The project's participatory approach will attract the local institutions to play an important role in monitoring. This role will be formalized and structured through the association of Ministry of Agriculture, Livestock and Fishery (MAEP) and its regional structures, the Ministry of Environment and Forestry resources (MERF) structures, as well its regional representations (DREF) and beneficiary associations of the pilot areas, which will be involved each year in the monitoring of the implementation and results, as actors of participatory M&E of PADAT. All of the implementation institutions will ensure the monitoring of activities of which they are principally responsible. The methodology of

participatory evaluation will be developed at the beginning of the project and will consist in an important commitment of national institutions in mid-term assessment. In order to facilitate this, an appropriate support will be provided to the national counterpart in order that it may be able to conduct M&E activities in line with planning.

The meetings of the project's Steering Committee will also be convened periodically. A progress report, concisely estimating the implementation level of the programmed activities, the results produced and the advancements made in achieving project objectives, will be prepared and disseminated two weeks before each Steering Committee meeting, which will conduct an analysis of the report and make recommendations for all necessary monitoring actions to improve project performance.

The results of the M&E system will also contribute to strengthening overall knowledge on climate change adaptation. More specifically, it will contribute to enriching the knowledge base by drawing on lessons learned from the cost-effectiveness of the models of adaptation activities as well as the need to best use and extend these activities to the entire country. Finally, it will contribute to developing LDC strategies by indicating the implementation framework for: (i) changes at the level of the project area; (ii) successful practices in re-qualification and improvement of knowledge on climate change adaptation; and (iii) inter-sectoral strategies, notably climate change adaptation.

The M&E function will be integrated in the overall M&E system of the PADAT operation. Total costs of the M&E system are reflected in project costing. LDCF financing will cover monitoring of ground and surface water and impact in terms of adaptation through component 4 at a total cost of $ 300,000 . Daily monitoring is undertaken through the VCSP through its overall M&E system. The LDCF component is an integral part of the VSCP Project and co-financing will mainly cover the M&E of this project as a blended component of the baseline.

PART V. MONITORING, REPORTING AND EVALUATION

5.1. Monitoring

The ADAPT monitoring system will be harmonized with the PADAT's. The latter, set up since the launching of activities (2012), includes tools allowing assessing the project progress and performance. The system is organized both at the national and regional levels. At the national level, the national mechanism is mainly facilitated by the head of the Monitoring and Evaluation, a member of the delegated National Coordination, based in the *Direction de la planification et de la coopération agricole* (DPCA, Directorate of Planning and Agricultural Cooperation) and supported by the ATI planner. This national specialist who is a statistician, has a good knowledge of database management, and works in close collaboration with the head of the Monitoring and Evaluation Division of the DPCA in order to set up the sectoral M&E system of the MAEP. Both work essentially in the following activities: (i) the finalization, adoption and dissemination of PADAT's M&E system and the sectoral monitoring and training of actors in their use ; (ii) the general planning of activities; (iii) the establishment of a baseline situation of project impact indicators;[10] (iv) feeding the M&E database; (v) the production of regular implementation reports; (vi) organization in support of the coordinator of regular supervision and evaluation missions; and (vii) the training of heads of technical departments and DRAEP on monitoring and evaluation. To this end, a database has been set up at the DPCA and an official of this institution has been trained to manage it. An annual project performance report will be produced and submitted for review by the Steering Committee. The head of the monitoring and evaluation will receive the quarterly monitoring reports of the Regional Coordinations, whose monitoring and evaluation manual will define the format in order to harmonize the information that will be provided. He/she will produce a special semestrial monitoring and evaluation report (in June and December) focusing on the agreed results indicators to be provided as input into the semestrial implementation report of the project. At the regional level, the head of the Monitoring and Evaluation of the Regional Coordination is in charge of the specific monitoring of PADAT activities in liaison with the different actors in the field, in particular, with the head of the DRAEP's Statistics and Monitoring and Evaluation Department. This individual is in charge of monitoring the stakeholders involved in the project implementation. In particular, he/she is in charge of monitoring: (i) the implementation of the guidelines; (ii) the APOs, their activities, the funding requested and received, and the outcomes obtained, etc.; (iii) as support actions for service providers and stakeholders of the productions selected for the realization and management of their activities (e.g. visits to the promoters, support and advice, feasibility study, etc.); (iv) the supervisory operators; (v) the training organized by the APOs (type of training provided, date and duration, number and identification of trained promoters, results obtained, facility or trainer that provided the training, cost of the training, the training programmes carried out for the certified promoters; (vi) the structuring of the PO by sector and training of PO members (restructuring of existing POs or the creation of new ones, the number and type of groups organized, the grassroots POs created, trained and supported, etc.); and (vii) the construction of infrastructures; etc. These data are recorded in the monitoring files (yet to be developed), input by the support NGOs and transmitted monthly to the Regional Coordinations.

5.2. Reporting

The quarterly reports of the Regional Coordination prepared in collaboration with the head of the Monitoring and Evaluation of the DRAEP are transmitted to feed the M&E database of the delegated National Coordination after analysis by DRAEP on how field activities are progressing and a summary of the monitoring sheets filled. The regular monitoring and evaluation report of the Regional Coordination is systematically reviewed at the DRAEP prior to its transmission to the Delegated

[10] The baseline survey will be administered with FAO's support from November 2010 to January 2011, i.e. before the launch of the project. The necessary measures have already been taken to this end.

National Coordination. A regional database is set up at the Statistics Division of DRAEP. It receives information from the supervisory operators and survey officers from the Statistics Department. The ADAPT project will adopt this mechanism.

5.3. Evaluation

On the basis of impact indicators selected within the framework of PADAT results, three studies/surveys will be carried out throughout the project, namely: (i) the baseline survey prior to the launch of the project; (ii) the mid-term evaluation; and (iii) the end-of-project evaluation. The baseline survey will be based on IFAD's SYGRI/Result and Impact Management System (RIMS) method (including the anthropometric survey), which will allow to monitor the impact of the Project on the nutritional situation of the population, the improvement of the living conditions of the target groups and the prevalence of child malnutrition index (boys/girls). ADAPT's climate change adaptation will be combined with the PADAT socio-economic impact indicators. All of the information from the surveys will be used as a basis for the monitoring and evaluation activities, be it the internal monitoring systems of the Project or through impact studies. The evolution of the Quick-Start operation will be subject to the SYRGRI monitoring and evaluation system.

PART VI. ADDITIONAL INFORMATION AND ANNEXES

6.1. Letter of endorsement of the country

The letter of endorsement was already obtained during the PIF preparation.

6.2. Letter of commitment from co-financiers

The main co-financier in this project is IFAD (Letter to be provided prior to submission).

6.3. LOGICAL FRAMEWORK

Outcomes hierarchy	Indicators	Means of verification	Assumptions
Goal: Reduce the impact of climate change on agriculture prodcutio nand food ecurity	▪ Increased resilience of vulnerable grousp and natural resources	▪ Supervision reports ▪ Project reporting	▪ Socio-political and economic context ▪ Continued support from the Government of Togo to the PNIASA ▪ Synergy and complementarity between the projects/programmes partners.
Environmental objective: Promote the integration of climate parameters in the planning and agriculture production nsystems	▪ Level of integration of climatic parameters in the planning processes (national. Regional and local) is significantly improved.	▪ Targetetd studies ▪ Mid-term and final evaluations ▪ Specific studies	▪ The institutional framework is conducive to the implementation of the ADAPT project. ▪ The public decision makers wish to adopt the policy recommendations; notably, they accept to undergo the training and to integrate climate risk into the sectoral strategies.
Development objective: Strengthen the capacity of institutions to sustainably improve food security and income from agriculture production.	▪ At least 25% of the institutions involved in food security of vulnerable households improve their capacities ▪ Farmers and their households improve their income by 40%	▪ Impact assessment surveys (mid-term and final career) ▪ PADAT evaluation Report	▪ The project develops and implements means to generate income, increase productivity and ensure food security resilient to climate change ▪ There are potential conflicts from increasing productivity without taking into account climate disruption and impacts on the natural resources.
<u>Component 1</u>: The integration of climate change adaptation tools into agricultural production systems	▪ At least 60% of producers (by sex and age) supported by PADAT indicate a good understanding of the climate change ▪ The number of farmers adopting Integrated Soil Fertility Management (ISFM) practices has increased more than 50%	▪ Project progress reports ▪ M&E system	▪ The structuring of small-scale grassroots organizations into unions representing their interests may induce ownership by the elites and the large producers ▪ Problems of governance and leadership of producer organizations ▪ Availability, competence and interest of service providers and technical services in participating in Project implementation.
Outcome 1.1: Support to the integration of climate change adaptation into the agricultural production systems is reinforced	▪ Reports on the thematic studies and mapping of the vulnerable production areas (especially for rice, maize and cassava vulnerable) are available for 90% of the targeted areas	▪ Cartographies & surveys reports	▪ Climate change adaptation strategy applied. ▪ Climate projections considerations taken from the IPCC

	▪ # of training sessions on development and use of vulnerability maps		
Outcome 1.2: The agro-meteorological network is strengthened	▪ 70% of meteorological personnel have gained the necessary skills in the field of monitoring and analysis of CC and on the articulation of climate change and farming	▪ Monitoring reports (M / E cell) ▪ Project reporting	▪ Capacity of local providers to distribute the equipment and ensure training while monitoring the use of equipment according to project modalities ▪ Capacity of local private operators to be in charge of managing the equipments
<u>Component 2</u>: Adaptation of vulnerable agricultural production systems to current and future climate impacts	▪ Smallholder farmers in the target area increase their production of 8 to 10% for maize and 5% for rice through adaptation measures	▪ Mid-term review	▪ Flexibility of PADAT to integrate ADAPT ▪ Comprehension and adoption of the climate change adaptation approach by COD-PADAT and its collaborators on the ground
Outcome 2.1: The resilience of food production (maize, rice and cassava) by the introduction of crop techniques integrating climate change adaptation is improved	▪ Diversified support is provided to strengthen the resilience of main crops	▪ Training manuals and planning	▪ Capacity of ICAT to assimilate the climate change adaptation approach.
Outcome 2.2: Systems integrating livestock farming and agro-silviculture to reduce the impact of recurrent drought are promoted	▪ Managed and equipe transhumance corridors ▪ Restauration of degraded or degrading ecosystems through reforestation	▪ Project reporting ▪ Reports of services providers ▪ Reports on training, study tours and exchange of experiences made	▪ Beneficiaries are committed to the restoration of degraded ecosystems. ▪ Motivation of the apiculture activities to stimulate reforestation.
Outcome 2.3: Diversification of production systems through the development of aquaculture and fish farming associated with market gardening is promoted	▪ 3 feasability studies on the IAA approach ▪ 10 aquaclture units established and 10 natural ponds (2500 m3 each) are rehabilitated for aquaculture ▪ Training and capacity building on aquaculture integrating IGAs (10 Farmers organisations)	▪ Project reporting ▪ Reports of services providers	▪ Availability of appropriate water sources for aquaculture. ▪ Expression of a local demand for aquaculture.

Component 3: Strengthening the promotion of education, information and communication (IEC) on climate change	▪ Establish a mechanism for IEC and adequate communication tools	▪ Mid-term review	▪ Level of literacy of the producers. ▪ Cultural reluctance to change.
Outcome 3.1: Public knowledge and awareness on Climate change and vulnerability has increased	▪ 50 % of decision makers and service providers use the tools and manuels for CC adaptation ▪ Sensitise and train smalfarmers on risk management (300 sites and 1500 farmers organisations on the impact of climate change and adaptation measures)	▪ Reports of services providers ▪ Reports on training, study tours and exchange of experiences made	▪ Simplicity of training manuals and modules for participants. ▪ Availability of qualified trainers in the languages spoken in the rural areas
Outcome 3.2: Technical modules and manuals including local knowledge on adapting agricultural production systems to climate change are elaborated, adopted, and disseminated	▪ Training material on CC adaptation for agriculture production nsystems produced and diffused to more than 2000 grasroots beneficiaries.	▪ Reports of services providers ▪ Modules and technical handbooks	▪ Beneficiaries agree to dedicate time for training. ▪ Ease in assimilating educational contents of manuals and modules

6.4.COSTAB

République du Togo
ADAPT
Table 1. Intégration d'outils d'adaptation aux risques climatiques
Detailed Costs

		Quantities						Unit Cost	Unit Cost	Base Cost (US$)						Totals Including Contingencies (US$)						Other Accounts		
	Unit	2013	2014	2015	2016	2017	Total	(FCFA)	(US$)	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	Disb. Acct.	Fin. Rule	Proc. Method
I. Investment Costs																								
A. Appui à l'intégration de l'aspect CC dans les systèmes de production agricole																								
1. Etudes sectorielles																								
Etat de la vulnérabilité	Etude	1	-	-	-	-	1	12,500,000	25,000	25 000.0	-	-	-	-	25 000.0	26 709.4	-	-	-	-	26 709.4	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Vulnérabilité des ressources en eau	Etude	1	-	-	-	-	1	12,500,000	25,000	25 000.0	-	-	-	-	25 000.0	26 709.4	-	-	-	-	26 709.4	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Energie rurale durable	Etude	1	-	-	-	-	1	12,500,000	25,000	25 000.0	-	-	-	-	25 000.0	26 709.4	-	-	-	-	26 709.4	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Elaboration d'un code pastoral /a	Etude	1	-	-	-	-	1	12,500,000	25,000	25 000.0	-	-	-	-	25 000.0	26 709.4	-	-	-	-	26 709.4	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										100 000.0	-	-	-	-	100 000.0	106 837.5	-	-	-	-	106 837.5			
2. Etudes thématiques																								
Mobilité du cheptel	Etude	1	-	-	-	-	1	11,998,500	23,997	23 997.0	-	-	-	-	23 997.0	25 637.8	-	-	-	-	25 637.8	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Adaptation de la filière semence	Etude	1	-	-	-	-	1	7,500,000	15,000	15 000.0	-	-	-	-	15 000.0	16 025.6	-	-	-	-	16 025.6	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Enquête semences adaptées /b	Etude	1	-	-	-	-	1	10,000,000	20,000	20 000.0	-	-	-	-	20 000.0	21 367.5	-	-	-	-	21 367.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										58 997.0	-	-	-	-	58 997.0	63 030.9	-	-	-	-	63 030.9			
3. Cartographie																								
Carte agricole /c	Unité	-	1	-	-	-	1	50,000,000	100,000	-	100 000.0	-	-	-	100 000.0	-	110 576.8	-	-	-	110 576.8	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Carte sylvo-pastorale /d	Unité	-	1	-	-	-	1	40,000,000	80,000	-	80 000.0	-	-	-	80 000.0	-	88 461.5	-	-	-	88 461.5	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										-	180 000.0	-	-	-	180 000.0	-	199 038.3	-	-	-	199 038.3			
4. Groupes de travail intégration CC	Atelier	4	4	-	-	-	8	2,500,000	5,000	20 000.0	20 000.0	-	-	-	40 000.0	21 164.0	21 904.7	-	-	-	43 068.7	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	SHOPPING_PM (100%)
5. Sensibilisation décideurs politiques																								
Dossier de sensibilisation	Forfait	1	-	1	-	-	2	10,000,000	20,000	20 000.0	-	20 000.0	-	-	40 000.0	21 367.5	-	22 889.4	-	-	44 256.9	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Sensibilisation décideurs politiques /e	Session	1	5	-	-	-	6	7,500,000	15,000	15 000.0	75 000.0	-	-	-	90 000.0	16 025.6	82 932.6	-	-	-	98 958.2	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Utilisation des modèles et scenarios CC /f	Forfait									35 000.0	-	25 000.0	-	-	60 000.0	37 393.1	-	28 611.8	-	-	66 004.9	PRESTATION_DE_SERVICES_DA	LDCF (100%)	QCBS_PM (100%)
Analyse des données climatiques /g	Forfait	-	1	-	-	-	1	20,000,000	40,000	-	40 000.0	-	-	-	40 000.0	-	44 230.7	-	-	-	44 230.7	PRESTATION_DE_SERVICES_DA	LDCF (100%)	QCBS_PM (100%)
Appui pédagogique et visites de terrain	Forfait	-	1	-	1	-	2	10,000,000	20,000	-	20 000.0	-	20 000.0	-	40 000.0	-	22 115.4	-	23 690.5	-	45 805.9	PRESTATION_DE_SERVICES_DA	LDCF (100%)	QCBS_PM (100%)
Subtotal										70 000.0	135 000.0	45 000.0	20 000.0	-	270 000.0	74 786.3	149 278.7	51 501.2	23 690.5	-	299 256.6			
6. Suivi des feux de brousse																								
Appui à la cartographie /h	Forfait									6 990.0	-	-	-	-	6 990.0	7 467.9	-	-	-	-	7 467.9	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Diffusion des bulletins /i	Unité	2	2	2	2	2	10	1,000,000	2,000	4 000.0	4 000.0	4 000.0	4 000.0	4 000.0	20 000.0	4 273.5	4 423.1	4 577.9	4 738.1	4 903.9	22 916.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										10 990.0	4 000.0	4 000.0	4 000.0	4 000.0	26 990.0	11 741.4	4 423.1	4 577.9	4 738.1	4 903.9	30 384.4			
Subtotal										259 987.0	339 000.0	49 000.0	24 000.0	4 000.0	675 987.0	277 560.1	374 644.8	56 079.0	28 428.6	4 903.9	741 616.5			

B. Renforcement du réseau agro-météorologique																							
1. Matériel et équipement																							
Stations météo automatiques type Devis California /j	Unité	9	-	-	4	-	13	10,000,000	20,000	180 000.0	-	-	80 000.0	-	260 000.0	192 307.5	-	-	94 762.1	-	287 069.6	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	ICB_PM (100%)
Petit équipement agro-métrologique /k	Forfait	3	2	-	-	-	5	6,000,000	12,000	36 000.0	24 000.0	-	-	-	60 000.0	38 461.5	26 538.4	-	-	-	64 999.9	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Subtotal										216 000.0	24 000.0	-	80 000.0	-	320 000.0	230 769.0	26 538.4	-	94 762.1	-	352 069.6			
2. Training																							
Formation collecte et stockage des données métrologique /l	Session	3	2	-	-	-	5	11,000,000	22,000	66 000.0	44 000.0	-	-	-	110 000.0	68 498.1	47 263.7	-	-	-	115 761.8	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Système de gestion des données climatiques /m	Forfait	3	2	-	-	-	5	5,000,000	10,000	30 000.0	20 000.0	-	-	-	50 000.0	32 051.3	22 115.4	-	-	-	54 166.6	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Subtotal										96 000.0	64 000.0	-	-	-	160 000.0	100 549.4	69 379.1	-	-	-	169 928.4			
Subtotal										312 000.0	88 000.0	-	80 000.0	-	480 000.0	331 318.4	95 917.5	-	94 762.1	-	521 998.0			
C. Plateforme d'échange																							
1. Inventaire études de base																							
Evaluation des bonnes pratiques /n	Par An	3	-	-	-	-	3	5,000,000	10,000	30 000.0	-	-	-	-	30 000.0	32 051.3	-	-	-	-	32 051.3	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Création d'une Platform d'information CC /o	ase des donnée	1	1	1	1	1	5	2,500,000	5,000	5 000.0	5 000.0	5 000.0	5 000.0	5 000.0	25 000.0	5 341.9	5 528.8	5 722.4	5 922.6	6 129.9	28 645.6	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Input des données dans la Platform /p	Par Mois	18	18	18	18	18	90	77,500	155	2 790.0	2 790.0	2 790.0	2 790.0	2 790.0	13 950.0	2 895.6	2 996.9	3 101.8	3 210.4	3 322.8	15 527.6	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Publication des études de cas /q	Forfait									-	15 000.0	15 000.0	10 000.0	10 000.0	50 000.0	-	16 586.5	17 167.1	11 845.3	12 259.8	57 858.7	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										37 790.0	22 790.0	22 790.0	17 790.0	17 790.0	118 950.0	40 288.7	25 112.3	25 991.2	20 978.3	21 712.5	134 083.1			
Total Investment Costs										609 777.0	449 790.0	71 790.0	121 790.0	21 790.0	1 274 937.0	649 167.2	495 674.6	82 070.3	144 169.1	26 616.5	1 397 697.6			
II. Recurrent Costs																							
A. Entretien Stations météo	Forfait									9 000.0	9 000.0	9 000.0	13 000.0	13 000.0	53 000.0	9 615.4	9 951.9	10 300.2	15 398.8	15 937.8	61 204.2	FONCTIONNEMENT_ET_ENTRETIENNE_DA	LDCF (100%)	SHOPPING_PM (100%)
Total Recurrent Costs										9 000.0	9 000.0	9 000.0	13 000.0	13 000.0	53 000.0	9 615.4	9 951.9	10 300.2	15 398.8	15 937.8	61 204.2			
Total										618 777.0	458 790.0	80 790.0	134 790.0	34 790.0	1 327 937.0	658 782.6	505 626.5	92 370.5	159 567.9	42 554.3	1 458 901.7			

\a une consultation y compris visites de terrain et validation avec population avant approbation

\b Etude à réaliser entre l'ICAT et l'ISRA

\c Cartographie générale de l'occupation des sols sur support SIG

\d Cartographie des ressources sylvo-pastorales sur support SIG

\e Formation en CC: 1 formation à Lome pour 1 semaine, 1 par région pour 1 semaine

\f 15 jours de formation pour 30 personnes (météo, économie-finance, AG, Env., foret et eau)

\g Un mois de formation sur l'analyse des données climatiques intégrant les outils AMAT, MRV et SIG (formation pour ICAT, AG, ENV, Foret et Eau pour un total de 40 personnes)

\h Equipement informatiques à la ANGE

\i Un bulletin par semestre

\j Incluant l'installation

\k Budget par région pour acheter des pluviomètres, thermomètres et hygromètres.

