ADAPTATION FUND

**REQUEST FOR PROJECT/PROGRAMME**
**FUNDING FROM THE ADAPTATION FUND**

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

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ADAPTATION FUND

# PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

## PART I: PROJECT/PROGRAMME INFORMATION

| | |
|---|---|
| Project/Programme Category: | REGULAR PROJECT |
| Country: | TOGO |
| Title of Project/Programme: | INCREASING THE RESILIENCE OF VULNERABLE COMMUNITIES IN THE AGRICULTURE SECTOR OF MANDOURI IN NORTHERN TOGO |
| Type of Implementing Entity: | REGIONAL IMPLEMENTING ENTITY |
| Implementing Entity: | BANQUE OUEST AFRICAINE DE DEVELOPPEMENT (BOAD) |
| Executing Entity/ies: | MINISTERE DE L'ENVIRONNEMENT ET DES RESSOURCES FORESTIERES/ MINISTERE DE L'AGRICULTURE/ AGETUR |
| Amount of Financing Requested: | 10.000.000 (in U.S Dollars Equivalent) |

**Project / Programme Background and Context:**

***Geographical and environmental***


*(Source: National circumstances, 2014)*

A country of West Africa, Togo is located between 6th and 11th degrees North Latitude and 0 and 1.40 degrees East Longitude. It is bounded to the north by Burkina Faso, to the south by the Gulf of Guinea, east by Benin and to the west by Ghana. With an area of 56,600 km², it stretches from north to south over a length of 600 km in a straight line and has a width that varies between 50 and 150 km. It has a coastline of about 50 km, which opens onto the Gulf of Guinea. It is divided into five administrative regions: Savanes, Kara, Central, Plateaux and Maritime where the capital Lomé is located (Figure 1).

The terrain is slightly hilly except the Atakora mountain range that crosses the country in the southwest to the northeast scarf with the typical landscape consists of deep and narrow valleys individualized trays.

In the far north, a vast eastern plain furrowed by the Oti River and its tributaries extends between 9 ° 20 N and 11 ° N. From the north, the eastern plain rises and extends to the south, giving the tray bar of land overlooking the lagoon area, which covers more than two thirds of the Maritime Region. Togo is under the influence of two major climatic patterns (Figure 2).

• The tropical north Sudanese regime (from the 8th parallel north) with a rainy season that goes from May to October and a dry season that goes from November to April. In this area, annual rainfall varies from 900 to 1100 mm and the plant growth period is less than 175 days;

• The Guinean regime tropical south (south of parallel 7) is characterized by two dry seasons and two rainy seasons of unequal durations. Annual rainfall ranges from 1000 to 1600 mm[1].