\l Formation des 40 personnes par région pour 1 semaine

\m $10000 par région pour achat logiciels et matériel informatique pour la gestion des données agro-climatologique

\n 3 consultations nationales

\o Au niveau du ministère de l'environnent

\p 6 étudiants recrutés 3 mois par an

\q En langue nationale

Table 2. Adaptation des systèmes de production agricoles vulnérables au CC: Elevage

Detailed Costs

		Quantities						Unit Cost	Unit Cost	Base Cost (US$)						Totals Including Contingencies (US$)						Other Accounts		
	Unit	2013	2014	2015	2016	2017	Total	(FCFA)	(US$)	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	Disb. Acct.	Fin. Rule	Proc. Method
I. Investment Costs																								
A. Amélioration de la gestion des espaces pastoraux et couloirs de pass																								
Sessions d'animation et de planification/cartographie avec la population /a	Session	30	30	-	20	-	80	300,000	600	18 000.0	18 000.0	-	12 000.0	-	48 000.0	19 230.8	19 903.8	-	14 214.3	-	53 348.9	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Synthèse et préparation de la carte pastorale	Forfait	1	-	-	-	-	1	5,000,000	10,000	10 000.0	-	-	-	-	10 000.0	10 683.8	-	-	-	-	10 683.8	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										28 000.0	18 000.0	-	12 000.0	-	58 000.0	29 914.5	19 903.8	-	14 214.3	-	64 032.6			
B. Aménagement des couloirs de transhumance et aire d'accueil																								
Etude	Etude	1	-	-	-	-	1	6,000,000	12,000	12 000.0	-	-	-	-	12 000.0	12 820.5	-	-	-	-	12 820.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Fabrication et implantation des balises /b	Unité	-	1 000	1 000	-	-	2 000	25,000	50	-	50 000.0	50 000.0	-	-	100 000.0	-	55 288.4	57 223.5	-	-	112 511.9	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	SHOPPING_PM (100%)
Installation des points d'eau /c	Unité	-	5	5	5	-	15	8,000,000	16,000	-	80 000.0	80 000.0	80 000.0	-	240 000.0	-	88 461.5	91 557.6	94 762.1	-	274 781.2	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	NCB_PM (100%)
Aménagement des couloirs (en km) /d	Unité	-	250	250	-	-	500	75,000	150	-	37 500.0	37 500.0	-	-	75 000.0	-	41 466.3	42 917.6	-	-	84 383.9	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	NCB_PM (100%)
Aménagement aires d'accueil /e	Unité	-	3	-	-	-	3	6,000,000	12,000	-	36 000.0	-	-	-	36 000.0	-	39 807.7	-	-	-	39 807.7	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	NCB_PM (100%)
Subtotal										12 000.0	203 500.0	167 500.0	80 000.0	-	463 000.0	12 820.5	225 023.8	191 698.7	94 762.1	-	524 305.2			
C. Restauration des écosystèmes sylvo-pastoraux dégradés																								
Etude sites à reboiser	Etude	1	-	-	-	-	1	6,000,000	12,000	12 000.0	-	-	-	-	12 000.0	12 820.5	-	-	-	-	12 820.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Reboisement /f	Ha	200	300	300	100	100	1 000	235,000	470	94 000.0	141 000.0	141 000.0	47 000.0	47 000.0	470 000.0	100 427.3	155 913.3	161 370.3	55 672.7	57 621.3	531 004.9	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	ICB_PM (100%)
Mise en défends des écosystèmes en dégradation /g	Unité	-	70	70	50	50	240	110,000	220	-	15 400.0	15 400.0	11 000.0	11 000.0	52 800.0	-	17 028.8	17 624.8	13 029.8	13 485.8	61 169.3	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	ICB_PM (100%)
Lutte contre les feux de brousse /h	Unité	20	20	20	20	20	100	500,000	1,000	20 000.0	20 000.0	20 000.0	20 000.0	20 000.0	100 000.0	21 367.5	22 115.4	22 889.4	23 690.5	24 519.7	114 582.5	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Etablissement et équipement des comités de lutte contre les feux de brousse /i	Unité	-	4	4	4	3	15	150,000	300	-	1 200.0	1 200.0	1 200.0	900.0	4 500.0	-	1 326.9	1 373.4	1 421.4	1 103.4	5 225.1	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Subtotal										126 000.0	177 600.0	177 600.0	79 200.0	78 900.0	639 300.0	134 615.3	196 384.4	203 257.9	93 814.5	96 730.2	724 802.2			
D. Apiculture dans les forêt restaurées et écosystème mis en défends																								
1. Distribution matériel apicole																								
Ruches	Unité	-	250	250	250	250	1 000	20,000	40	-	10 000.0	10 000.0	10 000.0	10 000.0	40 000.0	-	11 057.7	11 444.7	11 845.3	12 259.8	46 607.5	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Equipements /j	Forfait	-	10	10	10	10	40	1,200,000	2,400	-	24 000.0	24 000.0	24 000.0	24 000.0	96 000.0	-	26 538.4	27 467.3	28 428.6	29 423.6	111 858.0	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Extracteur /k	Unité	-	3	2	2	2	9	900,000	1,800	-	5 400.0	3 600.0	3 600.0	3 600.0	16 200.0	-	5 971.1	4 120.1	4 264.3	4 413.5	18 769.1	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	NCB_PM (100%)
Subtotal										-	39 400.0	37 600.0	37 600.0	37 600.0	152 200.0	-	43 567.3	43 032.1	44 538.2	46 097.0	177 234.6			
2. Formation en apiculture /l	Session	-	100	100	100	-	300	50,000	100	-	10 000.0	10 000.0	10 000.0	-	30 000.0	-	11 057.7	11 444.7	11 845.3	-	34 347.6	PRESTATION_DE_SERVICES_DA	LDCF (100%)	QCBS_PM (100%)
Subtotal										-	49 400.0	47 600.0	47 600.0	37 600.0	182 200.0	-	54 624.9	54 476.8	56 383.5	46 097.0	211 582.2			
Total										166 000.0	448 500.0	392 700.0	218 800.0	116 500.0	1 342 500.0	177 350.3	495 937.0	449 433.4	259 174.4	142 827.2	1 524 722.3			

\a 20 savanes, 20 Kara, 20 centrale, 10 plateaux et 10 maritimes

\b y compris le coût de transport.

\c 15 points sur les 4 régions de savanes, Kara, centrale et plateaux (forage pastoraux de 60 m en moyenne de profondeur)

\d 100 km par région

\e 1 par région (Savanes, Kara et Centrale)

\f Incluant flanc de montagne, forêt communautaire et réserve de l'état, couts de reboisement et entretienne sur 3 ans pour un tot de 1000ha: 500 ha pour l'Etat et 500 ha pour les communautés.

\g y compris le cout de pare feu. 200 $/ha pour installation et 20 $/ha / an pour l'entretien

\h Aménagement des pare feux pour un tot de 100 sites (40 Savanes, 30 Kara, 10 Central, 15 Plateaux, 5 Maritime)

\i 5 comité par région (Savane, Kara et Centrale)

\j Par OP

\k Un par OP

\l 20 jours de formation par région priorité aux jeunes.

Table 3. Adaptation des systèmes de production agricoles vulnérable au CC: Aquaculture

Detailed Costs

		Quantities						Unit Cost	Unit Cost	Base Cost (US$)						Totals Including Contingencies (US$)						Other Accounts		
	Unit	2013	2014	2015	2016	2017	Total	(FCFA)	(US$)	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	Disb. Acct.	Fin. Rule	Proc. Method
I. Investment Costs																								
A. Promotion de l'IAA en milieu rural vulnérable au CC																								
Etudes technico-economiques pre-installation des unités piscicoles /a	Par Mois	1	1	-	-	-	2	5,000,000	10,000	10 000.0	10 000.0	-	-	-	20 000.0	10 785.5	11 163.0	-	-	-	21 948.5	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Mise en place d'unités piscicoles /b	Unité	6	-	-	4	-	10	19,455,000	38,910	233 460.0	-	-	155 640.0	-	389 100.0	266 051.0	-	-	196 650.3	-	462 701.4	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	ICB_PM (100%)
Renforcement des capacités techniques des OP pour la pisciculture /c	Unité	24	-	-	16	-	40	500,000	1,000	24 000.0	-	-	16 000.0	-	40 000.0	26 862.0	-	-	19 854.9	-	46 716.9	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										267 460.0	10 000.0	-	171 640.0	-	449 100.0	303 698.5	11 163.0	-	216 505.3	-	531 366.8			
B. Mise en valeur de plans d'eau communautaires en zones vulnérables aux CC																								
Formation en gestion communautaire des retenues d'eau aménagées et empoissonnées /d	Session	3	-	-	2	-	5	1,000,000	2,000	6 000.0	-	-	4 000.0	-	10 000.0	6 410.3	-	-	4 738.1	-	11 148.4	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Empoissonnement de retenues d'eau réfectionnées /e	Ha	6	-	-	4	-	10	1,000,000	2,000	12 000.0	-	-	8 000.0	-	20 000.0	13 675.2	-	-	10 108.0	-	23 783.2	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										18 000.0	-	-	12 000.0	-	30 000.0	20 085.5	-	-	14 846.1	-	34 931.5			
C. Renforcement de capacités d'intervention des structures d'encadrement																								
Appui-conseil de proximité pour les OP aquacoles /f	Forfait	6	10	10	10	10	46	2,000,000	4,000	24 000.0	40 000.0	40 000.0	40 000.0	40 000.0	184 000.0	25 641.0	44 230.7	45 778.8	47 381.1	49 039.4	212 071.0	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Mise a disposition de kit de suivi de performances techniques des fermes aquacoles /g	Forfait	6	4	-	-	-	10	2,100,000	4,200	25 200.0	16 800.0	-	-	-	42 000.0	28 205.1	19 461.5	-	-	-	47 666.6	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Subtotal										49 200.0	56 800.0	40 000.0	40 000.0	40 000.0	226 000.0	53 846.1	63 692.2	45 778.8	47 381.1	49 039.4	259 737.6			
Total Investment Costs										334 660.0	66 800.0	40 000.0	223 640.0	40 000.0	705 100.0	377 630.1	74 855.2	45 778.8	278 732.4	49 039.4	826 035.9			
II. Recurrent Costs																								
A. Appui aux OP pour l'entretien des étangs piscicoles	Forfait	6	4	-	-	-	10	2,000,000	4,000	24 000.0	16 000.0	-	-	-	40 000.0	25 641.0	17 692.3	-	-	-	43 333.3	FONCTIONNEMENT_ET_ENTRETIENNE_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Total Recurrent Costs										24 000.0	16 000.0	-	-	-	40 000.0	25 641.0	17 692.3	-	-	-	43 333.3			
Total										358 660.0	82 800.0	40 000.0	223 640.0	40 000.0	745 100.0	403 271.1	92 547.5	45 778.8	278 732.4	49 039.4	869 369.2			

\a Y compris développement de capacités TSEP en Aquaculture: formation en encadrement de l'aquaculture rurale

\b Infrastructures & Equipements

\c Cout par personnes formées

\d 1 session par région avec environ 12 personnes

\e Dimension: 2500m2, 2 retenues par région

\f Couts par an et par zone

\g 1 kit par zone

Table 4. Adaptation des systèmes de production agricoles vulnérable au CC: Agriculture

Detailed Costs

		Quantities						Unit Cost	Unit Cost	Base Cost (US$)						Totals Including Contingencies (US$)						Other Accounts		
	Unit	2013	2014	2015	2016	2017	Total	(FCFA)	(US$)	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	Disb. Acct.	Fin. Rule	Proc. Method
I. Investment Costs																								
A. Integration de l'élevage dans les systèmes de production vulnérable																								
Distribution des animaux géniteurs à 450 ménages /a	Unité	250	200	-	-	-	450	104,000	208	52 000.0	41 600.0	-	-	-	93 600.0	55 555.5	46 000.0	-	-	-	101 555.5	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	NCB_PM (100%)
Distribution de semences fourragères par ménage /b	Unité	350	300	-	-	-	650	600	1.2	420.0	360.0	-	-	-	780.0	448.7	398.1	-	-	-	846.8	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Appui technique de l'ICAT /c	Unité	15	15	15	-	-	45	5,000,000	10,000	150 000.0	150 000.0	150 000.0	-	-	450 000.0	160 256.3	165 865.2	171 670.5	-	-	497 792.0	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										202 420.0	191 960.0	150 000.0	-	-	544 380.0	216 260.5	212 263.2	171 670.5	-	-	600 194.2			
B. Conservation de l'eau et des sols																								
Installation des tests de pratiques de demi-lunes sur les terres dégradées des savanes /d	Forfait	1	-	-	-	-	1	7,500,000	15,000	15 000.0	-	-	-	-	15 000.0	16 025.6	-	-	-	-	16 025.6	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Protection des berges des cours et des plans d'eau /e	Unité	7 000	5 000	5 000	3 000	3 000	23 000	7,500	15	105 000.0	75 000.0	75 000.0	45 000.0	45 000.0	345 000.0	112 179.4	82 932.6	85 835.3	53 303.7	55 169.3	389 420.2	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	NCB_PM (100%)
Installation des dispositifs antiérosifs /f	Ha	450	250	250	150	150	1 250	40,000	80	36 000.0	20 000.0	20 000.0	12 000.0	12 000.0	100 000.0	38 461.5	22 115.4	22 889.4	14 214.3	14 711.8	112 392.4	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	SHOPPING_PM (100%)
Distribution pilote de Kit micro irrigation à basse pression /g	Unité	150	-	-	-	-	150	1,000,000	2,000	300 000.0	-	-	-	-	300 000.0	320 512.5	-	-	-	-	320 512.5	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	ICB_PM (100%)
Aménagement et installation de parcs agroforestiers /h	Ha	30	-	-	-	-	30	304,600	609.2	18 276.0	-	-	-	-	18 276.0	19 525.6	-	-	-	-	19 525.6	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Mise en place ou aménage petites retenues d'eau /i	Unité	6	-	-	4	-	10	4,000,000	8,000	48 000.0	-	-	32 000.0	-	80 000.0	51 282.0	-	-	37 904.8	-	89 186.8	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	ICB_PM (100%)
Subtotal										522 276.0	95 000.0	95 000.0	89 000.0	57 000.0	858 276.0	557 986.6	105 048.0	108 724.7	105 422.9	69 881.1	947 063.2			
C. Système intégré aquaculture maraichage																								
Etablissement de zones de maraichage /j	Ha	20	10	-	20	-	50	700,000	1,400	28 000.0	14 000.0	-	28 000.0	-	70 000.0	29 914.5	15 480.8	-	33 166.7	-	78 562.0	GENIE_CIVIL_ET_RURAL_DA	LDCF (100%)	NCB_PM (100%)
Elaboration d'une carte variétale par zone agro climatologique /k	Unité	1	-	-	-	-	1	3,846,000	7,692	7 692.0	-	-	-	-	7 692.0	7 983.1	-	-	-	-	7 983.1	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										35 692.0	14 000.0	-	28 000.0	-	77 692.0	37 897.6	15 480.8	-	33 166.7	-	86 545.1			
Total										760 388.0	300 960.0	245 000.0	117 000.0	57 000.0	1 480 348.0	812 144.7	332 792.0	280 395.2	138 589.6	69 881.1	1 633 802.6			

\a Producteurs bénéficiaires du PADAT

\b Leucena, Albizia, Gliricidia

\c Appui sur l'intégration des cultures fourragères, soins vétérinaires etc.

\d Visites d'échanges encadrées

\e En metre linéaire: 7 Km dans Savanes, 5km dans Kara et Centrale, 3km dans Maritime et Plateaux. 1000m linéaire=4ha.

\f Diguettes, culture en terrasse à proximité de la parcelle située en amont des bassin de mise en valeurs du PADAT

\g 50 Savanes, 40 Kara, 30 Centrale

\h 10 ha dans les zones de production de mais du PADAT: Naki-ouest, Kétao, sotouboua

\i Volume de 2500 m3

\j Dimension de 5 ha chacune, deux zones par région

\k Enquête ICAT et ITRA selon les variétés demandées par zone.

Table 5. Information, Education et Communication sur le CC

Detailed Costs

		Quantities						Unit Cost	Unit Cost	Base Cost (US$)						Totals Including Contingencies (US$)						Other Accounts		
	Unit	2013	2014	2015	2016	2017	Total	(FCFA)	(US$)	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	Disb. Acct.	Fin. Rule	Proc. Method
I. Investment Costs																								
A. Compréhension et évaluation des impacts et de la vulnérabilité aux CC																								
Ateliers pour la diffusion d'informations fiables sur les CC auprès des OPs /a	Atelier	10	10	-	-	-	20	401,400	802.8	8 028.0	8 028.0	-	-	-	16 056.0	8 495.2	8 792.6	-	-	-	17 287.8	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Formation des OP à l'évaluation des impacts et de la vulnérabilité aux CC /b	Session	60	60	40	20	20	200	400,000	800	48 000.0	48 000.0	32 000.0	16 000.0	16 000.0	160 000.0	51 282.0	53 076.9	36 623.0	18 952.4	19 615.8	179 550.1	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Renforcement des capacités de communication et d'animation des agents endogènes des OP sur les options d'adaptation	Session	10	10	10	10	-	40	400,000	800	8 000.0	8 000.0	8 000.0	8 000.0	-	32 000.0	8 547.0	8 846.1	9 155.8	9 476.2	-	36 025.1	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Animation /c	Session	15	10	15	10	-	50	400,000	800	12 000.0	8 000.0	12 000.0	8 000.0	-	40 000.0	12 820.5	8 846.1	13 733.6	9 476.2	-	44 876.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Sensibilisation des éleveurs et agriculteurs sur le respect des couloirs de transhumance /d	Session	50	50	50	50	50	250	150,000	300	15 000.0	15 000.0	15 000.0	15 000.0	15 000.0	75 000.0	16 025.6	16 586.5	17 167.1	17 767.9	18 389.8	85 936.9	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Sensibilisations rapprochées contre la coupe et la déforestation /e	Session	50	50	50	50	50	250	150,000	300	15 000.0	15 000.0	15 000.0	15 000.0	15 000.0	75 000.0	16 025.6	16 586.5	17 167.1	17 767.9	18 389.8	85 936.9	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										106 028.0	102 028.0	82 000.0	62 000.0	46 000.0	398 056.0	113 196.0	112 734.8	93 846.5	73 440.6	56 395.3	449 613.2			
B. Outils d'aide à la décision et renforcement de capacités d'adaptation aux CC																								
Acquisition d'outils d'aide à la décision à l'échelle locale (Cartes, MARP) /f	Unité	15	15	15	-	-	45	250,000	500	7 500.0	7 500.0	7 500.0	-	-	22 500.0	8 165.4	8 451.2	8 747.0	-	-	25 363.7	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	SHOPPING_PM (100%)
Formations des formateurs sur les outils intégration de l'adaptation CC	Session	5	5	5	-	-	15	250,000	500	2 500.0	2 500.0	2 500.0	-	-	7 500.0	2 670.9	2 764.4	2 861.2	-	-	8 296.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Echange sur l'adaptation du calendrier agricole et itinéraires technique	Session	60	60	40	25	25	210	250,000	500	30 000.0	30 000.0	20 000.0	12 500.0	12 500.0	105 000.0	32 051.3	33 173.0	22 889.4	14 806.6	15 324.8	118 245.1	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Formation de comité de lutte contre les feux de brousse dans les CVD	Session	30	30	30	30	30	150	250,000	500	15 000.0	15 000.0	15 000.0	15 000.0	15 000.0	75 000.0	16 025.6	16 586.5	17 167.1	17 767.9	18 389.8	85 936.9	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										55 000.0	55 000.0	45 000.0	27 500.0	27 500.0	210 000.0	58 913.3	60 975.2	51 664.6	32 574.5	33 714.6	237 842.2			
C. Modules et manuels techniques en matière d'adaptation des systèmes de production agricole aux CC																								
Intégration de l'élevage /g	Session	10	10	10	-	-	30	750,000	1,500	15 000.0	15 000.0	15 000.0	-	-	45 000.0	16 025.6	16 586.5	17 167.1	-	-	49 779.2	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Vulgarisation des semences adaptés et le choix de paquet technologique /h	Session	15	15	15	-	-	45	750,000	1,500	22 500.0	22 500.0	22 500.0	-	-	67 500.0	24 038.4	24 879.8	25 750.6	-	-	74 668.8	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Formation des encadreurs en aquaculture /i	Unité	5	5	-	-	-	10	1,000,000	2,000	10 000.0	10 000.0	-	-	-	20 000.0	10 683.8	11 057.7	-	-	-	21 741.4	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	QCBS_PM (100%)
Subtotal										47 500.0	47 500.0	37 500.0	-	-	132 500.0	50 747.8	52 524.0	42 917.6	-	-	146 189.4			
Total										208 528.0	204 528.0	164 500.0	89 500.0	73 500.0	740 556.0	222 857.0	226 234.0	188 428.8	106 015.1	90 109.9	833 644.8			

\a Origines, impacts, vulnérabilité, options d'adaptation

\b Ciblées par système de production

\c Radio, sketchs et autres forme

\d 10 par région

\e Cantons et villages, 10 sessions par région

\f 5 OP par région sur 3 régions

\g Formation et production de manuels techniques

\h Formation et production de manuels techniques par spéculation

\i Formation et production de manuels techniques

Table 6. Gestion du projet et suivi et évaluation

Detailed Costs

		Quantities						Unit Cost	Unit Cost	Base Cost (US$)						Totals Including Contingencies (US$)						Other Accounts		
	Unit	2013	2014	2015	2016	2017	Total	(FCFA)	(US$)	2013	2014	2015	2016	2017	Total	2013	2014	2015	2016	2017	Total	Disb. Acct.	Fin. Rule	Proc. Method
I. Investment Costs																								
A. Equipement bureaux																								
1. Ordinateur fix	Unité	1	-	-	-	-	1	1,000,000	2,000	2 000.0	-	-	-	-	2 000.0	2 096.1	-	-	-	-	2 096.1	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	FROM_UN_PM (100%)
2. Ordinateur portable	Unité	1	-	-	-	-	1	1,200,000	2,400	2 400.0	-	-	-	-	2 400.0	2 515.3	-	-	-	-	2 515.3	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	FROM_UN_PM (100%)
Subtotal										4 400.0	-	-	-	-	4 400.0	4 611.3	-	-	-	-	4 611.3			
B. Véhicule	Unité	1	-	-	-	-	1	17,000,000	34,000	34 000.0	-	-	-	-	34 000.0	35 632.9	-	-	-	-	35 632.9	MOYENS_DE_TRANSPORT_ET_EQUIPEMENT_DA	LDCF (100%)	FROM_UN_PM (100%)
C. Ateliers de lancement régionaux	Unité	5	-	-	-	-	5	2,000,000	4,000	20 000.0	-	-	-	-	20 000.0	21 367.5	-	-	-	-	21 367.5	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
D. Etude situation de référence	Etude	1	-	-	-	-	1	7,617,000	15,234	15 234.0	-	-	-	-	15 234.0	16 275.6	-	-	-	-	16 275.6	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
E. Revue mi-parcours	Etude	-	-	1	-	-	1	7,617,000	15,234	-	-	15 234.0	-	-	15 234.0	-	-	17 434.9	-	-	17 434.9	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
F. Evaluation finale	Etude	-	-	-	-	1	1	7,616,500	15,233	-	-	-	-	15 233.0	15 233.0	-	-	-	-	18 319.7	18 319.7	ETUDES_FORMATION_ET_ATELIERS_DA	LDCF (100%)	CON_SRVCS_PM (100%)
G. Audit	Unité	1	1	1	1	1	5	4,000,000	8,000	8 000.0	8 000.0	8 000.0	8 000.0	8 000.0	40 000.0	8 302.8	8 593.4	8 894.2	9 205.5	9 527.7	44 523.5	PRESTATION_DE_SERVICES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Total Investment Costs										81 634.0	8 000.0	23 234.0	8 000.0	23 233.0	144 101.0	86 190.1	8 593.4	26 329.0	9 205.5	27 847.4	158 165.3			
II. Recurrent Costs																								
A. Salaires																								
Coordinateur	Par Mois	12	12	12	12	12	60	400,000	800	9 600.0	9 600.0	9 600.0	9 600.0	9 600.0	48 000.0	9 768.0	10 109.9	10 463.7	10 830.0	11 209.0	52 380.6	SALAIRES_ET_INDEMNITES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Chauffer	Par Mois	12	12	12	12	12	60	125,000	250	3 000.0	3 000.0	3 000.0	3 000.0	3 000.0	15 000.0	3 205.1	3 317.3	3 433.4	3 553.6	3 678.0	17 187.4	SALAIRES_ET_INDEMNITES_DA	LDCF (100%)	CON_SRVCS_PM (100%)
Subtotal										12 600.0	12 600.0	12 600.0	12 600.0	12 600.0	63 000.0	12 973.1	13 427.2	13 897.1	14 383.5	14 887.0	69 567.9			
B. Frais de déplacement	Forfait									5 000.0	5 000.0	5 000.0	5 000.0	5 000.0	25 000.0	5 240.1	5 423.5	5 613.4	5 809.8	6 013.2	28 100.0	FONCTIONNEMENT_ET_ENTRETIENNE_DA	LDCF (100%)	SHOPPING_PM (100%)
C. Fonctionnement véhicule	Par Mois	12	12	12	12	12	60	350,000	700	8 400.0	8 400.0	8 400.0	8 400.0	8 400.0	42 000.0	8 974.4	9 288.5	9 613.5	9 950.0	10 298.3	48 124.6	FONCTIONNEMENT_ET_ENTRETIENNE_DA	LDCF (100%)	SHOPPING_PM (100%)
D. Communication	Forfait									3 000.0	3 000.0	3 000.0	3 000.0	3 000.0	15 000.0	3 205.1	3 317.3	3 433.4	3 553.6	3 678.0	17 187.4	FONCTIONNEMENT_ET_ENTRETIENNE_DA	LDCF (100%)	SHOPPING_PM (100%)
Total Recurrent Costs										29 000.0	29 000.0	29 000.0	29 000.0	29 000.0	145 000.0	30 392.7	31 456.5	32 557.4	33 697.0	34 876.4	162 980.0			
Total										110 634.0	37 000.0	52 234.0	37 000.0	52 233.0	289 101.0	116 582.8	40 049.9	58 886.5	42 902.4	62 723.7	321 145.3			

6.5. ANNEXES

Annex 1: O perating accounts of income-generating activities

INSTALLATION D'UNE UNITE D'ELEVAGE D'ABEILLES (APICULTURE) COMME AGR PAR COOPERATIVE D'APICULTEUR (10 MEMBRES)

valeurs en FCFA, prix constants en 2012

		Prix	Sans projet		Avec projet							
	Unité	unitaire	Quantité	Montant	Quantité	Montant						
Couts d'investissement						A1	A2-A3	A4	A5	A6	A7	A8-A9	A10
Ruches	No.	20 000			30	600 000				600 000			
Enfumoir	No.	14 000			10	140 000							
Masques complets	No.	25 000			20	500 000				500 000			
Support ruche	No.	350			90	31 500							
Cire gaufrée	No.	3 000			90	270 000	270 000	270 000	270 000	270 000	270 000	270 000	270 000
Petit matériel	No.	25 000			10	250 000		250 000			250 000		250 000
Caisse de récolte	No.	5 000			10	50 000				50 000			
Extracteur de miel par coop	No.	900 000			1	900 000							
Formation	jour/an	20 000			10	200 000	400						
Tôt couts d'investissement						*2 941 500*							
Main d'œuvre	pers/mois	5 000			120	600 000							
Total couts				-		**3 541 500**	**270 400**	**520 000**	**270 000**	**1 420 000**	**520 000**	**270 000**	**520 000**
Revenus													
Miel	Litre	2 000			600	1 200 000							
Cire brute	Kg	5 000			30	150 000							
Propolis	Kg	6 000			9	54 000							
Total revenus				**0**		**1 404 000**	**1 404 000**	**1 404 000**	**1 404 000**	**1 404 000**	**1 404 000**	**1 404 000**	**1 404 000**
Bénéfices net				-			-						
Bénéfices nets	FCFA/ha			-		**- 2 137 500**	**1 133 600**	**884 000**	**1 134 000**	**- 16 000**	**884 000**	**1 134 000**	**884 000**
Bénéfices nets additionnels						**- 2 137 500**	**1 133 600**	**884 000**	**1 134 000**	**- 16 000**	**884 000**	**1 134 000**	**884 000**
TRI						**45%**							

Production tilapia en pisciculture

Montants en FCFA, valeurs constants 2012

Hypothèses

Paramètres de Production	Unite	Qte
Superficie des etangs de service (2)	m2	200
Superficie des etangs de production (8*500m2)	m2	4 000
Densite de charge-Geniteurs (1M/3F)	Unite	400
Densite de charge (Fingerlings)	Unite/m2	2
Poids moyen initial-alevins	g	10
Nombre d'alevins	Unite	8 800
Duree du cycle	Jour	165
Mortalite	%	20
Nombre de poissons recoltes (unite)	**Unite**	**7 040**
Poids moyen final (poisson marchand)	g	250
Poids de poisson marchand	**kg**	**1 760**
Indice de consommation alimentaire (a)	**Ratio**	**2**
Quantite d'aliment consommee	**kg**	**3 520**
Main d'ouvre occasionnelle (2 pers.*5,5 mois)(b)	HM	11

Estimation des couts de Production		1 Cycle	1 An
Prix Unitaire Moyen des alevins (= fingerlings)	FCFA	100	
Prix Unitaire Moyen des geniteurs	FCFA	1 000	
Prix moyen de l'aliment	FCFA/kg	150	
Salaire mensuel (c)	FCFA	15 000	
Prix de vente du poisson	FCFA/kg	1 200	
Cout des alevins	FCFA	880 000	1 760 000
Cout de l'alimentation	FCFA	528 000	1 056 000
Cout de la main d'oeuvre occasionnelle	FCFA	165 000	330 000
Autres charge (Forfait	FCFA	16 750	33 500
Cout Total de Production	FCFA	**1 607 200**	3 214 400

Revenues		1 Cycle	1 An	2 An	3 An	4 An	5 An
Marge		**3 733 250**	**7 466 500**	**7 466 500**	**7 466 500**	**7 466 500**	**7 466 500**

(a) = sous-produits agricoles et agro-industriels + fertilisation

(b) = Estimation de la main d'oeuvre fournie par les membres du groupement pour le nourrissage, le gardiennage et autres travaux d'entretien

(c) = salaire journalier = 500F

Cout des geniteurs	FCFA	400 000

Analyse financière

	Sans projet	Avec projet ADAPT					
	A0	A1+	A2	A3	A4	A5	A6	A7 - A10
Couts d'investissement		22793000						
Couts opérationnels	0	3 214 400	3 214 400	3 214 400	3 214 400	3 214 400		
Tôt couts	0	26 007 400	3 214 400	3 214 400	3 214 400	3 214 400		
Marge	0	7 466 500	7 466 500	7 466 500	7 466 500	7 466 500		
Bénéfices nets additionnels	0 -	18 540 900	4 252 100	4 252 100	4 252 100	4 252 100	4 252 100	4 252 100
TRI		18%						

	Tôt couts	Bénéfices Nets Annuels en FCFA			Bénéfices nets additionnels pour 1 $ d'investissement	Tôt couts	Bénéfices Nets Annuels en $EU		
		Sans Projet	Avec Projet (full dev)	Incrément			Sans Projet	Avec Projet (full dev)	Incrément
Aquaculture	26 007 400	-	4 252 100	4 252 100	0.16	52 015	-	8 504	8 504

Modèle de culture - Gombo

valeurs en FCFA, prix constants en 2012

		Prix	Sans projet		Avec projet	
	Unité	unitaire	Quantité	Montant	Quantité	Montant
Couts de production						A1 +
Nettoyage	ha	8 000	1	8 000	1	8 000
Labour + confection des planches	ha	40 000	1	40 000	1	40 000
Semis direct	ha	24 000	1	24 000	4	96 000
Sarclage (5 fois)	ha	12 000	5	60 000	1	12 000
NPK	kg	220	175	38 500	120	26 400
Achat semences	g	30	500	15 000	400	12 000
Arrosage	ha	900 000	1	900 000	0.6	540 000
Achat CYPERCAL 50 EC	litres	4 000	3	12 000	3	12 000
Achat fongicide (DIAFURAN)	sachets	2 500	1	2 500	3	7 500
Traitement phytosanitaire	ha	2 500	1	2 500	2	5 000
Récolte	ha	20 000	1	20 000	2	40 000
Transport	tonnes	15 000	8.50	127 500	12	180 000
Epandage engrais	ha	4 000	1	4 000	1	4 000
Frais stockage	jour	1 500	50	75 000	50	75 000
Total couts production				*1 329 000*		*1 057 900*
Imprevus	%	10		132 900		105 790
Total cout de production				**1 461 900**		**1 163 690**
Total revenus	**kg**	**450**	**8500**	**3 825 000**	**12000**	**5 400 000**
Bénéfices net				**2 363 100**		**4 236 310**
Bénéfices nets	FCFA/ha			-		
Bénéfices nets additionnels						**1 873 210**

Modèle de culture - Tomates

valeurs en FCFA, prix constants en 2012

		Prix	Sans projet		Avec projet	
	Unité	unitaire	Quantité	Montant	Quantité	Montant
						A1+
Couts de production						
Nettoyage	ha	8 000	1	8 000	1	8 000
Labour + confection des planches	ha	40 000	1	40 000	1	40 000
Mise en place pépinière	planches	500	4	2 000	4	2 000
Repiquage	ha	24 000	1	24 000	1	24 000
Sarclage (5 fois)	ha	12 000	5	60 000	5	60 000
NPK	kg	220	175	38 500	175	38 500
Achat semences	g	60	300	18 000	300.0	18 000
Arrosage	ha	900 000	1	900 000	1	450 000
Achat CYPERCAL 50 EC	litres	4 000	3	12 000	3	12 000
Achat fongicide (DIAFURAN)	sachets	2 500	1	2 500	1	2 500
Traitement phytosanitaire	ha	2 500	1	2 500	1	2 500
Récolte	ha	40 000	1	40 000	1	40 000
Transport	tonnes	15 000	10.50	157 500	14.00	210 000
Epandage engrais	ha	4 000	1	4 000	1	4 000
Frais stockage	jours	200	**40**	8 000	**40**	8 000
Total Couts Production				1 317 000		919 500
Imprevus	%	10		131 700		91 950
Total cout de production				**1 448 700**		**1 011 450**
Total revenus	**fcfa/ kg**	**400**	**10500**	**4 200 000**	**14000**	**5 600 000**
Bénéfices net				2 751 300		4 588 550
Bénéfices nets	FCFA/ha			-		
Bénéfices nets additionnels				1 837 250		

Modèle de culture - Piment

valeurs en FCFA, prix constants en 2012

		Prix	Sans projet		Avec projet	
	Unité	unitaire	Quantité	Montant	Quantité	Montant
Couts de production						A1+
Nettoyage	ha	8 000	1	8 000	1	8 000
Labour + confection des planches	ha	40 000	1	40 000	1	40 000
Mise en place pépinière	planches	500	1	500	1	500
Repiquage	ha	24 000	1	24 000	1	24 000
Sarclage (5 fois)	ha	12 000	5	60 000	5	60 000
NPK	kg	220	175	38 500	175	38 500
Achat semences	g	80	1 200	96 000	80	6 400
Arrosage	ha	225 000	1	225 000	0.6	135 000
Achat CYPERCAL 50 EC	litres	4 000	3	12 000	3	12 000
Achat fongicide (DIAFURAN)	sachets	2 500	1	2 500	1	2 500
Traitement phytosanitaire	ha	2 500	1	2 500	1	2 500
Récolte	ha	20 000	1	20 000	1	20 000
Transport	tonnes	17 000	10	170 000	12	204 000
Epandage engrais	ha	4 000	1	4 000	1	4 000
Frais stockage	jours	200	**40**	8 000	**40**	8 000
Sous total Production				*711 000*	*324*	*565 400*
Imprevus	%	10		71 100		56 540
Total cout de production				**782 100**		**621 940**
Total revenus	**fcfa/kg**	**240**	**10000**	**2 400 000**	**12000**	**2 880 000**
Bénéfices estimés				1 617 900		2 258 060
Bénéfices nets	FCFA/ha					
Bénéfices nets additionnels				640 160		

Annex 2 : Procurement plan for 18 months

Original: Formulation
Révisé:
Période: 18 mois

Abréviations	
AOI	Appel d'offre international
AON	Appel d'offre national
FROM UN	Marchés passés auprès d'institutions des Nations Unies
CR	Consultation Restreinte
CCV	Sélection de consultants à titre personnel par comparaison de CV
SQC	Sélection basée sur les qualifications des Consultants
SBQC	Sélection fondée sur la qualité et le coût
Shopping	Shopping

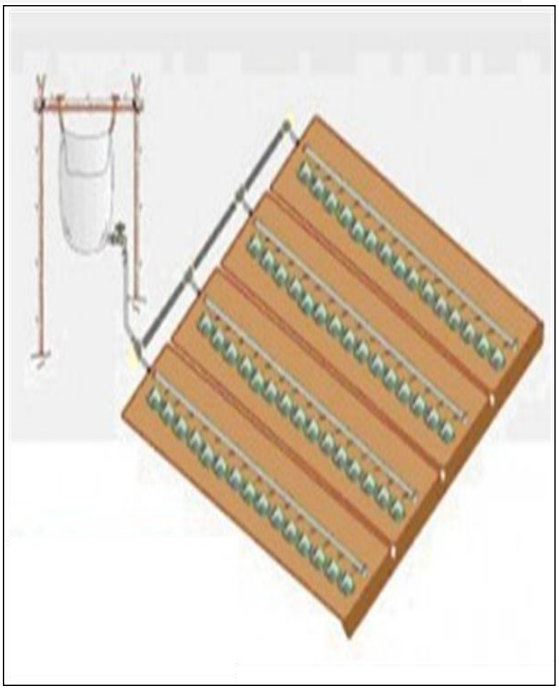
No de Réf	Description	Source de financement	Unité	Quantité	Cout unitaire USD	Couts tôt USD	Méthode de passation	Revue antérieure du	Préférence nationa
Composante A- Intégration d'outils d'adaptation aux risques climatiques dans les systèmes de production agricole									
A1	Etude Etat de la vulnérabilité	FPMA	Etude	1	25000	25 000	CCV		
A2	Etude Vulnérabilité des ressources en eau	FPMA	Etude	1	25000	25 000	CCV		
A3	Etude Energie rurale durable	FPMA	Etude	1	25000	25 000	CCV		
A4	Etude Elaboration d'un code pastoral	FPMA	Etude	1	25000	25 000	CCV		
A5	Etude Mobilité du cheptel	FPMA	Etude	1	23998	23 998	CCV		
A6	Etude Adaptation de la filière semence	FPMA	Etude	1	15000	15 000	CCV		
A7	Enquête semences adaptées	FPMA	Etude	1	20000	20 000	CCV		
A8	Carte agricole	FPMA	Unité	1	100000	100 000	SBQC		
A9	Carte sylvo-pastorale	FPMA	Unité	1	80000	80 000	SBQC		
A10	Groupes de travail intégration CC	FPMA	Atelier	6	5000	30 000	AON		
A11	Dossier de sensibilisation	FPMA	Forfait	1	20000	20 000	CCV		
A12	Sensibilisation décideurs politiques	FPMA	Session	3	15000	45 000	CCV		
A13	Utilisation des modèles et scenarios CC	FPMA	Forfait			37 393	SBQC		
A14	Analyse des données climatiques	FPMA	Forfait	1	40000	40 000	SBQC		
A15	Appui pédagogique et visites de terrain	FPMA	Forfait	1	20000	20 000	SBQC		
A16	Appui à la cartographie	FPMA	Forfait			7 468	Shopping		
A17	Diffusion des bulletins	FPMA	Unité	3	2000	6 000	SBQC		
A18	Stations météo automatiques type Devis Ca	FPMA	Unité	9	20000	180 000	AOI	Oui	
A19	Petit équipement agro-métrologique	FPMA	Forfait	5	12000	60 000	AON	Oui	Oui
A20	Formation collecte et stockage des données	FPMA	Session	5	22000	110 000	SBQC	Oui	
A21	Système de gestion des données climatique	FPMA	Forfait	5	10000	50 000	Shopping		
A22	Evaluation des bonnes pratiques	FPMA	Par An	3	10000	30 000	SBQC		
A23	Création d'une Platform d'information CC	FPMA	Base des dor	1	5000	5 000	Shopping		
A24	Input des données dans la Platform	FPMA	Par Mois	24	155	3 720	CCV		
A25	Publication des études de cas	FPMA	Forfait			7 500	AON		Oui
Total Composante A						*991 079*			

Composante B- Adaptation des systèmes de production agricoles vulnérable aux CC									
Sous Composante Agricole									
B1	Distribution des animaux géniteurs à 450 m	FPMA	Unité	350	208	72 800	AON		
B2	Distribution de semences fourragères par m	FPMA	Unité	500	1.2	600	Shopping		Oui
B3	Appui technique de l'ICAT	FPMA	Unité	25	10000	250 000	SBQC		
B4	Installation des tests de pratiques de demi-	FPMA	Forfait	1	15000	15 000	SBQC/AON		
B5	Protection des berges des cours et des plan	FPMA	Unité	10000	15	150 000	AOI		Oui
B6	Installation des dispositifs antiérosifs	FPMA	Ha	600	80	48 000	Shopping	Oui	
B7	Distribution pilote de Kit micro irrigation à b	FPMA	Unité	150	2000	300 000	AOI	Oui	Oui
B8	Aménagement et installation de parcs agro	FPMA	Ha	30	609	18 270	SBQC		
B9	Mise en place ou aménage petites retenues	FPMA	Unité	6	8000	48 000	AOI	Oui	Oui
B10	Etablissement de zones de maraichage	FPMA	Ha	25	1400	35 000	AOI		
B11	Elaboration d'une carte variétale	FPMA	Unité	1	7692	7 692	SBQC		
Sous Composante Elevage									
B12	Sessions d'animation et de planification/ca	FPMA	Session	45	600	27 000	SBQC		
B13	Synthèse et préparation de la carte pastoral	FPMA	Forfait	1	10000	10 000	SBQC		
B14	Etude couloir	FPMA	Etude	1	12000	12 000	CCV		
B15	Fabrication et implantation des balises	FPMA	Unité	500	50	25 000	Shopping		
B16	Installation des points d'eau	FPMA	Unité	2	16000	32 000	AOI		Oui
B17	Aménagement des couloirs	FPMA	Unité	100	150	15 000	AON		
B18	Aménagement aires d'accueil	FPMA	Unité	1	12000	12 000	AON		
B19	Etude sites à reboiser	FPMA	Etude	1	12000	12 000	CCV		
B20	Reboisement	FPMA	Ha	350	470	164 500	AOI	Oui	Oui
B21	Mise en défends des écosystèmes en dégra	FPMA	Unité	30	220	6 600	AOI		Oui
B22	Lutte contre les feux de brousse	FPMA	Unité	30	1000	30 000	SBQC		
B23	Etablissement et équipement des comités	FPMA	Unité	2	300	600	Shopping		
B24	Ruches	FPMA	Unité	100	40	4 000	Shopping		Oui
B25	Equipements	FPMA	Forfait	5	2400	12 000	Shopping	Oui	Oui
B26	Extracteur /k	FPMA	Unité	2	1800	3 600	AON		Oui
B27	Formation en apiculture	FPMA	Session	50	100	5 000	SBQC		
Sous Composante Aquacole									
B25	Etudes technico-economiques pre-installati	FPMA	Par Mois	1	10000	10 000	CCV		
B26	Mise en place d'unités piscicoles	FPMA	Unité	6	38910	233 460	AOI	Oui	Oui
B27	Renforcement des capacités techniques des	FPMA	Unité	24	1000	24 000	SBQC		
B28	Formation en gestion communautaire	FPMA	Session	3	2000	6 000	SBQC		
B29	Empoissonnement de retenues d'eau réfect	FPMA	Ha	6	2000	12 000	SBQC		Oui
B30	Appui-conseil de proximité pour les OP aqu	FPMA	Forfait	10	4000	40 000	SBQC		
B31	Mise a disposition de kit de suivi de perfor	FPMA	Forfait	8	4200	33 600	Shopping	Oui	Oui
B32	Appui aux OP pour l'entretien des étangs p	FPMA	Forfait	8	4000	32 000	SBQC		Oui
Total component B						*1 707 722*			

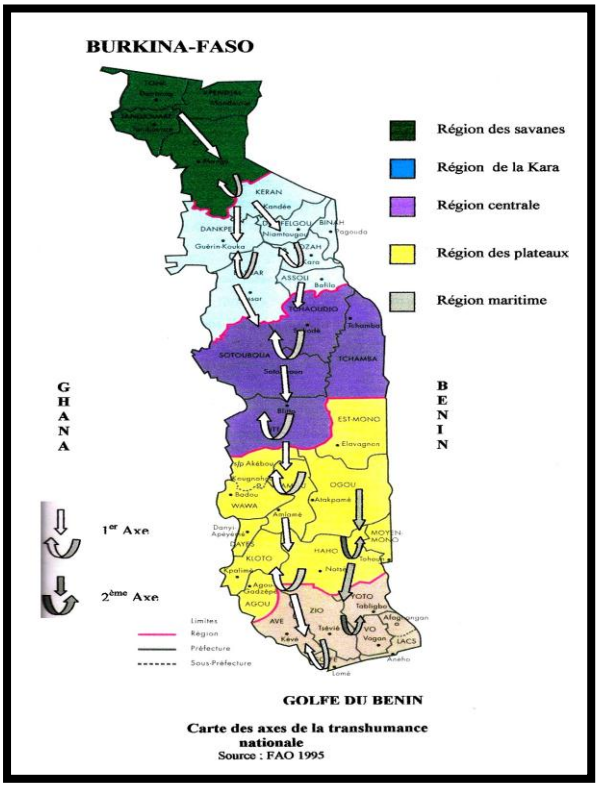
Component C- Information, Education et Communication sur le CC									
C1	**Ateliers pour la diffusion d'informations a**	FPMA	Atelier	15	803	12 045	SBQC		
C2	Formation des OP	FPMA	Session	90	800	72 000	SBQC		
C3	Renforcement des capacités des OP	FPMA	Session	15	800	12 000	SBQC		
C4	Animation	FPMA	Session	20	800	16 000	SBQC		
C5	Sensibilisation des éleveurs et agriculteurs	FPMA	Session	75	300	22 500	SBQC		
C6	Sensibilisations contre la coupe et la défore	FPMA	Session	75	300	22 500	SBQC		
C7	Acquisition d'outils d'aide à la décision	FPMA	Unité	20	500	10 000	Shopping		Oui
C8	Formations des formateurs	FPMA	Session	7	500	3 500	SBQC		
C9	Echange sur l'adaptation du calendrier agri	FPMA	Session	90	500	45 000	SBQC		
C10	Formation de comité de lutte contre les feu	FPMA	Session	45	500	22 500	SBQC		
C11	Intégration de l'élevage	FPMA	Session	15	1500	22 500	SBQC		
C12	Vulgarisation des semences adaptés	FPMA	Session	20	1500	30 000	SBQC		
C13	Formation des encadreurs en aquaculture	FPMA	Unité	7	2000	14 000	SBQC		
Total component C						*304 545*			

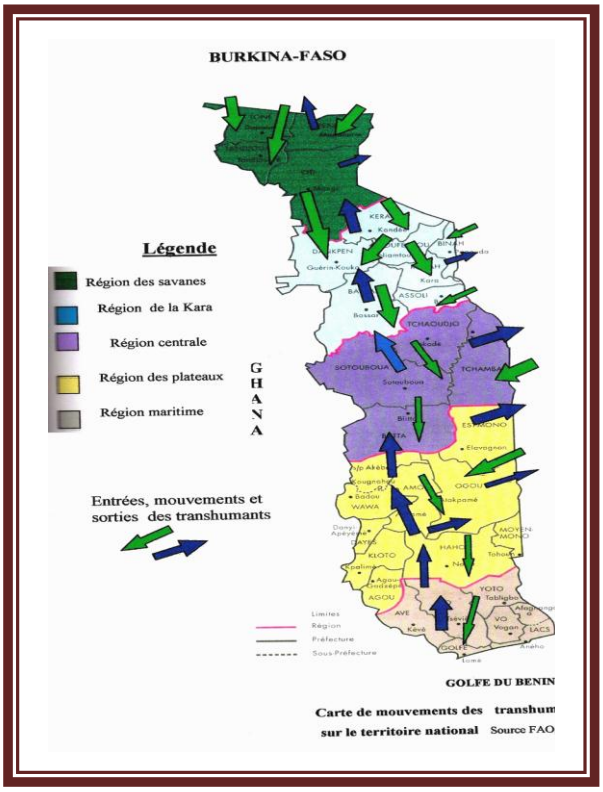
Component D- Gestion du projet et suivi et évaluation									
D1	Ordinateur fix	FPMA	Unité	1	2000	2 000	From UN		Oui
D2	Ordinateur portable	FPMA	Unité	1	2400	2 400	From UN		Oui
D3	Véhicule	FPMA	Unité	1	34000	34 000	From UN	Oui	
D4	Ateliers de lancement régionaux	FPMA	Unité	5	4000	20 000	Shopping		
D5	Etude situation de référence	FPMA	Etude	1	15234	15 234	CCV		
D6	Audit	FPMA	Unité	1	8000	8 000	SBQC		
D7	Coordinateur	FPMA	Par Mois	18	800	14 400	SBQC	Oui	
D8	Chauffer	FPMA	Par Mois	18	250	4 500	CCV		
D9	Frais de déplacement	FPMA	Forfait			7 952	Shopping		
D10	Fonctionnement véhicule	FPMA	Par Mois	18	700	12 600	Shopping		
D11	Communication	FPMA	Forfait			4 864	Shopping		
Total component D						*125 950*			