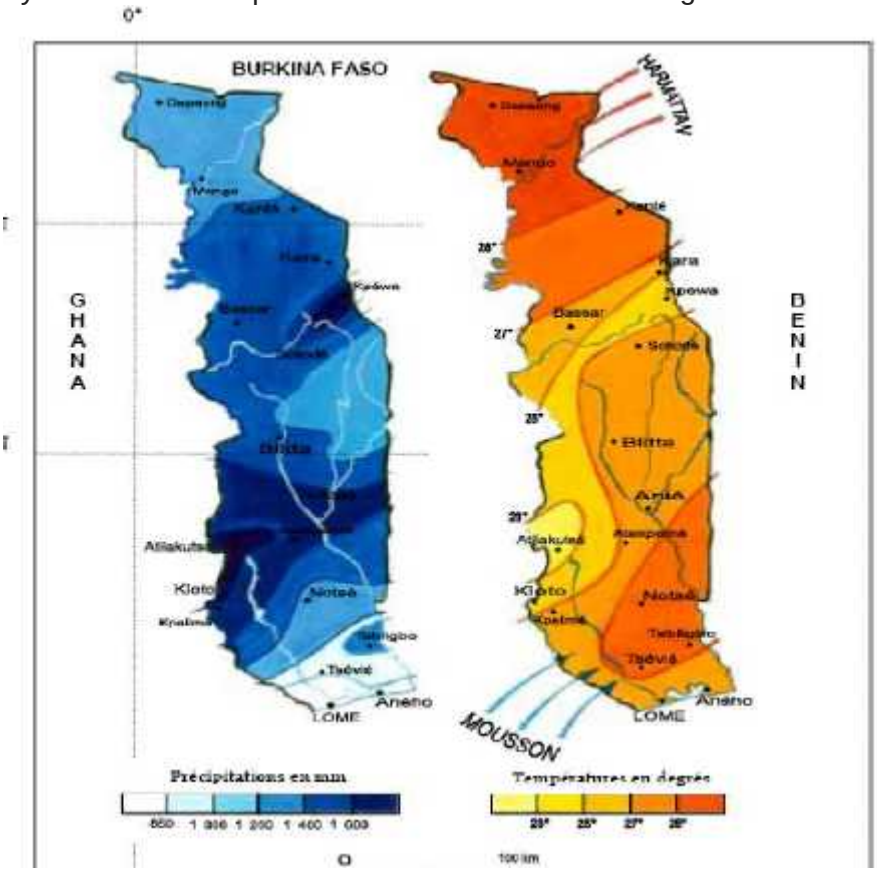



*Figure 2: The two maps for climate[2] (temperature and precipitation)*

Between the two regimes, there is a transition zone whose ombrothermic curve has a single rainy season with a slight decrease in rainfall in August or September. The average temperature is generally high: up to 28 ° C in northern areas, 27 ° C in the coastal zone and between 24 and 26 ° C in the other localities. The average relative humidity is high in the southern areas (73-90%) but low in northern regions (53-67%). The average wind speed is 1.93 m/s and the average duration of insolation is 6h37 minutes per day. The average evapotranspiration can be estimated at approximately 1540 mm/year[3].

At river level, Togo is divided into three large basins:
- The Oti basin and its tributaries cover about 47.3% of the territory. The high water period is between August and October, and the low water from December to June;

- Mono Basin occupies the central third and all of eastern Togo. By area (37.5% of the territory), it is the second country in the basin. There is only one high water period between July and October. The duration of the period without flow varies from 30 days to about 130 days;

[1] Deuxième communication nationale du Togo (2010)
[2] Deuxième communication nationale 2011
[3] Deuxième communication nationale du Togo (2010)

- The coastal basin of Lake Togo has three components which Western Component that drains the waters of Zio, the central component that drains the waters of the South and Haho component formed by the own basin of Lake Togo. The entire coastal basin covers an estimated area of 14.3% with a transitional equatorial regime in connection with the rains: two dry seasons alternating with two rainy seasons.

The National Water Policy (NEP) also reveals that despite a favorable situation in potential availability, Togo suffers from a lack of mobilization of its water resources and struggling to meet the basic needs of populations Supply drinking water and mobilize these resources for the promotion of a harmonious and coordinated development of the country. It reports also large regional differences in terms of availability and demand of the resource. The distribution in time and in space water resources does not necessarily follow the rules of needs and uses. They are abundant in some areas and sorely lacking in others. Sometimes the most deprived areas represent the most important use areas. Moreover, the problems of availability may be related to quality problems due to salinity or pollution may arise locally[4].

Compared to flora, Togo has three major categories of natural formations: the dense forest training (10% of the country), open and wooded savanna training (83% of the total area of the country), riparian formation located in more or less flooded the main river valleys (2% of the total area of the country).

Togo's vegetation formations are located in a transition zone between the semi-deciduous dense forest and savanna and include: (i) the Sudano-Guinean forest, degraded and currently mainly located in mountainous areas, especially in the West Plateaux region; (ii) the gallery forest bordering the axes of the main drainage watercourse; (iii) the dry dense forest or savannah consists of a stand of deciduous species, mainly in the center and north of the country; (iv) Savanna south and center of the country until the ninth parallel and north of the Togo Mountains in the basins of the Oti and Kara, and in Danyi Plateaux, and Akposso the Akébou; and (v) the shrubby bush is mainly found on the earth bar trays and wet lowland depressions of the Lama.

All formations described above are highly degraded in areas with high rural activities. This situation has worsened with the phenomenon of climate change which caused frequent drying up over the past decade in Togo. At the same time, productive savannas decreased at a rate of 6,000 ha/year and fallow increased by more than 22 000 ha/year[5]. The increasing erosion of plant formations including mountain forests is very worrying when you realize the important role they play in regulating water and rivers and also in the protection of watersheds. The climatic diversity of Togo leads from north to south by a diversity of ecosystems with their characteristic species. These flora and wildlife resource areas include terrestrial ecosystems and aquatic ecosystems[6].