Annex 3 : Outline of low-pressure gravity-fed micro-irrigation kits (left: type size on site, right: prototype)

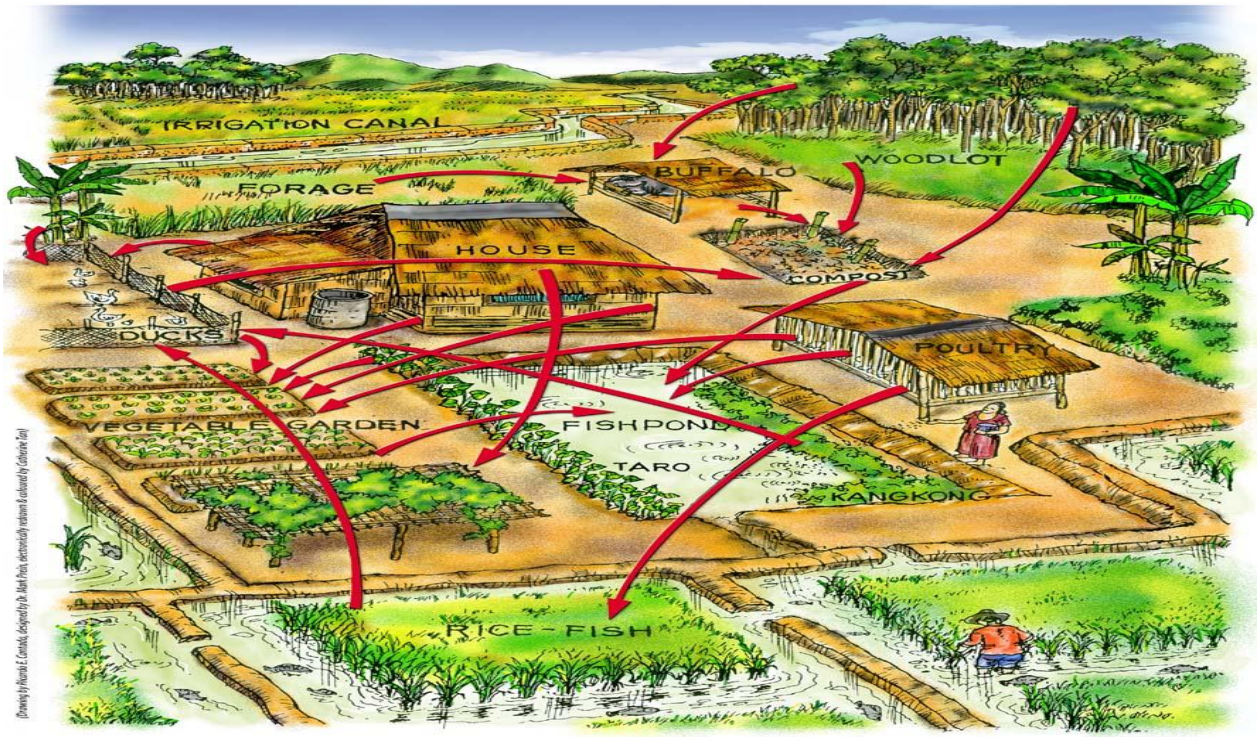


Annex 4 : Flux of the transhumance (source: NAPA and FAO)





Annex 5 : IIA Model (WorldFish Center, 2006)
Flows of water resources in a model where IAA reclaimed drain water are used to irrigate the gardening



Annex 6 – Aide-mémoire approuvé par le GdT et le FIDA

AIDE-MEMOIRE

MISSION DE FORMULATION
PROJET ADAPTATION DE LA PRODUCTION AGRICOLE AUX CHANGEMENTS CLIMATIQUES AU TOGO (ADAPT)

14 Mai au 02 Juin 2012

A. Introduction

1. Une mission du FIDA s'est rendue au Togo, du 14 Mai au 2 Juin 2012, pour la formulation du Projet d'adaptation des systèmes de production agricole aux changements Climatiques au Togo (ADAPT). Cette formulation du projet ADAPT s'inscrit dans la logique de continuité du PANA et sa mise en œuvre et du lancement des deux programmes majeurs d'investissements : le Programme national d'investissement agricole et de sécurité alimentaire (PNIASA) et Programme National d'Investissements pour l'Environnement et les Ressources Naturelles (PNIERN, nov. 2011).

B. Déroulement de la mission

2. La mission de formulation du projet ADAPT mandatée par le FIDA a séjourné au Togo du 14 Mai au 2 Juin 2012. Elle est conduite par Mme Aissa Touré Sarr, Chargée de Portefeuille du Togo (dernière semaine de mai 2012) et M. Naoufel Telahigue, Chargé de Programme Environnement et Climat au FIDA (du 15 au 29 mai 2012). Elle comprend : M. Oumar Fall, Expert international, Chef de mission (du 13 mai au 2 juin 2012 ; Ms. Chiara Calvosa, Économiste (du 15 au 29 mai 2012) ; les Experts nationaux: M. Ajavon Ayité-Lo Nohendé, Expert principal en changement climatique; Bahé Komi, Zootechnie; Dr. Gabriel Koffi Koko, Spécialiste en Pisciculture ; M Akpé Agbossou, Expert en Communication, information et éducation ; et, M. Yendouhame Kombate, Expert Agronome.

3. La formulation du projet ADAPT s'appuie sur la stratégie d'intervention du FIDA au Togo. La formulation de ce projet s'organise autour du projet PADAT auquel ADAPT vise à apporter une additionnalité en termes d'adaptation au changement climatique à travers les fonds FPMA. Elle s'appuie en l'occurrence sur la fiche d'identification (PIF) qui a déjà fait objet d'endossement par le gouvernement togolais et le Fonds pour l'environnement mondial.

4. A Lomé, la mission a pris contact avec (i) S.E.M. Kossi Messan Ewovor, Ministre de l'Agriculture, de l'Elevage et des Pêches en présence du Secrétaire Général du même ministère, et d'autres collaborateurs ; (ii) S.E.M. Kossivi AYIKOE, Ministre de l'Environnement et des Ressources Forestières en présence du Directeur de Cabinet et du Secrétaire Général du même ministère, ainsi que d'autres collaborateurs ; (iii) S.E.M. Gal. Zakari Nandja, Ministre de l'Eau, de l'Assainissement et de l'Hydraulique Villageoise en présence du Secrétaire Général du même ministère, ainsi que d'autres collaborateurs. Auparavant, la mission avait pris contact avec Mr Mindi Lamboni, Secrétaire Général du Ministère de l'Agriculture, de l'Élevage et de la Pêche, Mr Daku Didi Komlan, Secrétaire Général du Ministère de l'Environnement et des Ressources Forestières et Mr Assiongbon Kuéssan Kué-Zoun, Secrétaire Général du Ministre de l'Eau, de l'Assainissement et de l'Hydraulique Villageoise, tous membres du Comité Interministériel pour le suivi de la formulation et de la mise en œuvre du projet Adaptation de la Production Agricole au Togo (ADAPT). La mission a eu par la suite à présenter le Mercredi 16 Mai au Comité Interministériel chargé du suivi de la formulation réuni à la Salle des Conférences du MERF sa méthodologie de travail qui a été approuvée.

5. La mission a eu également à rencontrer successivement les cadres du PADAT, de la Direction de l'Aménagement Rural, de la Direction de l'Environnement et de la Direction de l'Hydraulique. Ces rencontres ont permis de recueillir les orientations des décideurs et les informations et données auprès des responsables nationaux des départements et filières, mais aussi d'établir des échanges fructueux et participer aux rencontres organisées par les différentes structures visitées.

6. Enfin, la mission a consacré un temps pour les échanges en interne pour l'organisation de la formulation de la composante adaptation au changement climatique à l'intérieur du pays et les étapes subséquentes.

7. A l'intérieur du pays, la mission a rencontré les autorités administratives[11], municipales et cantonales, les services techniques décentralisés de l'Etat au niveau des régions des Savanes, Kara, Centrale, Plateaux et Maritime. La mission s'est entretenue en conclave avec les représentants de toutes les parties prenantes au projet PADAT dans chacune des régions visitées réunis dans les directions régionales DRAEP des régions des Savanes, Kara, Centrale, Plateaux et Maritime. Les échanges ont porté sur la vulnérabilité aux changements climatiques des secteurs et écosystèmes du Togo, les impacts sur les groupes cibles et mesures idoines d'adaptation. Enfin, la mission a visité des sites dégradés, des sites à fort potentiel de biodiversité, et discuté avec les groupes de producteurs vulnérables de ces milieux naturels.

8. A son retour de terrain, la mission a rencontré plusieurs institutions, notamment M. VOVOR Victor, Directeur de Cabinet du ministère du développement à la base, jeunesse, artisanat et de l'emploi des jeunes, et partenaires, et poursuivi ses rencontres avec les Comités Interministériel et Technique du projet ADAPT.

9. La mission tient à remercier à ce sujet l'ensemble des autorités et personnes rencontrées pour leur ouverture d'esprit, leur disponibilité, la qualité de leurs contributions et surtout leur participation. Elle remercie tout particulièrement leurs Excellences Messieurs les Ministres du MAEP, du MERF et du MEAHV pour la diligente orientation accordée à ce projet, les autorités centrales et régionales, et les différentes équipes des directions régionales et projets. Elle remercie enfin le Secrétaire Général du MAEP et ses collaborateurs, M. Ognatan Ognadou le compagnon protocolaire, sans lesquels la mission n'aurait pas atteint son succès et de se dérouler dans les conditions satisfaisantes.

C. Stratégie du FIDA au Togo

10. La stratégie du FIDA au Togo est en général définie dans ce qu'il est convenu d'appeler le Document d'opportunités stratégiques (COSOP) ; ce document stratégique est régulièrement actualisé chaque fois que le contexte change pour l'une des parties. Mais, pour cette fois le FIDA n'a pas jugé opportun de renouveler le COSOP du Togo[12] en vigueur mais de s'appuyer sur le PNIASA dont il s'est proposé d'accompagner l'opérationnalisation.

11. Les derniers appuis du FIDA au Togo remontent aux années 1990 à 2002, où le FIDA avait financé trois importants projets au Togo, à savoir:

    - le Projet de soutien aux groupements villageois dans l'est de la région des savanes (SOGVERS), de 1993 à 2000, dans le cadre d'un financement conjoint du FIDA, du FENU et du PNUD d'un coût total de 15,86 millions d'USD;

[11] *M. Tchapro TCHEMI, Préfet de Tchaoudjo à Sokodé (18 mai 2012) ; M. El Hadj Mossyamba ALI SEYDOU, Préfet de Tône, à Dapaong (21 mai 2012) ; M. Damintot NAMOUNOU, Préfet de Tandjouaré à Mandouri (22 mai 2012) ; M. BAKALI Hemou Bahubadi, Préfet de Koza, (24 mai 2012)*

[12] *La formulation d'un Programme d'options stratégiques (COSOP) formel n'ayant pas été jugée nécessaire par le FIDA pour les pays en reprise de coopération après une longue interruption.*

- le Projet d'organisation et de développement villageois (PODV), de 1997 à 2001, a été exécuté dans cinq préfectures sur les six que compte la région Maritime; et
- le projet national d'appui aux services agricoles (PNASA), de 1998 à 2003, cofinancé par la Banque mondiale et le FIDA.

12. Le FIDA intervient présentement à travers le projet d'appui au développement agricole au TOGO – PADAT qui représente ce qu'il est convenu d'appeler la ligne de base au projet ADAPT; par ce terme il faut comprendre le projet auquel le projet ADAPT vient s'arrimer pour apporter une *additionnalité*, notamment par l'équivalent du paquet technologique répondant à l'adaptabilité au climat des activités du PADAT.

13. Le FIDA dispose dans sa politique d'un axe stratégique spécifique au changement climatique. C. L'approche choisie dans le cadre de la stratégie est de s'assurer que le changement climatique, aux côtés d'autres risques et enjeux, est systématiquement intégré et pris en compte dans le cadre des principaux programmes, politiques et activités du FIDA ; le But étant d'optimiser l'impact du FIDA sur la pauvreté rurale en tenant compte de l'évolution du climat au Togo comme ailleurs. Les Objectifs spécifiques de cet axe de la stratégie sont: (i) appuyer les approches innovantes pour aider les petits exploitants agricoles à mieux résister au changement climatique ; (ii) aider les petits exploitants à tirer parti des mesures d'incitation et des financements disponibles ; et (iii) instaurer une concertation plus cohérente sur le changement climatique, le développement rural, l'agriculture et la sécurité alimentaire.

D. PROJET D'APPUI AU SECTEUR AGRICOLE - PADAT

14. Objectif et stratégie générale du PADAT. L'objectif de développement du projet est de contribuer à l'amélioration de la sécurité alimentaire et des revenus des petits producteurs agricoles. Cet objectif sera atteint à travers l'amélioration de la production et de la productivité des petites exploitations agricoles ciblées sur le riz, le maïs et le manioc, ainsi qu'à travers la valorisation et la mise en marché des productions agricoles ciblées.

15. La mise en œuvre du PADAT s'inscrit dans la logique de la relance de la coopération entre le FIDA et le Gouvernement du Togo, à la suite de l'adoption du Document complet de stratégie de réduction de la pauvreté (DSRP-C) et du Programme national d'investissement agricole et de sécurité alimentaire (PNIASA).

16. Le PADAT a été engagé dans une démarche de mise en œuvre concertée dans laquelle le FIDA est en alliance avec plusieurs partenaires (la Banque mondiale, la BOAD et BIDC) et, plus récemment, avec la BAD. Cette alliance a été constituée, en 2009, à la suite de l'adoption du PNIASA dans le but d'appuyer et d'accompagner son opérationnalisation en inscrivant les actions à financer dans ses sous-programmes (agriculture, élevage, pêche, recherche et conseil agricole et renforcement et coordination sectorielle). Les membres de l'alliance, en fonction de leurs avantages comparatifs se sont accordés de positionner leurs financements comme suit: (i) Banque mondiale, via le PASA, appuie le développement des cultures de rente (café, cacao, coton), l'élevage traditionnel, la pêche continentale et le renforcement des capacités du MAEP; (ii) le FIDA, appuie le développement des cultures vivrières (riz, maïs et manioc) en faveur des petits exploitants agricoles; et (iii) BOAD et BIDC, appuie le développement des infrastructures rurales ; (iv) le fonds du GAFSP, appuie le développement des infrastructures rurales et la profession agricole ; et (v) la FAO dans l'accompagnement du projet. Le PADAT a été mis en œuvre dès le premier trimestre 2011.

17. Groupes cibles du PADAT. Le groupe cible prioritaire du PADAT est essentiellement composé des petits producteurs/trices, individuels ou regroupés au sein des organisations de producteurs, dans les trois cultures vivrières ciblées. Deux sous-groupes principaux ont été identifiés: (i) les petits producteurs vulnérables exploitant une superficie variant de 0,5 à un ha environ, parmi lesquels les femmes et les

jeunes sont des catégories particulièrement défavorisées; et (ii) les petits producteurs exploitant une superficie variant de un à trois ha.

18. Les coûts du Projet et ventilation par source de financement. Le coût total du Projet est évalué à 75,4 millions d'USD, soit 40,5 milliards de FCFA. La ventilation des financements reflète les centres d'intérêts annoncés par les co-financiers et prend en compte leurs avantages comparatifs relatifs aux thématiques couvertes par le Projet et le niveau des ressources mobilisables par bailleurs.

19. PADAT offre une assise adéquate pour l'arrimage d'un financement additionnel du FPMA à travers ADAPT (objet de cette formulation).

E. LES PROJETS ET INITIATIVES DANS LA ZONE DU PROJET

20. Les initiatives dans l'emprise du projet sont diverses et variées. Elles appartiennent pour l'essentiel à l'alliance au sein du PNIASA et visent la gestion des ressources naturelles. La mission a visité chacun des partenaires de l'alliance pour la recherche et le renforcement de la synergie avec les projets en cours dans l'emprise du projet ADAPT. Il s'agit de la liste non exhaustive ci-après:

21. *Le projet de gestion intégrée des catastrophes et des terres dégradées* de la Banque Mondiale est dans la zone d'emprise du PADAT celui qui vise (i) un renforcement et sensibilisation des institutions ; (ii) des activités communautaires d'adaptation ; (iii) un système d'alerte et de suivi précoce. ADAPT cherchera à favoriser une synergie avec ces activités qui sont par leur nature orientée vers le même groupe des producteurs vulnérables.

22. Un autre projet du PNUD sur les aires protégées (*Strengthening the conservation role of Togo's national System of Protected Areas - PA*) est également en cours. L'objectif de ce projet est à la fois de *conserver la biodiversité d'importance mondiale dans les biomes des savanes du Togo et à assurer la connectivité des zones protégées (ZP) à l'éco-régional tout en renforçant la gestion des systèmes de zones protégées du Togo afin d'améliorer sa contribution à la conservation de la biodiversité par la démonstration d'approches efficaces pour la réhabilitation et la gestion des ZP*. Afin d'atteindre cet objectif, l'intervention du projet vise (i) l'amélioration des politiques, des cadres juridique et institutionnel du domaine des ZP couvrant approximativement 578000 hectares ; (ii) une gestion efficace du complexe de zone protégée de l'OKM avec ses 179 000 ha d'aire protégée, à la biodiversité menacée par les braconniers, les feux incontrôlés et le surpâturage.

23. Deux autres projets financés par la Banque Mondiale sont dans l'emprise du projet ADAPT; il s'agit du projet d'appui au secteur agricole (PASA) et du projet de productivité de l'agriculture ouest africaine (WAAPP).

24. *Le PASA* a pour objectifs : *(i) de réhabiliter et de renforcer les capacités productives des bénéficiaires ciblés dans les filières sélectionnées et (ii) de favoriser un environnement institutionnel propice au développement du secteur agricole, sur le territoire du Récipiendaire.* Il vise à travers ces objectifs la promotion des cultures vivrières stratégiques, des cultures d'exportation et de la production halieutique continentale par l'appui au développement des filières vivrières, l'appui aux cultures d'exportation, et l'appui à la production halieutique continentale. Il vise aussi la relance du sous-secteur de l'élevage à travers (i) la reconstitution des cheptels avec des animaux disponibles localement offrant un meilleur potentiel génétique en termes de croissance et de résistance aux maladies afin de compenser la baisse des effectifs et la mortalité dans des zones sélectionnées; (ii) la santé animale et l'amélioration du contrôle des maladies à haute incidence (campagnes nationales de déparasitage et de vaccinations), sur la base d'un mécanisme durable déjà développé au Togo pour l'obtention et l'administration des vaccins et par un contrôle accru des chaînes d'approvisionnement des produits ; et (iii) l'amélioration des conditions zootechniques d'élevage traditionnel en termes d'habitat, en utilisant des techniques et matériaux localement disponibles, par la formation de prestataires de services et une assistance directe aux éleveurs en vue d'améliorer l'élevage traditionnel et de réduire la

mortalité animale due aux maladies, à la prédation et au vol. il vise enfin, l'appui au renforcement des capacités et coordination sectorielle à travers la réforme et le renforcement des capacités du MAEP, la coordination sectorielle et gestion du programme et la gestion des instruments d'assistance financière.

25. *Le PPAAO – WAAPP* a pour objectif de développer et diffuser des technologies pour améliorer la productivité agricole de 15% afin de contribuer à la croissance agricole de 6 %. L'activité en synergie porte sur *: générer, adapter et diffuser un panel de technologies améliorées de production durable des principaux produits végétaux (maïs, riz) et animaux (volailles, petits ruminants).* Le projet vise (i) à créer les conditions propices à la coopération régionale en matière de développement et de diffusion de technologies améliorées par l'harmonisation des textes nationaux avec la réglementation communautaire ; (ii) à soutenir le centre national de spécialisation et diffusion de technologies améliorées à travers le renforcement des infrastructures et des équipements de l'ITRA et de l'ICAT ; (iii) le renforcement des capacités des chercheurs et des acteurs impliqués dans le transfert de technologies ; (iv) le soutien aux programmes prioritaires de recherche adaptative et de transfert de technologies ; (v) l'appui à l'accélération de l'adoption de technologies ; (vi) et la facilitation de l'accès au matériel génétique amélioré.

26. *Le PNADE* (programme national d'actions décentralisées de gestion de l'environnement) financé par l'Union Européenne vient en appui à l'agence nationale de gestion de l'environnement (ANGE) et aux nouvelles instances de concertation intersectorielle (CNDD, CRDD) et a pour ambition de : *contribuer à l'objectif global de développement durable du pays à travers le renforcement et l'appui aux capacités des différents acteurs pour intégrer les questions environnementales dans les stratégies et actions de développement locales*. La stratégie pour réaliser cet objectif est basée sur 6 axes : (i) développer et renforcer les compétences humaines ; (ii) favoriser l'émergence et la reconnaissance d'une notion de subsidiarité des collectivités territoriales par rapport aux villages ; (iii) accompagner par la formation continue la professionnalisation des ONG et l'émergence de pôles de compétence techniques environnementales dans les préfectures et les régions ; (iv) construire la démarche DCE (développement des capacités en environnement) sur la base d'un apprentissage par l'action se traduisant par des réalisations concrètes sur le terrain, décidées et mises en œuvre par les acteurs locaux ; (v) créer des liens entre la gestion durable des ressources naturelles et la lutte contre la pauvreté ; (vi) insérer au sein des autres interventions existantes et/ou planifiées des synergies et des complémentarités, notamment avec les différents guichets de microréalisations et de réalisations sociales existants au sein des autres projets. Le projet cible 8 préfectures du pays comme zone d'intervention indicative et pour une durée de vie de 5 ans.

LE PROJET D'ADAPTATION DES SYSTEMES DE PRODUCTION AGRICOLE AUX CHANGEMENTS CLIMATIQUES AU TOGO (ADAPT)

A. CONTEXTE DU PROJET ADAPT

27. La production agricole au Togo dépend fortement du climat, des ressources en eau et des conditions édaphiques et est, par conséquent, très sensible aux changements climatiques. Le choix du secteur de l'agriculture comme priorité du Togo dans la mise en œuvre des mesures d'adaptation aux changements climatiques se justifie d'une part par sa vulnérabilité vis-à-vis des changements climatiques et d'autre part pour sa contribution importante au PIB (38%) et la part de la population active dans ce secteur (2/3).