The formations encountered are functions of the physical and geographical conditions are generally heavily degraded. In 1994, the National Forestry Action Program (NFAP) of Togo estimated that in 1970 the dense forest covered 449,000 hectares and in 1990 it was only 140,000 hectares with a deforestation rate of about 15 000 ha / year.

Tree cutting is the most devastating human activity that causes the destruction of forests throughout the national territory in general and especially in the western part of the Plateaux and Central Regions. This deforestation results from bushfires, pressure from farmers practicing slash and burn agriculture, and timber operators and wood energy especially for households in rural and urban areas. Indeed, firewood and charcoal are the two main types

[4] Rapport final vulnérabilité et adaptation ressources en eau-Projet Troisième Communication Nationale (2014)
[5] Deuxième communication nationale du Togo (2010)
[6] Rapport final étude de vulnérabilité et adaptation au changement climatique –Secteur de l'agriculture, foresterie et affectation des terres- Projet Troisième communication (2015)

of fuel mainly used for cooking food. Ninety-four percent (84.4%) of rural households use firewood for cooking while 75.4% of urban households are used mainly coal[7].

**Socio-economic development context**

The report of the general census of population and housing, Togo's population grew from 2,719,567 in 1981 to 6,191,155 people in 2010, composed of 51.4% women and 48.6% of men.

With an average annual growth rate of 2.84%, the population density rose from 34 inhabitants per square kilometer in 1970 to 110 inhabitants per square kilometer in 2010. This population is predominantly rural (> 60%). Young people under 15 years and 25 years counts respectively for 42% and 60% of the total population.

The macroeconomic context is characterized by a Gross Domestic Product (GDP) which rises from 3.7 billion USD in 2010 to 4.5 billion USD in 2014[8].

The rural sector contributes to almost 40% of the GDP of Togo. Agricultural production accounts for 70% of the GDP in this sector. Food production accounts for nearly 90% of the added value of agricultural products (2009 data) while this proportion was only 85% in 1990. Moreover, almost 70% of the labor force can be found in the agriculture sector. Indeed, only 45% of arable land, i.e. 3.4 million ha, is currently exploited[9].
The socio-political crisis that the country went through during the past years has deeply affected the performance of the sector. The trends are currently characterized by a growth in average of the agricultural production by 2.6% between 1991 and 2005 despite an increase in cultivated area of 3,4% over the same period. This reflects lower yields over the period.

The vast majority of the rural population consists of small producers. They are poorly monetized, explaining their low productivity and their inability to take advantage of market opportunities (national or international) to increase their income and to access a number of services that could improve their living conditions.

A 2009 study by IFPRI (International Food Policy Research Institute) on agricultural performance in Togo showed that halving the rural poor would require an annual growth of 9.6% of the agricultural sector during a five-year period. This constitutes a major challenge. Between 2005 and 2008, agricultural growth was 3.9% globally and 4.8% for food production. In 2009 agricultural growth reached a record level of 8.2%. This shows that significant progress can be rapidly achieved unless decisive actions are taken. In the various sub-sectors, the following performances are recorded.

For the subsector of crop production, subsistence farming is the main source of poverty reducing growth both nationally and rural for the next decade. The main vegetable can be divided into: (i) food crops (maize, sorghum, millet, rice ...), tubers (yams, cassava ...) and legumes (peanuts, beans ...), having contributed in recent years to 2/3 of the agricultural GDP; (ii) export crops such as cotton, coffee and cocoa, contributing an average of 9% of agricultural GDP[10].

While grain is the main staple of the population, the cereal balance was in deficit between 2005 and 2008 with a coverage rate of domestic production between 87% and 97%. Since

[7] Questionnaire des Indicateurs de Base du Bien-Etre (2011)
[8] Comptes nationaux du Togo 2010 and Word Bank (http://www.worldbank.org/en/country/togo)
[9] Rapport final étude de vulnérabilité et adaptation au changement climatique –Secteur de l'agriculture, foresterie et affectation des terres- Projet Troisième communication (2015)

[10] Rapport final étude de vulnérabilité et adaptation au changement climatique –Secteur de l'agriculture, foresterie et affectation des terres- Projet Troisième communication (2015)

then, through incentives introduced by the Government as part of the Strategy for the revival of agricultural production (AFS); fertilizer supply has increased from less than 11 000 tonnes in 2008 to 30 000 tonnes in 2010 with the key the setting up of 110 stores; food seed production recorded about 400 t in 2008 (an increase of 12.9% in twelve years of practice) increased to more than 533 T and 750 T in 2009, 2010 an increase of 33% in two years. Land Management (SLM) gradually restores the device and seed production capacity by rehabilitating the seed farm Sotouboua structuring of the seed sector, training of seed inspectors.