28. Après la ratification par le Togo de la Convention Cadre des Nations Unies sur les Changements Climatiques (CCNUCC), le 8 mars 1995, il a préparé et soumis en novembre 2001 la Communication Nationale Initiale (CNI) et en novembre 2010 la Deuxième Communication Nationale sur les Changements Climatiques. Ces documents révèlent que la détérioration du climat s'accompagnera du décalage des saisons avec une réduction des périodes humides, une hausse de l'évapotranspiration

et un dessèchement accru des sols. Le régime d'alimentation des plantes ainsi perturbés entrainera une importante baisse de la production agricole. L'augmentation de la température et la diminution de la pluviométrie va affecter la valeur nutritive des fourrages et entrainer une réduction de la résistance des animaux aux maladies.

29. Le document du PANA (Plan d'Action National d'Adaptation) soumis au Secrétariat de la CCNUCC en septembre 2009 a retenu quatre risques majeurs auxquels sont exposés les modes et moyens d'existence dans le secteur de l'agriculture. Il s'agit des inondations, de l'élévation de la température, de la sécheresse et de la mauvaise répartition des pluies.

30. Dans le cadre de la relance de l'économie nationale, le secteur agricole a été retenu comme l'un des domaines prioritaires sur lequel le Togo compte consolider les bases d'une croissance forte et durable. C'est ainsi qu'il a élaboré et validé en novembre 2009 le Programme National d'Investissement Agricole et de Sécurité Alimentaire (PNIASA) qui constitue le document de base du secteur de l'agriculture et a pour objectif de réaliser à l'horizon 2015, une croissance agricole annuelle d'au moins 6%.

31. C'est dans le cadre de la mise en œuvre du PNIASA que le Projet d'Appui au Développement Agricole au Togo (PADAT) a été élaboré et financé par le FIDA. Ce projet n'a malheureusement pas pris en compte les coûts additionnels dus aux impacts du changement climatique. En particulier, le projet ne semble pas considérer que la production agricole est censée diminuer par la variabilité accrue du climat. Cela implique la nécessité d'étendre la portée des activités du scénario de base qui, autrement, risque d'être insuffisante. Les frais pour soutenir ces activités ne sont pas pris en compte dans la conception du PADAT.

32. La plupart des activités identifiées dans le PADAT représentent un point d'entrée pour l'intervention PMA car beaucoup d'entre eux sont complémentaires avec les priorités du PANA.

33. C'est en vue de répondre à cette insuffisance et de rendre le PADAT durable à travers la prise en compte du changement climatique, notamment l'amélioration de la résilience de la production du mais, riz et manioc par la mise en place de techniques de culture intégrant l'adaptation aux changements climatiques, que le projet « ADAPT » a été initié.

34. Localisation. Le projet ADAPT épouse la même zone d'emprise que le PADAT ; c'est-à-dire les cinq régions des Savanes, Kara, Centrale, mais également Plateaux et Maritime. ADAPT interviendra en effet dès la première année dans les deux régions des Plateaux et Maritime car sa mise en œuvre interviendra à peu près vers la dernière année de la Phase 1 et début de la Phase 2 du PADAT mais aussi et surtout parce que le renforcement des capacités dans le domaine des changements climatiques ne peut attendre.

35. Le projet ADAPT sera mis en œuvre dans les zones du PADAT. De ce fait il aura une vocation nationale mais sera exécuté, de manière séquencée, dans des zones d'intervention englobant des poches de pauvreté, où se concentrent les petits producteurs et productrices vulnérables.

36. Pour la première phase (les trois premières années) il couvrira les régions des Savanes, de Kara et Centrale. Le tableau suivant mentionne à titre indicatif les zones à cibler par région.

Région	Préfectures	Zones cibles
Savanes	Tône	Naki-Ouest, Nano, Tantigou,
	Kpendjal	Naki-Est, Mandouri
	Oti	Koumbéloti, Sadori
Kara	Binah	Pagouda
	Dankpen	Guéri-Kouka
	Kéran	Kantè
	Assoli	Kpéwa
Centrale	Tchamba	Tchamba, Kaboli
	Sotouboua	Ferme semencière

37. Au cours de la deuxième phase, le projet s'étendra aux régions des Plateaux et Maritime.

38. **Climat**. Le Togo est sous l'influence de deux grands régimes climatiques : (i) le régime tropical soudanien au Nord, avec 2 saisons et où la pluviométrie moyenne varie entre 850 et 1400 mm ; et (ii) le régime tropical guinéen au Sud, caractérisé par 4 saisons et une pluviométrie annuelle variant de 1000 à 1600 mm. La température moyenne est 28°C dans les zones septentrionales, 27°C dans la zone côtière et varie entre 24 et 26°C dans les autres zones. En général dans tout le pays, les températures sont en hausse et les cumuls pluviométriques annuels affichent une tendance à la baisse. Les pluies se concentrent sur une courte période et les périodes sèches se ressentent plus durement avec des seuils de température dépassant toutes les moyennes. On observe une décroissance de la pluviométrie du sud au nord du pays. Les températures des mois de Février, Mars et Avril, qui présentent de fortes chaleurs, peuvent dépasser 35°C (DCN, Nov. 2010).

39. L'humidité relative moyenne est également élevée dans les zones méridionales (73 à 90%), mais faible dans les régions septentrionales (53 à 67%). La vitesse moyenne du vent est de 1,93 m/s et la durée moyenne de l'insolation est de 6 heures 37 minutes par jour. L'évapotranspiration moyenne est de 1 540 mm/an. Au cours des 45 dernières années, il est constaté une diminution de la pluviométrie et du nombre de jours de pluies, ainsi qu'une augmentation de la température. En outre, le ratio Pluviométrie/Evapotranspiration Potentielle (P/ETP) qui est l'indice d'aridité est également en baisse, témoignant de la tendance à l'assèchement du climat.

40. **Vulnérabilité au changement climatique**. Selon les résultats des études menées dans le cadre des communications nationales sur les CC du Togo (Nov 2010), la biomasse énergie, à l'horizon 2025, les formations naturelles et les plantations subiront une baisse significative de leur productivité. La classification des régions sur la base des indices de vulnérabilité totale place la Région Centrale comme étant la plus vulnérable et la Région des Plateaux comme étant la moins vulnérable. En ce qui concerne l'hydro-électricité, le bassin de l'Oti dans le Nord du pays subirait un accroissement de la pluviométrie de l'ordre de 120 mm à l'horizon 2025. Au niveau des autres régions, la diminution de la pluviométrie affecterait le potentiel hydro-électrique de 7,2%. Un déficit plus important en énergie hydroélectrique sera noté, pouvant varier entre 27 et 36% à l'horizon 2050. Dans le domaine des énergies renouvelables, l'accroissement de l'ensoleillement induirait un accroissement du rendement des installations photovoltaïques, ce qui constitue de facto un impact positif sur le potentiel en énergie solaire.

41. Au niveau des Ressources en Eau, la vulnérabilité aux effets des changements climatiques se manifeste par une surexploitation de l'aquifère dans la zone de Lomé, ce qui se traduirait notamment par une augmentation de la salinité de l'eau dans les aquifères pompés. Les changements climatiques entraînent aussi une tendance à la baisse accentuée des écoulements et du niveau de recharge des nappes souterraines. Une simulation d'une diminution du potentiel hydrique de 5% à l'horizon 2025 et de 10% à l'horizon 2050 entraînera un déficit qui s'accentuera dans la même proportion dans toutes les régions économiques du pays.

42. L'assèchement entraîne une diminution de la couverture végétative de sol. Or en l'absence de couverture végétative fixatrice du sol, il est constaté, un phénomène d'érosion par ruissèlement, qui diminue la superficie cultivable en amont du fait de la baisse de la couche arable, où résident les éléments nutritifs de la plante. Il s'ensuit une baisse de la productivité des spéculations quelles soit annuelles, vivrières ou pérennes. Les périodes les plus sensibles au cours desquelles, l'assèchement a des effets néfastes se situent au moment du semis, de la floraison et de l'épiaison. Au semis, le taux de germination est faible et il s'ensuit un faible niveau de levée des plantes, nécessitant des actions de re-semis, pour maintenir une densité optimale et garantir le niveau escompté de productivité et de production des spéculations. A la floraison, le manque de pluies combinée à une augmentation de la température ambiante ne favorise pas la floraison des céréales (maïs et sorgho, notamment qui sont les plus sensibles) ou provoque la coulure de la tomate. En effet, en cette période, ces spéculations sont très sensibles au stress hydrique, résultant du déficit hydrique. Il s'ensuit, selon les cas, une baisse du taux de fructification de la plante, un faible niveau d'épiaison et faible taux de remplissage des graines. La conséquence qui en résulte est la baisse des rendements des spéculations concernées.

43. Les impacts spécifiques des changements climatiques en termes d'augmentation de température et de baisse du niveau pluviométrique sur certaines spéculations peuvent être ainsi résumés :

    - Pour le riz pluvial et de bas-fonds, le déficit hydrique a pour conséquence, l'assèchement rapide des bas-fonds et leur mise en eau tardive. Ceci affecte la fructification et donc entraîne une faible productivité au regard du cycle végétatif de la plante comparée à la durée normale de la saison pluvieuse. L'insuffisance d'eau affecte aussi en baisse la floraison et l'épiaison du riz. Il s'ensuit, un faible taux de remplissage de la graine au niveau du paddy, car certaines panicules ne sont pas dans la gaine foliaire.
    - En ce qui concerne, la culture de manioc, dans certaines zones de production, elle est bouturée à plat ; l'assèchement des sols résultant des hausses de températures et de baisse de pluviométrie, induit des difficultés de déterrement des tubercules/racines, dont certains sont cassés ou restés en terre. Ce qui induit une baisse de productivité.
    - Pour le maïs qui constitue la base de l'alimentation de la population togolaise, il est particulièrement vulnérable à cause de sa forte sensibilité au stress hydrique surtout au stade de la floraison. Ainsi, l'impact du déficit hydrique sur cette culture dépend du stade végétatif auquel il est intervenu et peut provoquer une diminution de la productivité (rendements agricoles), à cause du faible taux de fructification de la spéculation, entraînant une réduction de l'offre des denrées alimentaires, qui s'accompagnera d'une flambée de prix.

44. Dans le sous-secteur de l'élevage, le déficit hydrique et l'assèchement du climat entraîneront le tarissement des points d'abreuvement des animaux, la dégradation des pâturages, la mort du cheptel, la baisse des revenus des pasteurs et agropasteurs et l'exode rural. L'abondance de pluies favorisera la recrudescence de certaines maladies, notamment la peste aviaire, la trypanosomiase chez les bovins en particulier les zébus.

45. Dans le sous-secteur de la pêche, les changements climatiques auront pour conséquences, de fortes perturbations dans les cycles de productivité des poissons, la salinisation des plans d'eau douce et également la mort des alevins ; en outre, l'augmentation de la température de la couche d'eau chaude marine de surface (entre 25 et 29°C) pourra provoquer de fréquentes migrations de certaines espèces de poissons en profondeur et une diminution du volume des ressources pélagiques.

46. Dans les scénarios climatiques prévus aux horizons 2025, 2050 et 2100, les impacts affecteraient en baisse les niveaux de productions des principales cultures, respectivement de 5%, 7% et 10%.

B. OBJECTIF DU PROJET ADAPT

47. L'objectif principal visé par le projet ADAPT est de réduire l'impact du changement climatique sur les groupes vulnérables, ainsi que sur les ressources naturelles essentielles pour soutenir la production agricole et accroître la sécurité alimentaire.

48. La phase formulation de la composante FPMA consiste à réaliser les études de base et les consultations nécessaires dans l'objectif d'identifier, avec précision : (i) les besoins en termes d'investissement, (ii) le ciblage géographique des activités, (iii) les coûts d'interventions et (iv) les modalités de suivi et évaluation à envisager.

C. L'ADDITIONALITE DU PROJET ADAPT

49. L'intervention d'ADAPT augmentera la portée des activités menées dans le PADAT (ligne de base), pour les rendre moins vulnérables aux changements climatiques. Ainsi, la démarche contribuera à intégrer et à diffuser les connaissances sur les changements climatiques au niveau local et national (Organisations Paysannes). Du soutien sera aussi donné à l'intégration des outils d'adaptation dans les systèmes de productions agricoles sélectionnées (le maïs, le riz et le manioc) et à la diversification économique afin d'améliorer la résilience à travers des systèmes intégrés d'agriculture et élevage et aquaculture. Cela contribuera à la réalisation de l'objectif de rendre les rendements des cultures résilients au changement climatique et d'atténuer son impact sur la production alimentaire. Un appui sera également fourni à assurer la prise en compte de l'aspect changement climatique dans le projet PADAT (notamment à travers des études thématiques et en mettant à disposition des informations agro-météorologiques pour aider à informer les décideurs). Dans le cadre de cette activité de l'appui sera donné à la reconstitution de l'équipement des stations météorologiques.

50. Enfin, l'intervention d'ADAPT contribuera à créer la capacité de réponse et de suivi de l'impact du changement climatique au niveau national, ainsi que la sensibilisation des communautés locales sur les changements climatiques. Le budget d'ADAPT couvrira aussi les frais d'amélioration de la collecte de données et du suivi à travers la cartographie des zones vulnérables.

D. PRINCIPALES OBSERVATIONS DE LA MISSION

51. Les principales observations de la mission sur le terrain comprennent :

    (i) Les changements climatiques constituent une menace croissante sur le développement socio-économique du Togo et sur ses systèmes de production agricole et de sécurité alimentaire ;
    (ii) Un état de dégradation amorcé des éléments biophysiques dans la zone d'emprise du PADAT engendré par les facteurs climatiques
    (iii) Un état critique de la vulnérabilité au changement climatique des modes et moyens de subsistances dans la zone d'emprise du PADAT des régions des Savanes
    (iv) Un déboisement massif du couvert ligneux sur tout le territoire
    (v) Une transhumance source progressive de dégradation des ressources naturelles et de conflits entre agriculteurs et éleveurs
    (vi) Les ressources en eau sont du point de vue volume capté en nette décroissance du fait d'un envasement massif.

52. Ces observations confirment les signes les plus visibles des impacts du changement climatique reportés dans la seconde communication nationale (2010) : assèchements, catastrophes naturelles, flambées de maladies, la diminution du couvert forestier, érosion, salinisation prolongée du terminal continental du bassin sédimentaire côtier, soit une baisse généralisée de la qualité de l'eau, et la perte de la fertilité des sols.

E. LES COMPOSANTES DU PROJET D'ADAPTATION

53. Le projet ADAPT proposé est articulé autour de quatre composantes intégrant les différentes priorités du PANA et les observations ci-dessus énumérés:

    1. L'intégration d'outils d'adaptation au changement climatique dans les systèmes de production agricole;
    2. Les systèmes de production agricoles vulnérables sont adaptés aux impacts climatiques actuels et futurs;
    3. L'information, l'éducation et la communication sur le changement climatique;
    4. La gestion du projet et suivi et évaluation.

54. ***La Composante 1. L'intégration d'outils d'adaptation au changement climatique dans les systèmes de production agricole.*** *Cette composante met l'accent sur la nécessité de soutenir de façon plus efficace et plus coordonnée les mécanismes institutionnels ; elle est articulée en trois sous-composantes :*

55. *Sous-composante 1. 1 : Appui à l'intégration de l'aspect CC dans les systèmes de production agricole. Les activités de cette sous-composante sont une série d'études sectorielles, d'études thématiques, de cartographies, la mise en place de groupes de travail, la sensibilisation des décideurs politiques et le suivi des feux de brousse.*

- *Activité 1: Etudes sectorielles. Il s'agira ici de réaliser une analyse visant l'état de la vulnérabilité, la vulnérabilité des ressources en eau, l'énergie rurale durable et l'élaboration d'un code pastoral qui à la fois trace un portrait juste et réaliste de la situation et définit un cadre plus adapté de conduite du troupeau. Cette évaluation de la politique et des capacités agricoles (les lacunes et les chevauchements, les possibilités et contraintes d'analyse) permettra une meilleure intégration de l'adaptation au changement climatique dans les politiques du secteur agricole, y compris la biodiversité agricole et le secteur pastoral.*
- *Activité 2: Les études thématiques porteront sur la mobilité du cheptel, de l'adaptation de la filière des semences, et aussi à une enquête sur les semences adaptées. Elles permettront de mieux cerner les problèmes d'adaptation aux changements climatiques.*
- *Activité 3: Cartographie agricole et sylvo-pastorale. La connaissance des endroits vulnérables atténue les incertitudes et facilite une adaptation appropriée.*
- *Activité 4: Constitution de groupes de travail. La mise en place d'un bon cadre institutionnel[13] est indispensable à la réussite du projet. Cette activité s'attachera à la constitution de groupes de travail intersectoriels pour définir les programmes intégrant l'adaptation aux changements climatiques et en les adaptant à la programmation sectorielle. Ceci permettra le renforcement de la collaboration institutionnelle entre les ministères concernés (MAEP, MERF et MEAHV) dans l'application des outils clés tels que «climate proofing» et dans le suivi des processus adaptation aux changements climatiques dans le secteur agricole.*
- *Activité 5: Sensibilisation des décideurs politiques. Les décisions politiques jouent un rôle primordial dans le développement socioéconomique du pays. Il est donc très important que les décideurs politiques soient bien informés afin de prendre les meilleures décisions en matière d'adaptation au changement climatique. Cette activité s'attachera à élaborer un dossier de sensibilisation destiné aux décideurs politiques, à l'utilisation des modèles et scénarios de CC, à l'analyse des données climatiques et à des visites sur le terrain.*
- *Activité 6: Suivi des feux de brousse. Les feux de brousse constituent une pratique très dévastatrice des écosystèmes. L'activité vise à fournir un appui à la cartographie des feux de brousse et la diffusion de bulletins.*

[13] *Le Comité Climat peut être redynamisé*

56. *La sous-composante 1.2 : Renforcement du réseau agro-météorologique. Les informations et la qualité des données météorologiques sont indispensables pour une meilleure appréciation des conditions climatiques. Pour avoir des données de bonne qualité, il faut disposer des capacités nécessaires. C'est pourquoi la sous-composante 2 comporte la fourniture de matériels et d'équipements appropriés appuyée par une formation durable.*
    - *Activité 1: Matériels et équipements. Développer des systèmes de surveillance appropriés pour le suivi des progrès accomplis dans la réalisation des objectifs d'adaptation nécessite des équipements appropriés. Cette activité consiste à doter les différentes zones agro-météorologiques de stations météorologiques automatiques et de petits équipements agro-météorologiques.*
    - *Activité 2: Formation. Il a été constaté que l'un des facteurs qui ne facilitent pas une bonne adaptation dans les différentes zones du PADAT est l'insuffisance des capacités. La formation qui est prévue dans cette activité est un processus durable dans toutes les zones concernées de façon continue et répétitive sur la collecte et le stockage des données météorologiques ainsi qu'un système de gestion des données climatiques.*

57. *La sous-composante 1.3 : Mise en place d'une plateforme d'échanges sur les CC. Pour réussir une bonne politique d'adaptation, il faut mettre en place un mécanisme qui permettra à tous les acteurs de pouvoir disposer facilement de toutes les informations sur les questions liées au changement climatique.*
    - *Activité* 1: *Mise en place d'une Plateforme nationale sur les échanges d'informations sur les CC. Il s'agira de mettre en place une plateforme regroupant toutes les parties prenantes : institutions, secteurs privés, agriculteurs, éleveurs, pêcheurs, sociétés civile, autorités traditionnelles, ONG, négociateurs, chercheurs, semenciers, etc., afin d'échanger et partager les informations sur les CC de façon générale et celles relatives à l'adaptation en particulier en s'appuyant sur un système de réseau approprié.*
    - *Activité 2: Inventaire des bonnes pratiques à l'échelon national en matière d'adaptation au CC. Il existe déjà des pratiques d'adaptation mises en œuvre par les populations depuis plusieurs années. Il s'agit de les inventorier puis d'élaboration un ensemble de bonnes pratiques opérationnelles et les enseignements tirés/leçons apprises dans le cadre d'un risque accru d'adaptation climatique du secteur agricole pour la diffusion et la reproduction aux niveaux national et régional en appui à l'élaboration des politiques de programmation.*
    - *Activité 3 : Présentation des études de cas qui existent sur l'adaptation au CC. Certaines expériences régionales, nationales et/ou internationales en matière d'adaptation dans certains secteurs et/ou sur certaines thématiques ont été des succès. L'activité 3 se propose de présenter ces études de cas pour servir d'exemples.*

58. ***La composante 2. Les systèmes de productions agricoles vulnérables sont adaptés aux impacts climatiques actuels et futurs***

59. Cette composante divisée en trois sous composantes notamment : SC 2.1-Résilience de la production vivrière du mais, riz et manioc améliorée par la mise en place de techniques de culture intégrant l'adaptation aux changements climatiques ; SC 2.2-Promotion des systèmes d'intégration de l'élevage à l'agrosylviculture pour réduire l'impact des sécheresses récurrentes et SC 2.3-Amélioration des possibilités de diversifier les systèmes de production à travers le développement de l'aquaculture et la pisciculture.

60. ***La sous composante 2.1** : **Résilience de la production vivrière (mais, riz et manioc) améliorée par la mise en place de techniques de culture intégrant l'adaptation aux changements climatiques.***

61. Les effets des CC sur l'agriculture se manifestent à travers (i) la réduction de la pluviométrie et du nombre de jours de pluies; (ii) l'augmentation de la température

qui provoque l'assèchement des plans d'eau naturels et artificiels et l'augmentation de l'évapotranspiration; (iii) la diminution de la productivité et de la production ; (iv) l'insécurité alimentaire; et (v) la paupérisation surtout des petits producteurs agricoles.

62. La sous-composante sera exécutée dans toutes les zones d'intervention du PADAT et, spécifiquement dans les Régions des Savanes (RS), Kara (RK) et Centrale (RC) pour la première phase (les trois premières années) et sera élargie aux deux autres régions (Plateaux et Maritime au cours de la deuxième phase).

63. Elle est déclinée en trois (03) sous-sous-composantes, à savoir : (1) la diffusion aux groupes vulnérables des semences adaptées et bonnes pratiques intégrant le petit élevage dans les systèmes de production ; (2) l'amélioration de l'équilibre hydrique à la parcelle à travers la promotion de la micro irrigation efficiente à basse pression ; la conservation de l'eau et des sols, la réalisation de petites retenues et l'amélioration de la fertilité des sols et (3) la promotion des activités génératrices de revenus (AGR) à travers un soutien au maraichage.