Among cash crops, cotton has suffered a continuous decline since 2005, going from 173 660 t to 27 900 t in 2009. Between 2002 and 2009, production in the coffee and cocoa experienced respective annual growths 39% and 79% to 11 000 t and 13 200T in 2009. In addition to the agro-ecological potential available in the country, the Government has undertaken major restructuring to improve cash crops. They are undergoing restructuring and coordination unit was established to restore production potential through the support and close support to producers[11].

The sub-sector of livestock production has contributed to the agricultural GDP with an average of 13.4% in the last five years. Cattle, sheep, goats, pigs and poultry (chickens, guinea fowl, turkeys, and ducks) can be found in Togo. In 2009, estimates of cattle numbers (307,500 heads), small ruminants (sheep 1,657,400 heads, and goats 1.87 million heads), pigs (308,450 head) and poultry (13,878,000 units) show an annual growth of 3%, 10%, 3% and 39% respectively for the four categories.
Despite this growth, meat production does no satisfy the demand. In 2009, meat production was at 49 689 t for a demand of 70 000 T, hence a shortfall of 20 311 t (30% of the needs) met by imports from the Sahelian countries and from Europe. Through the National Agricultural Investment Program and Food Security (PNIASA), the Government aims to cover this demand through domestic production.

Over the last ten years, fish production (mostly artisanal) intervened to 3.6% in the formation of agricultural GDP. In 2009, the average fish production was 27 025 t, of which 81% comes from the sea and 19% of the river system, lagoon and fish farming.

The coverage rate of domestic consumption in fisheries products is less than 50% and is likely to worsen in the future. Given the weakness of maritime resources and overexploitation of lagoon resources, the efforts of the Government to reduce the deficit are mainly focused on the development of fish farming and the establishment of adequate mechanisms for the sound management of fisheries resources maritime and continental.

Socially, there are many conflicts between farmers and herders in Togo related to transhumance especially after the harvest. Generally livestock is usually coming from the Sahelian countries (Burkina Faso, Mali, Niger, etc.) and Benin. This creates a lot of problems with the local sedentary population. The root causes are that transhumance corridors are existing, but still, with climate change, livestock have no other choices than increase the pressure on natural resources, and sometimes destroying the stored crops. There are, however, Committees of Transhumance Management that hold regular meetings in the prefectures.

In socio-economic terms, despite the implementation of various economic and social policies, Togo's development indicators are far from satisfactory today. Togo is part of the category of Least Developed Countries (LDC) with a per capita income of 360 US dollars in 2005. The Togolese economy traditionally depends on the primary sector. This represents about 40% of

[11] Rapport final étude de vulnérabilité et adaptation au changement climatique –Secteur de l'agriculture, foresterie et affectation des terres- Projet Troisième communication (2015)

GDP and employs over 70% of the workforce. The secondary and tertiary sectors represent approximately 23% and 36% of GDP in 2004. Agricultural production is primarily dependent on weather conditions and is dominated by small farms conducted using rudimentary techniques and tools. Togo has a liberal economy whose exports, focusing on phosphates, cotton, cement, coffee, and cocoa accounted for an annual average of 34% of GDP between 2002 and 2005, a level well below the average of 45% that prevailed in the 80 Also, the degradation of economic activities, followed by worsening poverty have ended up showing the limits of the actions of the state to respond effectively to people's needs. In addition, the skills gap also affects the private sector and civil society.

Clearly, human and social development indicators are lackluster. Indeed, the human development index of 0.495 is Togo (UNDP Report 2006) and ranks the country 147th rank in the world ranking. Based on data from the survey on well-being indicators (CWIQ, 2006), it was revealed that the incidence of poverty has increased reaching a share of 56.2% of poor households in 2006 (MEF, 2007) against 35.3% in 1998 (RNDHD, 2004). The Human Poverty Index (HPI-1) of Togo was 39.2% in 2006, ranking the country 72th in the world out of 102 developing countries (in 2003, the HPI-1 was 38.5%). The various surveys revealed that over 60% of the Togolese population lives below the poverty line. The incidence of poverty is very high in rural areas where three out of four households are poor against two in five in urban areas. The most affected regions by poverty are the Savanes region (90.5%), the Central region (77.7%) and the Kara region (75%). Moreover, poverty is strongly correlated with undernutrition to the extent that 64.2% of the poor population is undernourished[12].

The main determinants of household poverty are, firstly, household size, health status of members and household factors of production and on the other hand, the level of education, occupational status, sex, age and marital status of head of household.

The comprehensive strategy for poverty reduction that the Government intends to implement with the participation of all development actors and beneficiary populations, has the ultimate objective of effectively and sustainably improve people's living conditions by addressing main causes of poverty.

To do this, the governmental action is based on four (04) strategic pillars: (i) strengthening governance; (ii) the consolidation of the foundations for strong and sustainable growth; (iii) human capital development and, (iv) reduction of regional imbalances and promoting development at the base. These different pillars take into account the cross-cutting issues relating to the environment, AIDS, gender and human rights.

In terms of access to basic social services, there is a great disparity to the chagrin of the poor. In terms of access to education, guidance of public subsidies to education is unfavorable to the poor. The poorest 20% receive an equivalent of 5607 FCFA as educational grant per head, while the richest 20% receive 10 376 FCFA per capita, twice about. Similarly, access to public grants, health, is unfavorable to the poor. Indeed, the poorest 50% of the Togolese population has only 20% of public subsidies to University Hospital, 30% of subsidies to hospitals and health centers. In rural areas that concentrate approximately 80% of the poor, access to care is done through clinics or health centers. Health huts do not receive public subsidies. The analysis of the access to electricity situation in Togo premium shows first that the poor do not have access. Only 11.1% of poor people have access to electricity, against 42.9% of non-poor. As for access to safe drinking water, the divide between the poor and non-poor is relatively low. About 39% of the poor have access to safe drinking water against 53.5% of non-poor.

[12] DSRP-C Togo (2009-2011)

Representing the largest fraction of the Togolese population (51.3%), women are nearly 75% in rural areas against only 25% in urban areas. In agriculture, they represent nearly 60% of the agricultural workforce and are present in all phases of agricultural work they are responsible for 40% of plowing, weeding and 70% of the harvest, 80% of seed and 90% activities agricultural processing and marketing. They are present in many other activities and their role in domestic work predominates over that of men.

Compared to men, Togolese women face higher rates of illiteracy that affects their lives. The majority of women are not educated; the female literacy rate is 55.8% according to provisional data from the 2006 CWIQ survey. They rarely go beyond the primary level and even less the secondary level. This situation does not allow women to be informed about all the favorable legal provisions that gives them the Convention on the Elimination of Discrimination against Women (CEDAW).

The different legal provisions in favor of gender equity and empowerment of women, demonstrate the Government's desire to promote equality and equity between the two components of society. The sociological factors, ignorance of the existence of these provisions, the lack of a clear appeals process, distrust, resignation, partly explain the non-exercise of rights. In general, beliefs and custom still dominate modern law in some areas and oppose the advancement of women and the girl. This is, among others, early marriage; female genital mutilation; the low-participation of women in decision-making. Added to this are the difficult access to credit, land and inputs; easements ritual marked by the placement of girls in convents fetishists; some mourning rites for the widow; and gender-based violence.

To support and implement the commitments made in the framework of the various agreements, the Government of Togo in 1992 devoted to the principle of gender equality in the Constitution of the 4$^{th}$ Republic. Togo ratified all international instruments that protect the Woman (CEDAW/CEDAW, Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others, the Protocol to the African Charter on Human Rights and Peoples' Rights (ACHPR) on the Rights of Women). However, there are still obstacles that must be overcome to improve women's status and promote their equal participation in the development process. To this end, initiatives should be undertaken to : (i) promote education and training of the daughter and wife, (ii) improve the health of women, (iii) ensuring the economic empowerment of women (iv) improve and respect the legal and social status of women, (v) develop and take into account women's work, (vi) strengthening the participation of women in decision making spheres[13].