64. Les activités et tâches à mener dans le cadre du Projet ADAPT visent principalement à apporter une *additionnalité* au projet PADAT, à travers :

65. *Sous-composante 2.1.1. Le renforcement de la résilience des groupes vulnérables via la dotation de semences adaptées et bonnes pratiques intégrant le petit élevage dans les systèmes de production :*
    - *Activité 1 – Diffusion aux groupes vulnérables de semences vivrières adaptées et performantes et de semences fourragères sélectionnées (Leucena, Albizia, Gliricidia, Mucuna); le catalogue de semences existant sera étudié et les souches tolérantes au stress hydrique lors des retards des pluies seront appuyées et introduites dans les systèmes de production agricole ;*
    - *Activité 2 - Renforcement des ménages vulnérables du PADAT par une intégration étudiée des systèmes de production : notamment par des géniteurs animaux tolérants et de petits noyaux d'élevage à objectifs multiples : 450 ménages bénéficieront d'animaux géniteurs, de 3 caprins/ovins et 4 volailles par ménage pour favoriser le retour aux bonnes pratiques d'amendement des sols et la constitution d'un noyau de capital d'élevage d'appoint;*
    - *Activité 3 - Appui à l'intégration des bonnes pratiques d'adaptation au CC dans les systèmes de production agricole;*

66. *Sous-composante 2.1.2. Amélioration de l'équilibre hydrique à la parcelle*
    - *Activité 1 – Réalisation de deux retenues d'eau d'une capacité de 2500 m3 dans chaque région favorisant l'utilisation des terres agricoles marginales ;*
    - *Activité 2 – Appui technique à la mise en place d'activités de CES/DRS à caractère additionnel sur les terres non agricoles en amorce de dégradation dans la Région des savanes : selon la nature de la dégradation installation de dispositifs antiérosifs[14] (y compris les demi-lunes) associés à un reboisement pour la protection des berges, des cours et plans d'eau; distribution pilote de 150 Kits pour la micro irrigation à basse pression; appui technique à la mise en place, sur 1000 ha, de dispositifs antiérosifs à la périphérie de la parcelle agricole aménagée et/ou mise en valeur par le PADAT (diguettes, culture suivant les courbes de niveaux, culture en terrasse, etc.);*
    - *Activité 3 – Installation de parcs agro forestiers de 10 ha dans les zones cibles de production de maïs du PADAT de Naki-ouest, Kétao, et Sotouboua.*

67. *Sous-composante 2.1.3. Promotion du maraîchage marginal adapté à la petite irrigation à base d'eau captée par ruissellement / drainage*
    - *Activité 1 – Appui à l'installation de 5 ha de maraichage par région autour des sources marginales aménagées au profit des maraichers organisés en groupements;*

[14] *60 ha de superficies exprimées en mètre-linéaire dans le budget de la sous-composante*

- *Activité 2 – Réalisation d'une enquête à des fins de cartographie des zones agro-climatologiques.*

68. ***La sous-composante 2.2. Promotion des systèmes d'intégration de l'élevage à l'agrosylviculture pour réduire l'impact des sécheresses récurrentes.*** Cette sous-composante cible la gestion des parcours et systèmes de production animale vulnérables.

69. En termes de vulnérabilité, le secteur élevage se montre très sensible aux CC. Les impacts de hausse de température et de baisse de la hauteur de pluie entrainent: (i) le réchauffement, (ii) l'assèchement et de l'évaporation des eaux continentales, sources d'abreuvement des animaux, (iii) disparition des aires de pâturage. En outre, le Togo subit les externalités négatives résultant de l'aridité du climat des pays sahéliens (Niger, Mali, Burkina), à travers la transhumance des bovins allochtones, qui raclent tout sur leurs passages. Les animaux deviennent cachectiques (amaigrissement avancé), fatigués et meurent ou sont rapidement liquidés aux bouchers de la région. De plus, les couloirs et zones de transhumance, malheureusement non matérialisés, ne sont pas respectés. Pour s'adapter, les éleveurs autochtones sont contraints à la transhumance. D'année en année, le nombre des éleveurs transhumants augmente, ce qui accélère le phénomène de la dégradation des écosystèmes situés le long des parcours et les sites d'accueil (déboisement, tassement des sols, ensablement des cours et retenues d'eau).

70. Quatre activités seront menées dans cette sous composante destinée aux régions et zones cibles du PADAT et les écosystèmes jouant un grand rôle dans la biodiversité menacée :

- *Activité 1: Amélioration de la gestion des espaces pastoraux et couloirs de passage. La cartographie des couloirs, les sessions d'animation et de planification sur l'usage des couloirs ; et la diffusion du code pastoral seront les principales actions de cette activité. La cartographie des couloirs et le code pastoral (cf. activité 1 de la sous-composante 1.1) seront associés à (i) des sessions d'animation et de planification sur l'usage des couloirs ; (ii) Une étude d'évaluation[15] de la capacité de charge des couloirs et zones d'accueil sera menée dans le but de gérer durablement ces écosystèmes ; cette étude identifiera aussi, clairement le couloir principal, les types d'aménagements nécessaires surtout les points d'eau à installer ou à réhabiliter, la largeur des couloirs, analyser les problèmes fonciers i.e comment les propriétaires terriens expropriés seront pris en compte dans les taxes préfectorales perçues sur les animaux entrant. L'étude suivie de la cartographie seront toutes deux faites à la 1ère année du projet ADAPT(2013) ; et la diffusion du code pastoral dès son approbation. Tandis que l'élaboration du code pastoral annoncée dans l'activité 1 de la sous-composante 1.1 va consister à produire un document législatif et technico-économique qui réglementera l'élevage au Togo et surtout les questions de la transhumance, une cause principale de la dégradation des écosystèmes togolais aggravant ainsi les effets des CC ; cette activité prendra en compte la sensibilisation sur l'intégration sous régionale mais aussi les problèmes des écosystèmes togolais en nette dégradation ces 45 dernières années. Chaque acteur du secteur élevage possèdera un extrait du code pastoral en ce qui lui concerne et surtout tous les transhumants seront sensibilisés chaque année à l'entrée et pourvus des extraits du code.*
- *Activité 2 : Aménagement de cinq cent (500) km de couloirs de transhumance et trois (03) zones d'accueil à travers (i) La matérialisation du ou des couloirs avec des balises à chaque cinq cent mètres, des arbres, des éléments naturels ou infrastructures (montagne, rivières, bas-fonds, pistes etc.) aideront également à la délimitation de ces couloirs ; (ii) l'installation des points d'eau pour l'abreuvement du bétail (15 forages pastoraux), ces forages d'au moins*

[15] *D'un coût chiffré à 12.000 USD*

60m de profondeur atteindront les nappes abondantes ; (iii) autour de chaque points d'eau sera installé un poste de surveillance et de gestion de ce point d'eau[16] dans le but de rendre durables les installations et éviter les conflits autour des points d'abreuvement ; (iv) l'aménagement de 03 aires/zone d'accueil ; l'aménagement de ces aires va consister à l'installation ou à la réhabilitation d'un point d'eau, l'introduction des essences fourragères, l'accès facilité et un poste de surveillance et de contrôle de la capacité de charge de la zone par le contrôle des effectifs rentrant pour éviter la dégradation excessive de l'écosystème.

- *Activité 3 : Restauration des écosystèmes sylvo-pastoraux dégradés par : (i) le reboisement de 1000 ha de parcelles réparties dans les cinq régions ; soit 500 ha seront confiés à l'État qui va obtenir des appuis à cet effet et les 500 autres hectares seront réalisés par les communautés lesquels décideront des espaces à reboiser et les réaliseront grâce aux appuis que le projet ADAPT va leur apporter ; (ii) La mise en défens de 240 ha d'écosystème en dégradation ; Une étude[17] va précéder ces deux activités pour identifier les sites à reboiser, les différentes essences à installer dans le but que dans un moyen et long terme, ces espaces reboisés soient exploités pour l'alimentation du bétail et continuent en même temps par jouer leur rôle de lutte contre les facteurs du CC. Bien entendu, ce ne sont pas des reboisements à caractère économique mais environnemental. L'étude précisera aussi les acteurs du reboisement (ONG, Communauté, État via ODEF). Concernant les espaces à mettre en défends, l'étude doit produire le document d'engagement inclusif non révocable de la communauté riveraine qui en compassassions va bénéficier des AGR. Cette étude va élaborer également les plans et les modules de formation à l'endroit des communautés (par exemple formation des communautés en technique de pépinières pour leur permettre de produire elles-mêmes leurs plants) ; (iii) La lutte contre les feux de brousse dans 100 sites couplée à l'établissement et équipement de 15 comités de lutte contre les feux de brousse pour permettre aux communautés et à l'État de venir à bout de ce fléau; une étude de diagnostic participatif et d'essai doit préciser pour chaque préfecture les périodes exactes d'autorisation des brulages précoces en conformité avec les données pluviométriques.*
- *Activité 4 : la promotion de l'apiculture en tant que stimulant l'emploi là où seront réalisés les investissements structurants ; les sites d'accueil seront les forêts restaurées et écosystèmes mis en défens via une formation de 10 coopératives de 30 membres (300 personnes) et l'équipement en ruches (1000), de 9 extracteurs et autres petits équipements. L'apiculture apparaît comme l'activité qui permettra aux populations vulnérables de s'adapter aux CC du fait que quel que soit la variabilité du climat, il y a sur le territoire togolais une strate de plantes qui vient en floraison ce qui permettra aux producteurs d'exploiter les produits de la ruche et de vivre de cela afin de faire face aux effets négatifs sur le pouvoir d'achat des CC.*

71. ***La sous-composante 2.3** : **La diversification des systèmes de production via le développement de l'aquaculture et la pisciculture associées au maraichage.*** Cette sous-composante vise l'appui à la diversification des productions agricoles. Les effets des CC sur la ressource en eau, les écosystèmes aquatiques et sur les groupes vulnérables sont (i) la disparition saisonnière de plusieurs cours d'eau ; (ii) l'assèchement des plans d'eau naturels et artificiels ; (iii) la tendance à la disparition des activités de pêche ; (iv) la raréfaction du poisson ; et (v) la paupérisation des communautés de pêcheurs.

16 Dont les charges de surveillance sont prises en compte dans les coûts de l'activité

17 Le financement de cette étude sera dégagé sur le budget des activités qu'elle renseigne sur la base d'un coût unitaire du reboisement de 470USD par ha (235 000 FCFA) pour un total de 1000ha et de l'échelonnement suivant: 200 ha en première année (A1), 300 ha en A2 et A3 et 100 ha en A4 et A5 ; l'étude pour l'identification des sites à reboiser : forfait de USD 12000 à la première année

72. La sous-composante sera exécutée dans 10 des 35 préfectures du Togo et, prioritairement dans les Régions des Savanes (RS), Centrale (RC) et Maritime (RM). Elle est déclinée en deux (02) sous-sous-composantes, à savoir : (1) promotion de l'aquaculture associée au maraichage ; et (2) la mise en valeur des plans communautaires par la pêche basée sur l'aménagement piscicole des retenues d'eau communautaires. La sous-composante touchera 15 à 20 localités dans les 10 préfectures retenues, 187 bénéficiaires directs, membres d'organisations de producteurs (OP), et 935 dépendants directs. La sous-composante fera aussi la promotion de la production de poisson sur une base collective et communautaire et touchera quant à elle 10 communautés de 500 à 1000 personnes. Les activités et tâches à mener dans le cadre du Projet ADAPT sont les suivantes :

73. Sous-composante 2.3.1. Promotion de l'Intégrations Aquaculture-Agriculture (IAA) comme mode d'adaptation en milieu rural vulnérable aux changements climatiques.

- *Activité 1 - Études technico-économiques de pré-installation des unités piscicoles (2 études zonales de faisabilité);*
- *Activité 2 - Appui à la mise en place d'unités piscicoles (10 unités);*
- *Activité 3 - Renforcement des capacités des pisciculteurs organisés (10 OP) autour des unités piscicoles mises en place;*

74. Sous-composante 2.3.2. Mise en valeur de plans d'eau communautaires en zones vulnérables aux changements climatiques.

- *Activité 1 - Formation en pêche des membres de 10 communautés basée sur des aménagements aquacoles (pour un total de 5 sessions);*
- *Activité 2 - Empoissonnement de 10 retenues d'eau de 2500m^3 réfectionnées.*

75. Sous-composante 2.3.3. Renforcement de capacités d'intervention des structures d'encadrement

- *Activité 1 – Mise à disposition des kits de suivi des performances des Techniciens Spécialisés-Élevage et Pêche (TSEP) ;*
- *Activité 2 - Appui-conseil aux organisations de pisciculteurs;*

76. ***La Composante 3. Renforcement nécessaire pour promouvoir l'éducation, l'information et la communication en matière de changement climatique***

77. Le projet ADAPT a pour objectif de réduire l'impact du changement climatique sur les groupes ruraux vulnérables, ainsi que sur les ressources naturelles essentielles pour soutenir la production agricole et accroître la sécurité alimentaire. Il vise, à travers l'intégration des options d'adaptation aux effets néfastes des changements climatiques, la durabilité du projet PADAT qui, au départ, a ciblé uniquement le développement de la productivité et la valorisation des produits agricoles.

78. Plusieurs facteurs clés concourent à doter le Togo d'une bonne capacité d'adaptation et par conséquent à diminuer la vulnérabilité du secteur de l'agriculture face aux effets néfastes des changements climatiques. Il s'agit principalement de : (i) l'accessibilité aux technologies disponibles ; (ii) la définition claire des rôles et responsabilités pour la mise en œuvre des activités d'adaptation ; (iii) la mise en place de systèmes de formations des acteurs et de diffusion de l'information fiables sur les changements climatiques ; et (iv) enfin l'accès équitable aux ressources.

79. L'identification des besoins en Information, Education et Communication (IEC) en matière de changements climatiques avec les investissements nécessaires qui y sont liés permet de prendre en compte ces facteurs clés en combinaison avec les autres études prévues dans cette phase de formulation du PPG qui sont : (i) l'évaluation des besoins en matière d'information et outils pour intégrer l'aspect CC dans la planification et la gestion des systèmes de production agricole ; (ii) l'évaluation de la vulnérabilité des systèmes de production végétale (Mais, riz et manioc) ; (iii) l'évaluation de la vulnérabilité des systèmes de production animale, intégration élevage/agriculture ; (iv) l'identification des potentialités de l'aquaculture comme activité de diversification et d'adaptation aux changements climatiques.

80. La méthodologie utilisée pour cette étude se fonde sur deux approches: (i) la collecte de l'information au moyen de la consultation des acteurs sur leurs besoins en IEC en lien avec l'agriculture et les changements climatiques couplées avec l'étude et de la recherche documentaire; (ii) l'analyse des informations en vue de l'évaluation des besoins en IEC.

81. La finalité de l'étude est l'élaboration d'une stratégie d'IEC qui apporte une additionnalité à la stratégie d'IEC du PNIASA et donc de permettre au projet de toucher les groupes et les zones les plus vulnérables aux changements climatiques et promouvoir ainsi leur capacité d'adaptation à travers la mise en œuvres de 3 composantes d'activités ciblées pour un coût total d'environ 680 546 $US.

82. Sous-composante 3.1. Compréhension et évaluation de la vulnérabilité aux CC :

- *Activité 1 : Renforcement des OPs en suivi et évaluation de la vulnérabilité aux CC ; il s'agit d'ateliers de formations*
- *Activité 2 : Renforcement des capacités de communication et d'animation des agents endogènes des OP sur l'adaptation aux CC ;*
- *Activité 3 : Recours à des mécanismes appropriés de sensibilisation des éleveurs et agriculteurs sur le respect des couloirs de transhumance et la lutte contre la déforestation ;*

83. Sous-composante 3.2. Outils d'aide à la décision et renforcement de capacités d'adaptation aux CC[18] *:*

- *Activité 1 : Développement participatif d'outils d'aide à la décision à l'échelle locale (Cartes, MARP)*
- *Activité 2: Sessions d'échanges à l'échelle locale sur l'adaptation du calendrier agricole et itinéraires techniques ; outiller les producteurs à utiliser les connaissances scientifiques disponibles sur le climat dans le calage du calendrier agricole*
- *Activité 3 : Renforcement des capacités des CVD dans la lutte contre les feux de brousse et des outils d'intégration de l'adaptation au CC*

84. Sous-composante 3.3. Modules et manuels techniques en matière d'adaptation des systèmes de production agricole aux CC

- *Activité 1 : Module et manuels techniques d'Intégration de l'élevage aux systèmes de production agricole*
- *Activité 2 : Module et manuels techniques de vulgarisation des semences adaptées et choix de paquet technologique*
- *Activité 3 : Module de formation des TSEP en aquaculture adaptée au CC.*

85. ***La composante 4. Gestion du projet et suivi et évaluation.*** *Cette composante est intégrée à l'unité de coordination du PADAT. Un aspect particulier portera sur le suivi de l'impact des activités inscrites dans la composante ADAPT pour mesurer son additionnalité lors de la revue à mi-parcours.*

4.1. STRATEGIE DE MISE EN ŒUVRE

86. La mise en œuvre s'appuiera sur le dispositif du PADAT. La spécificité de l'adaptation au changement climatique occupera une place importante dans le choix des opérateurs capables d'exécuter les tâches y afférentes. A titre d'exemple, la composante relative au renforcement des politiques en matière d'adaptation au CC, le PADAT fera appel aux spécialistes du MERF. Similairement, pour les autres composantes le projet fera appel aux différents prestataires chacun selon son avantage comparatif ; il s'agit des consultants, bureaux d'études, ONG, Union des OP, services et établissements publics, etc.

87. Pour la mise en œuvre du projet ADAPT, un fonctionnaire du MERF, expert en adaptation au changement climatique, sera mis à disposition par le gouvernement en qualité d'Assistant au COD PADAT et son Comité de pilotage.

[18] *Y compris la formation des formateurs*

88. **Sur le plan institutionnel**, le dispositif de coordination mis en place pour le PADAT sera entièrement reconduit pour le projet ADAPT mais renforcé par les structures en charge de l'adaptation au changement climatique qui seront elles-mêmes appuyées et formées : celles-ci se retrouvent au sein des différents ministères (MAEP, MERF, MEAHV) et de la société civile.

89. **Ministère de l'environnement et des ressources forestières** (MERF). Chargé de l'élaboration, de la mise en œuvre, et du suivi-évaluation des politiques, stratégies, initiatives et outils de gestion durable des ressources naturelles; le MERF assure la promotion et la prise en compte des problématiques environnementales dans les stratégies et programmes sectoriels. Il est en charge du suivi et mise en œuvre du PANA et de façon plus globale des changements climatiques et de leurs impacts sur les ressources économiques et naturelles du pays. Il aura à jouer un rôle prépondérant dans cette composante adaptation au changement climatique, en particulier pour le suivi et monitoring des impacts de l'adaptation. Il est également spécialisé dans le reboisement dans la sylviculture et l'agroforesterie.

90. **Ministère de l'Eau, de l'Assainissement et de l'Hydraulique Rural** (MEAHV). Le département gère la politique de l'eau, ressource essentielle à la vie. La direction de l'aménagement rural est aussi en partie responsable de la gestion des eaux de surface. Ces structures auront à jour un rôle important dans l'approvisionnement en eau et les aménagements infrastructurels des bas-fonds.

91. **Ministère du Développement à la base, de la jeunesse, de l'artisanat et de l'emploi des jeunes.** Ce ministère travaille beaucoup avec les communautés à la base pour réduire un tant soit peu la pauvreté dans le pays. Ses activités sont transversales à tous les ministères et concernent l'éducation, la micro-finance, les AGR, l'appui aux producteurs/ trices agricoles etc... Un point important soulevé par ce ministère est celui relatif aux changements climatiques qui ont un impact négatif sur les capacités de résilience (remboursement des crédits) des producteurs.

92. **L'Institut de Conseil Agricole du Togo** (ICAT) a pour mission de contribuer à la promotion du monde rural, à travers la vulgarisation des itinéraires techniques appropriés et l'appui à la structuration des organisations professionnelles. Bien établi dans le territoire par ses Délégations Régionales, Agences préfectorales, antennes cantonales et conseillers agricoles appuyés par les techniciens spécialisés (TS), l'ICAT sera un des opérateurs clefs du dispositif par lequel le message et les investissements dans l'adaptation seront retransmis aux producteurs.

93. **Les organisations paysannes et producteurs agricoles** (CTOP et RENOP) seront mises à contribution pour le rôle de partenaires essentiels dans la mise en œuvre du PADAT notamment dans le domaine du pilotage du projet, du renforcement des capacités des OP, la mise en place de l'opération « quick start » et de l'opération pilote de distribution d'engrais auprès du système privé, le développement des petits aménagements agricoles, etc.).

94. **Les prestataires de services** (ONG, consultants indépendants et/ou bureaux d'études), partenaires du PADAT sont constitués d'opérateurs ayant des compétences diverses et avérées dans les domaines de : (i) l'animation , (ii) la formation à l'organisation et la gestion, (iii) l'appui aux OP , (iv) l'appui à la commercialisation, (v) l'appui à la préparation des plans d'actions des OP , (vi) la formation en IEC pour les femmes et les jeunes des villages partenaires, (vii) le conseil technique (agriculture et génie rural), en micro finance, (viii) la conduite d'études diverses, etc. Le paysage togolais compte plus d'une centaine d'ONG intervenant dans divers domaines du développement rural : encadrement, appui, conseil, sécurité alimentaire, économie sociale, développement communautaire, renforcement des capacités techniques et organisationnelles des OP, etc. Elles sont inégalement réparties sur toute l'étendue du territoire.

LES CRITERES DE CIBLAGE

95. Les critères de ciblage varient selon les thématiques. Ils peuvent être de nature sociale, économique, sectorielle, géographique mais à ces critères seront nécessairement associés les trois critères fondamentaux portant sur le changement climatique : (i) impact du CC, (ii) vulnérabilité au CC, et (iii) potentiel à l'adaptation au CC.

BUDGET DU PROJET

96. Le budget du projet ADAPT formulé est articulé comme il figure dans le PIF et se chiffre au même montant de $5,3 millions USD accordés par le Fonds des PMA. Le cofinancement disponible à partir du PADAT sera estimé et comptabilisé. Il en sera de même pour les contributions du Gouvernement et des bénéficiaires à estimer en nature : exemptions des taxes et impôts pour le gouvernement et main d'œuvre pour les bénéficiaires. Le cofinancement du Gouvernement donnera lieu à une lettre formelle du Gouvernement du Togo adressée au FIDA.

CONCLUSIONS ET ETAPES SUIVANTES

97. Le projet devrait être soumis au comité technique du FIDA en Juin 2012 puis au Secrétariat du FEM en Juillet 2012. Pour s'inscrire dans ce délai, un document de projet provisoire sera communiqué aux partenaires au cours du mois de Juin 2012.