The extractive industries are mainly on phosphate and clinker. As for manufacturing, they include the following industrial units: food, beverages and tobacco, textiles, clothing, wood and wood products, printing, paper, publishing, chemical, and metal products.

The overall objectives of the various sectoral policies implemented in areas related to climate change are as follows:

- In agriculture, it is to increase the income of farmers and contributing to improving the living conditions of rural people, in a perspective of sustainable development, with particular attention to the poorest populations or most vulnerable, including young people and women ;

- In the energy sector, the general objective of the Government is to meet the energy needs of households and businesses. More specifically, it will effectively manage energy by reducing losses and waste, to establish an institutional and legal framework for development of the sector, to implement a promising alternative sources development plan for the production of energy, taking into account the environmental dimension and to promote the involvement of private operators ;

[13] (UNDAF) (2007)

- In the forestry sector, the guidelines of the National Forestry Action Plan (NFAP) concern the improvement of forest management and strengthening capacities of ecosystems for efficient carbon sequestration. People are called to create private forest areas, to protect existing forest stands and developing urban forestry, suburban and rural ;

- In the field of Transport, the objectives of the Government's policy focus on improving: road infrastructure; the effectiveness of the sector to support the economic recovery and contribute to economic growth; the competitiveness of Togolese products in domestic and foreign markets by reducing transport costs and a better quality of services and the mobility of goods and people and the reduction of poverty and the implementation of an autonomous and sustainable plan of the area;

- In the area of health, the general guidelines of the national policy designed to reform the health system in order to adapt to the new challenges of the health sector in Togo; ensure the adequacy of the health system to the needs of the most vulnerable and the poor; and promote physical, economic and policy favorable to health and advocacy to put health at the heart of economic and social development;

- In the field of hydraulics, this is to enable all people to have access to drinking water in sufficient quantity and quality. To improve the management efficiency of this sub-sector, the Government will resort to the private sector, either through outright privatization or by privatizing some functions such as marketing;

- In the area of sanitation, the Government is aware that its mastery requires, among other things, public awareness, proper management of household and industrial waste, improving access to individual sanitation system households, the prevention of pollution of any kind;

- In the field of urban planning and housing policy of the Government aims to control urban development by facilitating access to housing for the most disadvantaged; capacity building of actors in the subsector; mastery of land issues; and institutional strengthening of the Planning Department and Housing;

- In the specific environmental sector, the Government has developed an environmental policy to promote a comprehensive and rational management of the environment, to improve the environment and living conditions of people in the perspective of economic development and social sustainability.

To do this, the Government intends to implement the following measures: (i) reducing human pressure on natural resources; (ii) the promotion of integrated management of the coastal zone; (iii) strengthening of cooperation in regional and international environmental management matters; (iv) strengthening national environmental management capacities; (v) prevention and fight against pollution and nuisances; and (vi) prevention and management of risks and disasters.

In general, the degree of consideration of the issue of climate change in the policies initiated by the Government is significant from one sector to another, but generally insufficient.

### *Change and climate variability in Togo*

- ***Trends, climate risks and observed impacts***

Studies conducted in Togo in recent years indicate that there is generally a decrease in rainfall and number of days of rain[14]. The ratio Rainfall / Potential evapotranspiration (P/PET) which is the aridity index is also down, reflecting the trend of climate aridity. Temperatures are rising, those of February, March and April, which present high temperatures can exceed 35 °C (Table 1). Climate data and those of climate change show that the major climatic risks between 1961 and 2012 are summarized with paradoxically extreme situations of drought or flood. Thus, those contradictory extremes follow and create complete confusion on the country level communities. Between 1986 and 2012, observing data indicates also an agitated climatic period by the global warming phenomenon. The warming phenomenon is felt differently from south to the north of country.

However, since 2005, a resumption of rainfall was recorded in some stations. This recovery is reflected in the intensity and amount of rain fell, which would explain the recurrent floods recorded these last years in the country (Table 2). This rainfall variability is not without consequences on the occupation and evolution of the ground.

| Regions | Average of T°C 1961-1985 | Average of T°C 1986-2012 | Variations in T°C |
|---|---|---|---|
| **Lomé 06° 10' N – 01°15' E** | 26,8 | 27,9 | 0,69 |
| **Atakpamé 07°35' N – 01°07 E** | 25,8 | 26,8 | 1 |
| **Sokodé 08°59'N – 01° 07' E** | 26,2 | 26,9 | 0,69 |
| **Mango 10° 22' N – 00° 28' E** | 27,9 | 29,1 | 1,2 |

**Table1 : Warming evolution in various climatic zones in Togo[15]**

| Regions | Average of rains (mm) 1961-1985 | Average of rains (mm) 1986-2012 | Variations (mm) |
|---|---|---|---|
| **Lomé 06° 10' N – 01°15' E** | 876,0 | 833 | -43 |
| **Atakpamé 07°35' N – 01°07 E** | 1363,3 | 1360 | -3,29 |
| **Sokodé 08°59'N – 01° 07' E** | 1380,7 | 1299,7 | -81 |
| **Mango 10° 22' N – 00° 28' E** | 1085,1 | 1048,3 | -41,8 |

**Table 2 : Evolution of precipitations in various climatic zones in Togo[16]**

Following the recurring of floods in Togo and consequences recorded on the national economy and on the poorest people, the government set up Disaster Risk Reduction (DRR) into a national priority. So it has taken initiatives enabling it to respond appropriately to the risks of disasters taking into account sustainability in interventions (NADP, 2010)[17].

Tables 1 and 2 above indicate that in all country, temperatures are rising and the annual rainfall totals show a general downward trend. The rains are concentrated in a short time and dry periods are felt hardest with temperature thresholds exceeding all averages.

[14] Adjoussi et al, (2012), Adéwi (2012)
[15] Direction Nationale de la Météorologie, (2013) in (Scénarios climatiques-Troisième communication nationale 2014)

[16] Direction Nationale de la Météorologie, (2013) in (Scénarios climatiques-Troisième communication nationale 2014)
[17] Programme national de suivi de l'environnement au Togo (PNSET, 2012)

- ***Climate projections and expected impacts***

The scenario studies indicate that climate changes are already visible in 2025, as well as at temperatures and precipitation. Indeed, it will be observed variation in rainfall of 1% in the North since 11 ° N to - 1.5% at latitude 5 ° N south of the country. The Savannah region is going to experience a slight increase in rainfall while other regions (Maritime, Plateaux, Centrale and Kara) will be marked by a decrease (from 0 to -1.5%).

The average annual temperature has a variation of 0.66 ° C in the south of the country to 0.80 ° C in the far north. On average high temperatures will be recorded in Savannah in April (32.6 ° C)[18] (Figure 3).

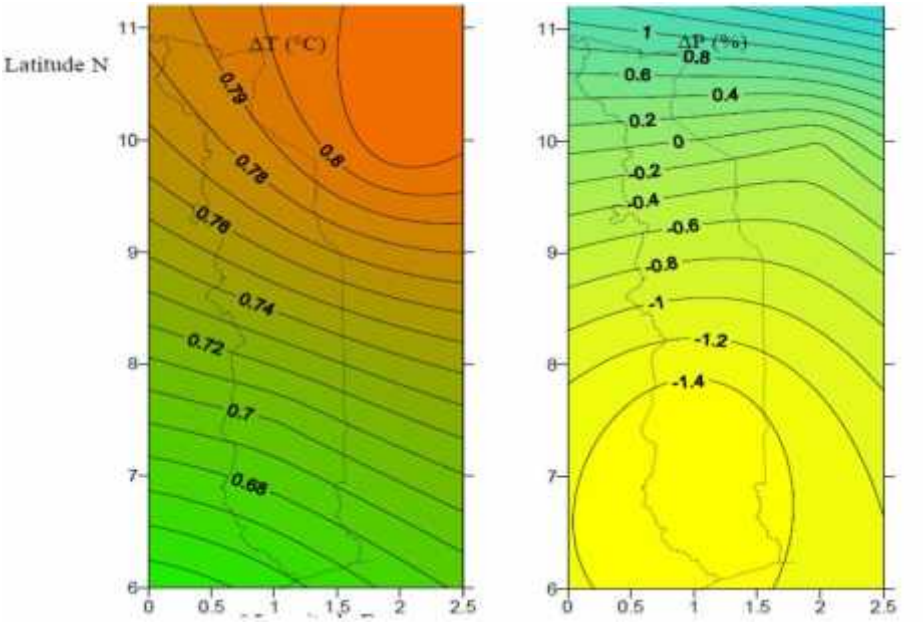



**Figure3 : annual variations of temperature and the rate of precipitation by 2025 (source : Second National Communication 2011)**