Fait à Lomé, le 17 Juin 2012

Pour la mission de formulation
[En présence de M. Naoufel Telahigue,
Chargé de programme ECD-FIDA]

Aissa Touré
Chargée de Portefeuille
Division Afrique de l'Ouest et du Centre
Département de la Gestion des Programmes
Fax: 0039-06-54593136/3019

Pour le Gouvernement du Togo

Monsieur Mindi Lamboni
Secrétaire Général
Ministère de l'Agriculture, de l'Élevage et de la Pêche de la République togolaise
Lomé

Annexe 7 – LISTE DES PERSONNES RENCONTREES

I. INSTITUTIONS CENTRALES (A LOME)

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Telephone	Courriel
14-mai	1	MAEP/SG	M. Lamboni Mindi	SG	2221-5563	lamboni1958mindi@yahoo.fr
14-mai	2	MAEP/SG	M. Ognatan Ognadou	Point Focal ADAPT	9099-7745	
14-mai	3	MAEP/SG	M. Kpadenou K. Anani	Chef Division Filiere Agro-industrielle	9029-8810	
14-mai	4	MAEP/SG	M. Radji Safiou	Conseiller technique/MAEP	9005-2324	sradji@orange.fr
14-mai	5	PADAT	M.Abrangao Tchedire	Specialiste Passation de marche	9014-0817	tabrangao@yahoo.fr
14-mai	6	PADAT	M. Kolani Tchimbiandja	Specialiste & Developpement de filieres	9021-2087	kolanigoule3@gmail.com
14-mai	7	PADAT	M. Zagare Firmin	Expert Infrastructures	9200-4290	zagaref@yahoo.fr
14-mai	8	PADAT	M. Bassim M. Asalo	ExpertGestion Financiere	9001-6934	bassim59@gmail.com
14-mai	9	MAEP/Cabinet	SEM. Ewovor K. Messan	MAEP/Ministre de l'Agriculture		
14-mai	11	PNUD	M. Barry Abdoulaye	Security Officer		
14-mai	12	PNUD	M. Etey Kokouvi	Assistant Security Officer		
15-mai	13	MERF/SG	M. Dakou Didi	SG		
15-mai	14	MERF/SG	M. Sossou	Planification		
15-mai	15	MERF/DE	M. Esspbiyou Thiyu Kohoga	DE	9002-1935	
15-mai	16	MERF/DE	M. Bamali Didier	Charge d'etude		
15-mai	17	MERF/DE	M. Guinhouya Mery	Chef de Division	9004-3182	
15-mai	18	MERF/DE	Mme. Yaou Mery	Charge d'etude	9014-8744	
15-mai	19	MEAHV/SG	M. Assiongbon	SG		
15-mai	20	MEAHV/SG	M. Akakpo Wohou	Directeur des Ressources en eau	9001-6973	
15-mai	21	MEAHV/Cabinet	SEM. Gal. Zakari Nandja	MEAHV		
15-mai	22	MEAHV/Cabinet	M. Assiongbon	SG		
15-mai	23	MERF/Cabinet	SEM. Ayikoe Kossi	MERF/Ministre de l'Environnement		
15-mai	24	MERF/Cabinet	M. Ouro-Djeri Essome	Directeur de cabinet		
15-mai	25	MERF/Cabinet	M. Dakou Didi	SG		
15-mai	26	MERF/Cabinet	Mme. Ali Sando	Charge de communication		
15-mai	27	MERF/Cabinet	M. Sossou	Planification		
16-mai	28	MERF/Salle de Conference	Comite Technique			
16-mai	29	MERF/Salle de Conference	(voir liste de presence)			
17-mai	30	MAEP/PADAT	M. Kodjovi-Numado Michel	COD/PADAT	9004-0577	
01-juin	31	MAEP	LAMBONI Mindi	SG		
01-juin	32	MEAHV	AMADOU Massa-Houdou			
01-juin	33	MERF	DJIWA Oyétoundé			
01-juin	34	MERF	AFENUTSU Kossivi Dodji			
		MAEP	Adou Rahim Alimi Assimiou	COD PPAAO	9018-7769	adourahima@gmail.com
		MAEP	Didjeira Akihila	Directeur semences	90 162 693	akihiladidj@yahoo.fr
		MAEP	Ali Domtani	DPA	90 006 011	domtani@yahoo.fr
		MAEP	Midekor Ayao Dodji Agbleir	COD PASA	90 040 651	midekor@yahoo.fr
		MAEP	Rossignol Lucien	Chef mission REI/SOFRECO	91 063 233	lucienros@yahoo.fr
04-juin	35	MDBJAEJ	M. VOVOR Victor;	Directeur de cabinet		
04-juin	36	MDBJAEJ	M. AGBOGBAZE Mensah;	Coordonnateur du projet PASEG		
04-juin	37	MDBJAEJ	M. PANTOM André	CCoordonnateur du projet PRT		

II. TERRAIN

2.1. REGION CENTRALE (Préfecture de Sotouboua)

Date	No.	Institution	Personnes rencontrees	Fonction	Contacts	
					Téléphone	Courriel
18-mai	1	DPAEP-Sotouboua	M.LAWKPEZI Tchao	DPAEP-Sotouboua	90344173	
18-mai	2	DPAEP-Sotouboua	M.ALILOU Aboubakari	Chef division phytosanitaire	90941165	
25-mai	3	ITRA/CRA-SH/Ferme semencière	M. Ayeva Tcha-Gole	Chef de bloc	90204274	
25-mai	4	ITRA/CRA-SH/Ferme semencière	M. Palanga K. Adjelem	Chef de bloc	90957105	
25-mai	5	ITRA/CRA-SH/Ferme semencière	M. Afoda Djywa	Chef Section Production	90027168	
25-mai	6	ITRA/CRA-SH/Ferme semencière	M. Sunu Yao Dodzi	Assistant-Chef Program. Racines & tubercules	90159394	
25-mai	7	ITRA/CRA-SH/Ferme semencière	M. N'Kpenou K. Etoudo	Chef Programme Racines & tubercules	90273578	
25-mai	8	ITRA/CRA-SH/Ferme semencière	M. Songai M. Sani	Chef de laboratoire	90028066	
25-mai	9	ICAT-Agence de Sotouboua	M. Adom Gado Abalo	Chef d'Agence par interim	90198192	
25-mai	10	DPAEP-Sotouboua	M. Alilou Aboubakari	DCP	90941169	

Préfecture de Tchaoudjo

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Telephone	Courriel
18-mai	1	DRAEP-RC	M. Gnongbo Nabiya	DRAEP-RC	9019-6254	
18-mai	2	COR/PADAT	M. Anani K. Marcel-Philippe	Charge du Suivi-Evaluation	9099-8876	philanani@yahoo.com
18-mai	3	COR/PADAT	M. Mome M. Euloge	Secrétaire-Comptable	9009-1021	eulogemome@yahoo.fr
18-mai	4	Prefecture/Tchaoudjo	M. Tchemi Tchambi Tchapkro	Prefet		
18-mai	5	Prefecture/Tchaoudjo	M.	SG		
25-mai	6	DRAEP-RC	M. Akaya Abalo	Chef DPFSA		
25-mai	7	DRPDAT-RC	M. Batema Bangina	DRPDAT-RC	90107331	
25-mai	8	DRTP-RC	M. Anwone Ounoh	DRTP-RC	90054423	
25-mai	9	DRTP-RC	M. Agadazi Ando Bongo	Chef Section TP	90233820	
25-mai	10	DRANSAT-RC	M. Baboko Gnakpao	DRANSAT-RC	90226297	
25-mai	11	Chambre Regionale d'Agriculture (CRA)-RC	M. Afoda Koumateh	SG		
25-mai	12	DREAHV	M. Kidjadi Bilibi	Mecanicien		
25-mai	13	DRAEP/DCV	Dr. Lattah Appere	Chef DCV		
25-mai	14	DRI/Action Sociale	M. Tokitawon Gou-Teyi	DRI		
25-mai	15	PHARMAVAL	Dr. Alikissankpeyi Razal	Veterinaire Prive		
25-mai	16	ANPAT	M. Agnon Kodjo	Aviculteur		
25-mai	17	URPSC	M. Edjeou Essossina	President		
25-mai	18	DPAEP-Tchaoudjo	M. Assama T. Iliassou	DPAEP-Tchaoudjo		
25-mai	19	APCR	M. Missih A. Awossa	President		
25-mai	20	UROPC	M. Atarouwa Sally	President		
25-mai	21	Tchaoudjo	M. Fandonougbo Kokou	Pecheur		
25-mai	22	Tchaoudjo	M. Kingbo K. Kpadenou	Pecheur		
25-mai	23	DRAEP-RC	M. Samie-Nimam M.	TSA (Volontaire)		
25-mai	24	DRAEP-RC	M. Pagana Yooudema	TA (Volontaire)		
25-mai	25	DRAEP-RC/DAER	M. Abina Tchalla	TSA		
25-mai	26	Tchaoudjo	M. Bassarou Raimi	Eleveur de bovins		
25-mai	27	Tchaoudjo	M. Issa Sarafadini	Eleveur de bovins		
25-mai	28	Tchaoudjo	M. Ro-Akpo Kale	Eleveur de bovins		
25-mai	29	Tchaoudjo	M. Korondowou	Eleveur de bovins		
25-mai	30	Pt de la Beme	Mme Amanah Mamiya	Point focal	90344219	

25-mai	34	Chambre Regionale d'Agriculture (CRA)-RC	M. Ouro-Bere Kassim		90265929	
25-mai	35	Chambre Regionale d'Agriculture (CRA)-RC	M. Tchagnaou Kounsoumou		90264206	
25-mai	36	REJJEPAT	M. Issifou Aboulaye	President	90950255	
25-mai	37	DR-Meteo	M. Pagouyou Konzou	Chef Communication	90971412	
25-mai	38	CECODRI (ONG)	M. Opekou Kossi Agbenofa	Cordinnateur de Programme	90982547	
25-mai	39	Developpement a la Base	M. Kodjo Omandoujo Komlan	Point focal	92027366	
25-mai	40	ICAT-Agence de Tchaoudjo	M. Sourou Koffi		90015910	
25-mai	41	GRADSF (ONG)	M. Djobo Same	President	90051105	
25-mai	42	DRERF-RC	M. Tellu K.	DRERF-RC	90022461	telkomtr@yahoo.fr
25-mai	43	Chambre Regionale d'Agriculture (CRA)-RC	M. M'Badia Tikpentiyena		90110719	
25-mai	44	DRAEP-RC	M. Akila Koffi		90138186	
25-mai	45	ICAT-Agence de Tchaoudjo	M. Alfa Aboubakar		90281676	
25-mai	46	DRAEP-RC	M. Tagba Tcha		90915070	
25-mai	47	DRAEP-RC	M. Tairou Abdoul Aziz	Section Aquaculture & Peche	90741360	
25-mai	48	FRGPCUR	M. Kabissa Hemou		91949367	
25-mai	49	DRAEP/DCP	M. Tchakingouena Fonta		90248775	
25-mai	50	CPC-Togo	M. Olou-Adara Ayefoumi		90114452	
25-mai	51	PTM (ONG)	M. Gomina Pizeme		90149527	
25-mai	52	Ets. Le Paysan	M. Amouzou Diyama Julien		90109890	

2.2. REGION DES SAVANES (Préfecture de l'Oti)

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Téléphone	Courriel
19-mai	1	Commune du Millenaire /Kangounou	M. Afanou K.	Spécialiste du Développement rural	91342590	
19-mai	2	Groupement Piscicole/Kangounou	Membres du groupement			
23-mai	3	ICAT-Agence de l'Oti	M. Bedekelabou Meyeke	Chef d'Agence ICAT-Oti	90339555	
23-mai	4	ICAT-Agence de l'Oti	M. Lare Yendouma	TSEP	90081283	
23-mai	5	DRI/ ODEF	M. Assoumanou	Forestier		
23-mai	6	DP-Environnement	M.			
23-mai	7	Barrage de Koumbeloti	Un groupe de producteurs de riz	Producteurs de riz		
23-mai	8	Terrain au tour de Mango	M.			

2.2.2. Préfecture de Tone

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Téléphone	Courriel
21-mai	1	Prefecture des Savannes	Elhadj Mossyamba Ali Seydou	Préfet de Tône	9 033 905	
21-mai	1	DRAEP-RS	M. Douti Evariste	Chef DPPSA	9003-6544	evaristdouti@yahoo.fr
21-mai	2	DRAEP	BADDOH Bambah	Chargé de programme	90935570	
21-mai	3	NSCI	AWONOU Tete	DDR	90260558	
21-mai	4	ICAT	LARE Monoka Raymond	CSVAPA	90019542	
21-mai	5	ICAT	TCHATAKORA Domdja	Responsable	90298009	
21-mai	6	ITRA	KOUSSA Dissirama	Chercheur	90296457	
21-mai	7	ITRA	LOMBO Yao	Resp. Suivi&Evaluation	90210161	
21-mai	8	s/c PADAT	TARAORE M. Alassane	Secr. Comptable	90037116	
21-mai	9	s/c PADAT	TINDAME L.M	Chef DCP	90918590	
21-mai	10	DRAEP/S	BAKONA Batobakou	Chef section semences	91858201	
21-mai	11	DRAEP/S	KASSEGNE Fantelé	Président	90940287	
21-mai	12	SCOOPS EP.	POUNDIBE Nagnandja	DPAEP/Tone	91856291	
21-mai	13	DRAEP	KOMBATE Pakindame	Président	90207762	
21-mai	14	UROPC-S	LARE Ibrahim	Président	90996981	

21-mai	15	RECAP	KOMBATE Ouwaridja	RECAP	90015552	
21-mai	16	Tantigou-Barrage	Un groupe de Maraichers	Maraichers		
21-mai	17	Naki-Ouest	Un groupe de 11 agriculteurs	Producteurs agricoles		
22-mai	18	Prefecture/Kpendjal	M. Mamounou	Prefet	98094172	
22-mai	19	Prefecture/Kpendjal	M. Kpanzou	Chef d'Agence ICAT-Kpendjal		
22-mai	20	Prefecture/Kpendjal	Un groupement mixte	Producteurs agricoles (riz, legumes, elevage)		
22-mai	21	Nano	Le Chef DOUBIK Gnoumba & une vingtaine de personnes	Producteurs agricoles (riz, legumes, elevage)		
22-mai	22	Naki-Est				
22-mai	23	Commune du Millenaire/Siege	M. Piake Douti Pierre	Coordonnateur	90056534	ppiake@hotmail.com
22-mai	24	Commune du Millenaire/Siege	M. Afanou K.	Specialiste du Developpement rural	91342590	
22-mai	25	Radio Rurale Locale des Savanes	ALI Goumoubni	Directeur	90728234	
22-mai	26	ONG CDD	KANFITINE Paul	Coordonnateur	90010650	

2.3. REGION DE LA KARA

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Téléphone	Courriel
24-mai	1	RESOKA	AGNAH Sowou	Président		
24-mai	2	PDPR Kara	ABOA Kossi	Chef division		
24-mai	3	ICAT-Kara	POUTOULI Yao	AVAPA		
24-mai	4	DRAEP/DPFSA	KOUGNIGAN Komlan	Contrôleur		
24-mai	5	CAP/EIR	DEKI Taïrou	Animateur		
24-mai	6	MDBASES	AMANA S. Eugénie	point focal		
24-mai	7	PDPR-K	PAYAROK	Chef division		
24-mai	8	DRTP-Kara	POLIROGNI Théna			
24-mai	9	ITRA/CRASS	ADABE K. Edoh	Chercheur		
24-mai	10	ONG ACM Kara	YODRIFEI Bagnakim	Animateur		
24-mai	11	DRDAT Kara	LEMOU Essowè	Chargé d'étude		
24-mai	12	PNADE-Kara	AMOUZOU Kokou Dodji	Gestionnaire		
24-mai	13	ICAT-Kara	PITCHOLO Akla-Esso	Directeur Réf.		
24-mai	14	DRAEP-Kara	KPANDIKA	Chef division		
24-mai	15	CNSS-Kara	AYEVA T.	Chef Programme		
24-mai	16	DRAEP-Kara	DJITENA Togaba	DR intérim		
24-mai	17	Terrain Kozah & Binah				
24-mai	18	ICAT-Agence de l'Assoli	M. Ali-Egbataou Koura	TSEP	90346626	

2.4. REGION PLATEAUX

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Téléphone	Courriel
		DRAEP Plateaux à Atakpamé	Adanou Koffi	Chef Division programmation, formation et statistiques agricoles	90 915 235	
		DRAEP Plateaux à Atakpamé	Alabi Lawani	Directeur Régional Plateaux	90 943 141	
		DRAEP Plateaux à Atakpamé	Batchassi Claude	Service contrôle phyto & semences	90 120 918	agninos1@yahoo.fr
		DRAEP Plateaux à Atakpamé	Yawo Komi	Direction régionale environnement	90 765 860	ykom02@yahoo.fr

2.5. REGION MARITIME

Date	No.	Institution	Personnes rencontrées	Fonction	Contacts	
					Téléphone	Courriel
26-mai	1	DRAEP-Maritime	M. Gligbe Kudzo Daniel	DRAEP-Maritime	90009799	

Annexe 8

Termes de référence du personnel du projet

Le COD PADAT ou **Délégué aux opérations** aura pour tâches sous l'autorité du SG/MAEP:

Assurer la planification, l'organisation, le suivi, le contrôle et la mise en œuvre de l'ensemble des activités du "Projet global" où par ce terme il est bien compris les activités de la composante FIDA/FPMA. A ce titre, il est responsable de : (i) la réalisation des PTBA, (ii) la gestion rigoureuse de toutes les ressources y compris celles de la composante FIDA/FPMA (humaines, financières et matérielles) du projet global où il associe an particulier son Assistant pour la composante FIDA/FPMA à toutes les étapes de décisions et de mise en œuvre de cette composante, (iii) l'acquisition des biens et services, (iv) le contrôle de la conformité des plans d'action aux objectifs du projet global, (v) l'appui technique (outils, formation, suivi, conseils, contrôle) aux Antennes et à tous les autres acteurs concernés pour la mise en œuvre des activités planifiées, (vi) le suivi régulier de l'évolution du projet global vers la réalisation des objectifs en relation avec les Antennes régionales, (vii) la supervision de la préparation des rapports périodiques et leur transmission à temps au CIPS, au PADAT et au FIDA, (viii) l'appui aux missions (technique, supervision, audit, etc.) et mise en œuvre de leurs recommandations, (ix) la signature des demandes d'approvisionnement des sous comptes d'opération, (x) la signature des ordres de paiements (virements, par chèque, etc.), (xi) la signature des accords, protocoles et contrats, et le fait au nom de l'UCP. Il a accès à tous les documents et correspondances qui sortent du Projet global et engagent ce dernier, et reçoit tout le courrier à l'arrivée. Il représente le projet global dans ses relations avec l'extérieur (CIPS, PADAT, ADAPT, Bailleurs de fonds, autres organismes représentatifs en relation avec les filières et adaptation aux changements climatiques).

L'Assistant spécialiste en adaptation au CC aura pour tâches sous la supervision du COD-PADAT :

- La programmation et mise en œuvre des activités de la composante ADAPT
- De préparer avec chacun des services du COD PADAT des DAO des activités d'adaptation
- De participer aux choix et sélection des agences et opérateurs prestataires de services
- De la définition et suivi des indicateurs d'adaptation au CC
- De concevoir la faisabilité de chacune des composantes avec la supervision du Comité Climat et services compétents du MERF, qu'il défendra par la suite devant le CTP du PNIASA à qui il rendra compte progressivement des résultats atteints
- Participera à l'identification des sites et bénéficiaires du projet avec qui il conviendra du mode opératoire
- Il est signataire de tous les documents financiers imputables au budget du projet ADAPT

L'assistance technique internationale (ATI)

Le Projet PADAT emploie une assistance technique internationale composée de un(e) assistant(e) technique international(e) (ATI) planificateur, avec une bonne expérience en suivi-évaluation axé sur les résultats; un(e) ATI spécialiste en gestion financière, avec une bonne expérience en passation des marchés ; un(e) ATI spécialiste en infrastructures rurales. L'ATI est essentiellement chargée d'Appuyer le MAEP dans la mise en place d'outils performants de gestion, d'un S&E axé sur les résultats. Il s'agit de : (i) développer des outils de planification stratégique et opérationnelle,(ii) de gestion et (iii) de suivi-évaluation (S&E) du Projet et du système de S&E sectoriel en appui à la DPCA; (iv) procéder à la formation de leurs homologues et des cadres nationaux des niveaux central et régional, (v) développer des outils d'évaluation des contrat annuels de performance des spécialistes nationaux, des prestataires de services et des différentes structures du MAEP participant au Projet et participer à l'évaluation de ces contrats.

Le Responsable financier. Sous la hiérarchie et la responsabilité du COD-PADAT, le Responsable Financier appuiera en rapport avec le COD-PADAT toutes les activités associées à la gestion financière et matérielle du projet en rapport avec le cofinancement du FIDA au projet ADAPT. Celles-ci sont : (i) assurer en rapport avec le COD-PADAT, la gestion financière et matérielle du projet, (ii) assurer le suivi et le respect des procédures de gestion du FIDA et FPMA, (iii) superviser la production des états comptables et financiers par le comptable notamment vérifier les imputations comptables, (ii) mettre en place le système comptable pour l'UCP et les Antennes, (iii) assurer le contrôle budgétaire et interne de gestion du projet, (iv) veiller à la régularité des opérations de gestion et à l'utilisation rationnelle du patrimoine du projet, (v) vérifier la régularité des dépenses et du respect des procédures administratives, comptables et financières, (vi) assurer le suivi et les prévisions de trésorerie (suivi des comptes du projet), faire préparer par le comptable les demandes de remboursement de fonds (DRF) puis suivre leur paiement, et recommander toutes actions nécessaires au COD-PADAT, (vii) faire élaborer par le comptable l'élaboration puis suivi et mise à jour des tableaux de bord financiers et de gestion du projet, (viii) rendre mensuellement compte de l'état des dépenses et de l'utilisation des ressources au COD-PADAT, et faire produire les rapports financiers du projet selon les échéances prévues, (ix) suivre les états de paiement pour les décaissements de Fonds et tenue de la situation des conventions et marchés entre les bénéficiaires, les Antennes et les OP, (x) suivre les reconstitutions mensuelles vers les comptes des région le cas échéant, (xi) superviser et auditer les comptes délégués tenus par les comptables de régions et contrôler des conventions et contrats souscrits à ce niveau, (xii) participer à la conception du Manuel de procédures administratives et financières et à la mise à jour dudit Manuel en fonction de l'évolution du Projet, (xiii) contribuer à la préparation des rapports d'exécution semestriels et annuels avec la DPCA, (xiv) participer à l'administration de biens du projet et à la gestion du personnel, (xv) suivi des relations avec les fournisseurs, (xvi) superviser le travail du comptable; et (xvii) collaborer avec les missions de supervision et d'audit.

Le Spécialiste en passation et suivi des marchés. En rapport avec la DAF et sous la supervision du COD-PADAT, le spécialiste en passation des marchés appuiera toutes les activités associées à la passation et suivi des marchés du projet en rapport avec le cofinancement du FIDA au projet ADAPT. En rapport avec la DAF et sous la supervision du délégué aux opérations, le spécialiste en passation des marchés appuiera la DAF dans les responsabilités suivantes : (i) préparer, actualiser et assurer le suivi des programmes de passation de marchés, (ii) préparer les dossiers d'appels d'offres, (iii) vérifier la conformité des termes de références préparés par les experts techniques, (iv) endosser, avec l'expert en suivi-évaluation et les experts techniques, les critères de suivi-évaluation des performances des prestataires et fournisseurs, (v) organiser le lancement des appels d'offres, assurer la réception des offres et leur évaluation selon les procédures en vigueur, (vi) assurer l'information du FIDA et la réception des autorisations et avis de non-objection en la matière, (vii) vérifier que les attributaires répondent en tous points aux critères et conditions établies, (viii) préparer et finaliser les contrats et les soumettre pour endossement au RAF et pour signature au Coordonnateur, (ix) en étroite concertation avec les experts techniques, assurer un suivi financier et contractuel des prestations, notamment par rapport aux indicateurs de performance, et prendre les mesures adéquates afin d'assurer l'exécution des prestations conformément aux clauses contractuelles, (x) en ce qui concerne les questions contractuelles, participer, en concertation avec le responsable du suivi-évaluation, le Coordonnateur et le responsable de la sous-composante et le chef d'antenne, sur base des rapports de performance, à la décision sur l'éventuelle reconduction des prestataires, (xi) former les cadres nationaux.

Spécialiste suivi-évaluation. En rapport avec la DCPA/MAEP et DE/MERF, et sous la responsabilité directe du COD-PADAT, le spécialiste en suivi-évaluation (Statistiques + base de données) appuiera la DPCA dans les responsabilités suivantes : (i) assurer la

coordination pour la préparation des PTBA qui seront réalisés avec les experts techniques et financiers, (ii) assurer la mise en place d'un système de suivi-évaluation informatisé et assurer l'élaboration et le suivi du tableau de bord des activités, (iii) assurer l'appui méthodologique à la DRAEP et à la DE via le délégué régional aux opérations, en matière de suivi et d'évaluation vérifier, ajuster et endosser les critères et indicateurs de S&E, (iv) avec les experts techniques et en collaboration avec l'assistant technique international en planificateur/S&E, rédiger les termes de référence pour les enquêtes de base du système de gestion des résultats et de l'impact de l'adaptation au CC et SYGRI (enquêtes indice des biens des ménages, vulnérabilité (y compris aux CC) et anthropométrique; assurer l'organisation et la supervision des enquêtes de références puis des enquêtes thématiques pour évaluer l'impact du projet d'adaptation sur les groupes vulnérables et bénéficiaires finaux, (v) assurer la mise en place d'un système de collecte et de reporting régulier visant à mettre en exergue les indicateurs de mise en œuvre et les indicateurs d'impact. Ces systèmes de reporting doivent permettre le S&E de chacune des sous-composantes, des composantes ainsi qu'au niveau individuel, de la qualité des prestations de services des différents partenaires, (vi) mettre en place des procédures visant à faire participer les bénéficiaires au S&E des prestations individuelles et des activités du projet, (vii) établir un programme de gestion et de diffusion des connaissances, de communication, de gestion des savoirs et de visibilité, (viii) assurer la centralisation, l'organisation, la consolidation et l'analyse des rapports internes soumis par les antennes et les prestataires, (ix) assurer la responsabilité dans la préparation des rapports semestriels et annuels d'activités, (x) appuyer la préparation des réunions du comité de pilotage (CIPS) en leur fournissant une information actualisée sur l'état d'avancement du projet et des différentes activités, (xi) appuyer les missions de supervision nationale du projet (deux par an) réalisées par certains membres de l'Équipe technique nationale de mise en oeuvre du projet, (xii) préparer la revue à mi-parcours et l'évaluation finale.

L'Agent comptable du projet ADAPT. Sous la hiérarchie et la responsabilité du COD-PADAT, et de l'Assistant pour la composante FIDA/FPMA, et avec la collaboration du responsable financier et spécialiste en passation et suivi des marchés et autres agents du PADAT y compris les comptables le cas échéant ; l'agent comptable recruté par le projet ADAPT a pour:

A. *Principales tâches comptables* : (i) contresigner les chèques signés avec le coordonnateur l'assistant du projet, après vérification de la régularité des dépenses et du respect des procédures administratives, comptables et financières, (ii) assurer le suivi et les prévisions de trésorerie (suivi des comptes du projet), préparer les demandes de remboursement de fonds (DRF) puis suivre leur paiement, et recommander toutes actions nécessaires au coordonnateur, (iii) élaborer puis suivre et mettre à jour les tableaux de bord financiers et de gestion du projet, (iv) rendre mensuellement compte de l'état des dépenses et de l'utilisation des ressources au coordinateur du projet, et produire les rapports financiers du projet selon les échéances prévues, (v) suivre des états de paiement pour les décaissements du Fonds et tenue de la situation des conventions et marchés entre les bénéficiaires, les Antennes et les OP, (vi) gérer et mouvementer les reconstitutions mensuelles vers les comptes de région, (vii) superviser et auditer les comptes délégués tenus par les comptables de régions et contrôler des conventions et contrats souscrits à ce niveau, (viii) Appuyer la conception du Manuel de procédures administratives et financières et à la mise à jour dudit Manuel en fonction de l'évolution du Projet, (ix) contribuer à la préparation des rapports d'exécution semestriels et annuels avec la DPCA.
B. *Et pour principales tâches de passation et suivi des marchés.* En rapport avec la DAF et sous la supervision du COD-PADAT, et collaboration du spécialiste en passation des marchés: (i) préparer, actualiser et assurer le suivi des programmes de passation de marchés, (ii) préparer les dossiers d'appels d'offres, (iii) vérifier la conformité des termes de références préparés par les experts techniques, (iv) endosser, avec l'expert en suivi-évaluation et les experts techniques, les critères de suivi-évaluation des

performances des prestataires et fournisseurs, (v) organiser le lancement des appels d'offres, assurer la réception des offres et leur évaluation selon les procédures en vigueur, (vi) assurer l'information du FIDA et la réception des autorisations et avis de non-objection en la matière, (vii) vérifier que les attributaires répondent en tous points aux critères et conditions établies, (viii) préparer et finaliser les contrats et les soumettre pour endossement au RAF et pour signature au Coordonnateur, (ix) en étroite concertation avec les experts techniques, assurer un suivi financier et contractuel des prestations, notamment par rapport aux indicateurs de performance, et prendre les mesures adéquates afin d'assurer l'exécution des prestations conformément aux clauses contractuelles, (x) en ce qui concerne les questions contractuelles, participer, en concertation avec le responsable du suivi-évaluation, le Coordonnateur et le responsable de la sous-composante et le chef d'antenne, sur base des rapports de performance, à la décision sur l'éventuelle reconduction des prestataires, (xi) former les cadres nationaux.

L'assistant (e) administratif (ve) recruté (e) par ADAPT aura pour tâches :

- De l'archivage de la documentation administrative relative au projet ADAPT ;
- De la tenue et suivi des rendez-vous, rencontres du COD-PADAT, son Assistant et de la programmation des ateliers et prestations des autres visiteurs du projet ;
- Du classement des contrats des prestataires et documents y relatifs ;
- De la gestion de tous les aspects de communication administratives et accueil du public ayant des rapports avec le projet.

Le chauffeur recruté par ADAPT aura pour tâches :

- D'être continuellement en règle avec le code de la route et les règles de transport en vigueur dans le pays ;
- De la tenue en bon état du véhicule du projet ;
- D'assurer en rapport avec la comptabilité d'une maintenance régulière du véhicule ;
- De la tenue à jour d'un tableau de bord du véhicule où seront consignés les kilométrages des différentes missions de terrain ou courses urbaines conjointement avec la consommation en carburant ;
- De respecter strictement les règles des Nations Unies en matière de déplacement ;
- De signaler tous les incidents survenus dans la conduite du véhicule.

Annexe 9

SEQUENCEMENT DES ACTIVITES POUR 2013

Le PTBA de l'année 1 du projet ADAPT s'orientera donc sur l'exécution des composantes du projet. Une comparaison voire une mise en adéquation avec le PTBA du PADAT 2013 sera ainsi facilitée dès la parution de ce dernier:

A. Composante 1. L'intégration d'outils d'adaptation au changement climatique dans les systèmes de production agricole

Les interventions du projet ADAPT au cours de l'année 2013 s'articuleront pour cette composante autour de :

Axe 1 : Appui à l'intégration de l'adaptation au CC dans les systèmes de production agricole

i. Réaliser une analyse visant l'état de la vulnérabilité agricole et des ressources naturelles, la vulnérabilité des ressources en eau, l'énergie rurale durable
ii. l'élaboration d'un code pastoral
iii. Réalisation de l'étude sur l'élaboration de l'état de la vulnérabilité agricole et des ressources naturelles.
iv. Réalisation de l'étude sur l'énergie rurale durable
v. Réalisation de l'étude sur la Mobilité du cheptel.
vi. Réalisation de l'étude sur l'Adaptation de la filière semence.
vii. Réalisation de l'étude sur l'Enquête portant sur les semences adaptées

viii. Réalisation des études cartographiques des feux de brousse et la diffusion de bulletins
ix. Constitution de groupes de travail pour la sensibilisation et l'animation d'une plateforme d'échanges sur les CC.

Axe 2 : Renforcement du réseau agro-météorologique

i. fourniture de matériels et d'équipements appropriés
ii. réaliser une formation continue et durable des capacités au profit de 40 personnes/région + une allocation de $10 000 par région pour achat de logiciels et matériels informatiques pour la gestion des données agro-climatiques

B. Composante 2. Les systèmes de productions agricoles vulnérables sont adaptés aux impacts climatiques actuels et futurs

Les interventions du projet ADAPT au cours de l'année 2013 s'articuleront pour cette composante autour de :

Axe 1 : Résilience de la production vivrière (mais, riz et manioc) améliorée par la mise en place de techniques de culture intégrant l'adaptation aux changements climatiques.

i. Lancer l'étude sur l'établissement d'un catalogue des semences existantes
ii. Etablissement d'accords avec les institutions semencières (peut être aussi avec WAAPP) pour le développement de semences adaptées au climat.
iii. Faire l'inventaire des bonnes pratiques agricoles à vulgariser
iv. Identification des ménages vulnérables et leur catégorisation
v. Recherche des géniteurs d'animaux tolérants ;
vi. Enquêtes sur les sites où seront réalisées deux retenues d'eau d'une capacité de 2500 m3 dans chaque région
vii. Enquête sur les sites dégradés nécessitant des activités de CES/DRS à caractère additionnel sur les terres non agricoles en amorce de dégradation dans la Région des savanes
viii. Constitution des groupements maraichers dans les régions
ix. Identification des parcs agro forestiers de 10 ha dans les zones cibles de production de maïs du PADAT de Naki-ouest, Kétao, et Sotouboua et des sites à reboiser pour la protection des berges, des cours et plans d'eau

Axe 2 : Promotion des systèmes d'intégration de l'élevage à l'agrosylviculture pour réduire l'impact des sécheresses récurrentes

i. Entreprendre une étude sur le système de transhumance, identifiant les espaces pastoraux, les couloirs de passage.
ii. Entreprendre la cartographie des couloirs
iii. Entreprendre une étude sur les écosystèmes sylvo-pastoraux dégradés

Axe 3 : Amélioration des possibilités de diversifier les systèmes de production à travers le développement de l'aquaculture et la pisciculture.

i. Entreprendre les études préalables de faisabilité et de rentabilité de l'approche IAA, et technico-économiques de pré-installation des unités piscicoles;

C. **La Composante 3. Renforcement nécessaire pour promouvoir l'éducation, l'information et la communication en matière de changement climatique**

Les interventions du projet ADAPT au cours de l'année 2013 s'articuleront pour cette composante autour de :

Axe 1 : Compréhension et évaluation de la vulnérabilité aux CC :

i. Préparation de la plateforme et outils d'aide à la décision à l'échelle locale des sites vulnérables
ii. Identification des formateurs des outils d'intégration de l'adaptation au CC

Axe 2 : Modules et manuels techniques en matière d'adaptation des systèmes de production agricole aux CC

i. Préparation des Modules et manuels techniques d'Intégration de l'élevage aux systèmes de production agricole
ii. Identification des TSEP à former en aquaculture adaptée au CC
iii. Préparation des Modules et manuels techniques de vulgarisation des semences adaptées et du choix des paquets technologiques

D. **La composante 4. Gestion du projet et suivi et évaluation.**

Les activités de la composante « coordination, gestion et suivi- évaluation » concerneront les activités suivantes :

i. Recrutement du personnel
ii. l'aménagement des bureaux de la composante FIDA/FPMA ;
iii. l'acquisition des équipements et mobiliers de bureaux ;
iv. la mise en adéquation des activités du PADAT et ADAPT : PTBA, plan de passation des marchés, dispositif de suivi- évaluation, etc.
v. la finalisation du PTBA 2013 (harmonisé avec celui du PADAT) et sa validation par le CISP
vi. la conduite des études et la tenue des ateliers diverses ;
vii. l'appui aux directions du MAEP ;
viii. l'appui technique continu (consultants internationaux en planification et suivi- évaluation, en gestion financière et en infrastructures rurales) ;
ix. la préparation du Rapport d'activités 2013 et soumission aux bailleurs dans les délais;
x. Mise en place des outils de gestion du projet

ANALYSE SOMMAIRE SUR LA CAPACITE DES PRESTATAIRES DU PROJET

Tâches	Prestataire potentiel	Expertise et capacité
Coordination et gestion du projet	(COD-PADAT)	Agronome ayant une bonne expérience en planification, gestion, supervision d'action de développement et de gestion de ressources humaines. Disposant d'expérience professionnelle comme coordonnateur de projet de développement rural ou responsable à un poste élevé de responsabilité dans le développement rural ou dans le secteur privé
Coordination de la composante adaptation du projet	L'Assistant spécialiste en adaptation au CC	Diplômé d'études supérieures en environnement/Changements Climatiques– Ayant une expérience professionnelle continue d'au moins cinq ans comme consultant ou expert dans une administration ou projet d'adaptation aux CC
Administration et gestion du projet	Responsable financier	Diplômé d'études supérieures en finances/ Comptabilité– Ayant une expérience professionnelle continue d'au moins cinq ans comme responsable financier au niveau d'un projet, d'une entreprise ou d'une institution privée
Préparation des DAO et de passation et suivi des marchés	Spécialiste en passation et suivi des marchés	Diplômé d'études supérieures en gestion – Ayant au moins cinq ans d'expérience professionnelle en passation de marché au niveau d'un projet / une entreprise ou institution privée
Suivi-évaluation du projet	Spécialiste en suivi-évaluation	Ingénieur statisticien/agro économiste depuis au moins 10 ans ayant plus de 8 ans d'expérience professionnelle comme spécialiste S&E au niveau des projets de développement rural.

Gestion de la comptabilité du projet et passation/suivi des marchés	Comptable du projet	Diplôme d'études supérieures spécialisées en finances/ Comptabilité ou audit depuis au moins 5 ans – Avoir participé à plusieurs Séminaires de formation (gestion financière et passation/suivi des marchés des projets) – Avec dix ans d'expérience professionnelle comme responsable financier de projet
Administration du secrétariat du projet	Assistante administrative	Diplôme d'études de secrétariat de bureau ayant des capacités de communication, d'archivage et des services bureautiques / informatiques des projets

Les prestataires de services

STRUCTURES	Objectifs	Capacités d'intervention
Université de Lomé	Promouvoir l'éducation supérieure au niveau national y compris les changements climatiques	L'Université de Lomé comprend actuellement cinq facultés (Droit, Économie et Gestion, Sciences, Lettres et Sciences Humaines, Médecine et Pharmacie), cinq écoles supérieures (Ingénieurs, Agronomie, Secrétariat de Direction, Biologie Alimentaire, Assistants Médicaux), deux instituts (Sciences de l'éducation, Gestion) et trois centres de formation (Informatique et Formation à distance). Elle dispose d'un Staff comprenant des spécialistes en CC parmi lesquels un ancien président du GIEC et donc d'un potentiel important d'étudiants engagés dans cette thématique. Ce même staff mène présentement des recherches dans le domaine du réchauffement climatique au Togo et sur l'érosion côtière. Il a déjà réalisé également plusieurs prestations de renforcement des capacités au MERF (communications nationales sur les CC) et organismes accrédités au Togo : Union Européenne, FAO, BCEAO, etc.
Institut de Recherche Agronomique (ITRA)	Contribuer à réduire la pauvreté et à assurer la sécurité alimentaire durable aux populations rurales par l'accroissement des revenus et l'amélioration de la productivité agricole	L'Institut Togolais de Recherche Agronomique (ITRA) est une Société Anonyme d'Economie Mixte (SEM S.A) créée le 23 juillet 1997 par décret N° 97-105/PR. Elle a pour attribution de conduire les activités de recherche développement dans les domaines des systèmes agraires, des productions, de la gestion des ressources naturelles, des technologies alimentaires et de la normalisation. Il comprend une Direction Générale à laquelle sont rattachées trois Directions techniques (la Direction scientifique, la Direction des laboratoires et la Direction de l'administration, des finances et de la comptabilité). La Direction scientifique est chargée de la Coordination : il existe quatre coordinations, (i) production végétale, (ii) production animale, (iii) un dispositif d'appui à la Recherche-système, (iv) une coordination chargée la Gestion des ressources naturelles. Il y a 4 Centres de recherche agricole (CRA) répartis dans les 4 zones agro-écologiques du Togo ; (i) le CRA du Littoral qui travaille sur le maïs, le manioc et l'élevage à cycle court et, plus précisément, sur la sélection du maïs, (ii) le CRA Forêt qui travaille sur le Café, le Cacao, la Cola et l'Elevage à cycle court dans l'Ouest du pays, (iii) le CRA Savanes Humides (Kolokope) qui travaille sur le Coton et l'Elevage à cycle court, (iv) le CRA Savanes sèches basé à Kara qui travaille sur le Sorgho, le Mil, les légumineuses à graines et la Pintade. L'ITRA dispose d'un personnel de 240 agents environ comprenant 90 cadres, 39 agents de maîtrise et 111 agents d'exécution. Les principaux problèmes de cette institution sont relatifs à l'insuffisance des équipements des laboratoires d'analyse (sols, eau et engrais) et de contrôle de qualités et à la faible capacité en ressources humaines.
Institut de Conseil et d'Appui Technique (ICAT)		L'ICAT a pour mission de contribuer à la promotion du monde rural, à travers la vulgarisation des itinéraires techniques appropriés et l'appui à la structuration des organisations professionnelles. Il existe au sein de l'ICAT, trois organes : (i) un conseil de suivi (comprenant des représentants du Ministère de l'Agriculture, du Ministère de l'Enseignement Supérieur, du Ministère de l'Economie et des Finances), (ii) un conseil d'administration constitué de 9 membres (dont des Représentants d'OP, de l'ITRA, et un représentant du Ministère de l'Agriculture) qui se réunit trois fois par an pour examiner et approuver le plan d'activités et le budget et (iii) la Direction générale chargée de l'exécution du Plan approuvé par le Conseil d'administration. La Direction générale comprend : (i) une Direction des ressources humaines, (ii) une Direction financière, (iii) une Direction études et conseil chargée des relations avec les partenaires techniques et de l'information agricole et (iv) une Direction appui opérationnel ayant pour mission d'identifier et

		de sélectionner les techniques à transférer aux producteurs et de les appuyer et (v) une cellule de suivi-évaluation. Il existe cinq Délégations régionales comprenant (i) des services techniques (appui à la Coopération, appui à la Vulgarisation…), (ii) un service de Suivi-évaluation, (iii) 31 Agences au niveau des préfectures mettant en oeuvre les programmes destinés aux producteurs ; ce sont des entités autonomes comprenant un Ingénieur (Chef d'agence), et trois techniciens spécialisés (Organisations de producteurs, élevage et production végétale), et (iv) 250 antennes (6 à 10 par agence) au niveau des cantons sous la responsabilité des conseillers agricoles appuyés par les techniciens spécialisés (TS) notamment pour des questions spécifiques, actuellement au nombre de 137 et basés dans les agences. L'effectif total des agents est de 600. L'ICAT apporte un appui technique pour : (i) des cultures céréalières (Maïs, Riz et Sorgho), (ii) pour des cultures à tubercule (Igname, Manioc), (iii) pour des cultures maraîchères (tomate, gombo, oignon, piment), (iv) pour des cultures de légumineuses (Niébé, Soja et Arachide). L'ICAT a changé de stratégie d'intervention et se base, depuis peu, sur un diagnostic participatif pour élaborer un plan d'appui accompagnement d'un groupe donné qui comprend: (i) une activité d'information et de sensibilisation, (ii) une activité d'organisation des producteurs, (iii) la mise en relation des groupes avec les fournisseurs d'intrants et de crédits, (iv) le transfert de technologie pour l'installation des Unités de démonstration. Dans la nouvelle approche adoptée, les agents de l'ICAT ne couvrent plus un seul thème mais proposent un paquet technique : il y a (i) la description des pratiques par culture, (ii) l'identification des éléments sur lesquels agir, (iii) le producteur fait des observations, synthétise et prend des décisions. Au sein de l'ICAT, il existe un savoir-faire en termes d'Ecoles champs paysans. Le concept d'Ecoles champ paysan a été introduit au Togo à l'occasion de la mise en œuvre de deux projets TCP, le premier ayant pour objectif le contrôle des Mauvais herbes dans la culture du riz et le deuxième la gestion intégrée de la fertilité des sols pour la culture du maïs ; il y a eu, ainsi, formation d'un noyau de 40 formateurs paysans (Kara, Maritimes et Savanes). Certains éléments de l'Ecole champs paysans ont été intégrés aux Unités de démonstration et utilisés par les Conseillers agricoles pour accompagner les producteurs (notamment la description des pratiques paysannes et le concept de la participation des producteurs). Il existe, également, un pool de Conseillers agricoles qui ont été formés dans le cadre des deux projets et qui maîtrisent le concept d'Ecole champs paysan (10 dans la région des Savanes, quatre dans la Kara, et quelques-uns dans la Région Maritime) qui pourraient utiliser certains éléments de l'approche avec l'appui de leur hiérarchie. L'ICAT est, également, impliquée dans le système mis en place pour la reproduction des semences commerciales : l'ICAT recense les besoins en semences de base des producteurs semenciers dans les différentes régions, les met en relation avec l'ITRA et apporte un appui pour l'enlèvement et la collecte des semences. Le projet WAAP va appuyer l'ICAT pour la mise en place d'un Système national de vulgarisation agricole (SNVA) dans lequel tous les acteurs (ONG, OP) intervenant dans la vulgarisation seront identifiés et leurs rôles définis car il y a une nécessité d'harmoniser les méthodes et les approches de vulgarisation.
Ferme Semencière de Sotouboua (FSS)	Production, traitement, conditionnement et analyse de la qualité des semences.	En vue de produire des semences de qualité pour satisfaire les besoins des agriculteurs, l'Etat togolais avait créé en 1976 la Ferme semencière de Sotouboua (FSS). Cette ferme assure la production, la conservation et la distribution sur l'ensemble du pays des semences commerciales des céréales et légumineuses à graines. Elle produit les semences de base pour approvisionner les besoins des multiplicateurs semenciers. Ce centre dispose de nos jours d'un personnel qualifié (de l'ITRA), qui maitrise la technologie de production des semences ainsi que du matériel adéquat, Les tests réalisés pour s'assurer de la qualité des semences est le test de germination, de pureté spécifique, teneur en eau et taux de germination. Les quantités de semences commerciales produites, en 2009, d'une région à l'autre sont variables comme le montre le graphique 1. La région Centrale est celle où la production de semences commerciales est la plus élevée, notamment, grâce à la présence de la ferme semencière de Sotouboua et des équipements et infrastructures présentes en termes de conservation de semences de base et de pré base.
ONG et faîtières	Compagnonnage dans l'encadrement, appui, conseil, développement communautaire, renforcement des capacités techniques et organisationnelles des OP	Le paysage togolais compte plus 200 ONG intervenant dans divers domaines du développement rural. Deux réseaux, fédèrent les ONG togolaises à savoir: la Fédération des ONG du Togo (FONGTO: 119 membres) et l'Union des ONG du TOGO (UONGTO: 108 membres). Sur l'ensemble des organisations existantes, quelques-unes seulement disposent de compétences diversifiées et peuvent être considérées comme des ONG d'accompagnement ou services d'appui émergents, d'autant plus qu'elles sont présentes sur le terrain et ciblent leurs interventions dans les poches de pauvreté; elles ont, de ce fait, un impact réel sur le développement local. La mission de conception finale du projet les a rencontrées pour apprécier leurs capacités d'intervention et identifier celles susceptibles d'être partenaires du projet. Elle a procédé à une présélection des ONG potentielles sur

		le plan géographique et sur la base de leurs compétences opérationnelles. Deux ONG prestataires par région seront retenues afin de garantir un encadrement de proximité et de qualité. Au regard des résultats de la présélection, quatre premières ONG sont retenues sur la base des éléments de réponse jugés satisfaisants. Dès son démarrage, le projet procèdera à la signature des contrats avec celles-ci. Six autres ONG seront sélectionnées dans une phase ultérieure. Au total, les 10 ONG prestataires couvriront toutes les activités d'appui/accompagnement du Projet basées sur les trois thématiques d'encadrement suivantes: (i) appui technique aux cultures vivrières; (ii) appui aux infrastructures de production et de mise en marché, appui à la transformation/commercialisation; et (iii) renforcement des capacités des acteurs. Les ONG seront composées de manière à disposer de trois personnes ressources ayant les profils suivants: (i) un profil d'agronome; (ii) un profil de spécialiste en organisation de producteurs; et (iii) un profil de génie rural.