**Reference scenario**

The present time is represented here by the average of the 1986-2005 period atmosphere centered on 1995. The average annual temperatures' TMEAN '' range between 21.22 ° C and 28.62 ° C with maxima 'TMax' 'around 35.22 ° C in the extreme north and minima' 'TMin' 'of 16 ° to the west of the plateau region.
The annual rainfall '' Precip 'vary between 850 and 1715 mm with the lowest values in the maritime region and in the far north of the savannas.

**Scenarios for 2025 (optimistic assumption RCP2.6)**

Depending on the emission scenario defined by the concentration of GHG RCP2.6 trajectory, the highest temperatures will be registered in the extreme northeast with average maximum of almost 36 ° C. The average temperatures oscillate between 21 and 29 ° C in general and the western plateau region is going to experience the lowest temperatures around 17 ° C on average. Compared to 1995, the maximum temperature limit will increase by 2%.

Precipitation will change in the range 857-1722 mm against 850 mm and 1715 in the reference scenario.

[18] Deuxième communication nationale 2011

**Scenarios to 2050 (optimistic assumption RCP2.6)**

The warming trend is noticeable throughout the country by 2050 with average maximum temperatures between 27 ° C and 36.24 ° C.

The change in rainfall is not very high compared to the levels of average precipitation in the baseline scenario. However it can be noted a slight increase in overall.

**Scenarios for 2025 (worst case RCP8.5)**

The results of the pessimistic scenario for 2025 are below:

27,00°C < TMax < 36,08°C
22°C < TMean < 29,5°C
17°C < TMin < 24,26°C
858,41 mm < Precip < 1723,30 mm.

**Scenarios to 2050 (worst case RCP8.5)**

By 2050 the GHG concentration trajectory worst scenario RCP8.5 temperatures will change as below:

27,8°C < TMax < 37°C
22,8°C < TMean < 30,5°C
17,8°C < TMin < 25°C

Rainfall " Precip " are in the range from 862.7 to 1732 mm.

**The scenarios, impacts and Agriculture**

The IPCC Third Assessment Report of the Expert Group noted a loss of 2 to 4% for agricultural production for West Africa and Central regions. Moreover, studies for category B2 SRES showed that by 2080 the changes in meteorological factors will lead to a loss of agricultural potential. Land area for rainfed agriculture and grain production potential will decline so remarkable.

Other risks that can be expected are the risks of erosion and declining agricultural product yields in rainfed areas and reduced crop growth periods. Climate variability, climate change and changes in socioeconomic variables can also have positive as well as negative impacts on the fishery and livestock especially the risk of pest invasions.

On the West African regional level, it is recognized that climate change has already led to a desert encroachment of 25-35 km to the South West Africa. Consequently, areas of arid and semi-arid regions will increase by 5 to 8%.

For Togo, the projections show that agriculture needs namely food grains, tubers and legumes and protein will continue to increase in the country to feed itself in the future. This population is estimated at 5,212,000 inhabitants in 2005, but projections are close to 8 million by 2050 and 17 million by 2100.

Thus the limiting factor for food production is the availability of arable land. The area of arable land is estimated at 2, 5 million hectares. The arable lands still suffer from degradation due to the combined effects of human activities and climate change. Indeed, many areas of land have already lost their vegetation cover and exposed to leaching especially on hillsides

and mountains of the chain of Atakora and observable process laterization east of the Plateaux Region namely the prefectures of Est-Mono, the Middle Mono and Notsé.

In Togo degraded lands are estimated at 163 400 ha in 2005. The projections foresee around 4 million hectares of managed ecosystems, including agricultural land, irrigated areas, pastures and forest plantations in 2050. Thus, the achievement of this goal of 4 million hectares of landscaped space is impossible. Socio-economic impacts are also numerous. There will decline in the contribution of agriculture sector to Gross Domestic Product due to lack of arable land available for horizons years after 2050.

According to the evaluation of GCE reports there will also be a decline in food production per capita, a situation that will force the country to depend more on imports for food.

***Non-climatic vulnerabilities***

The main environmental and social constraints are: land degradation, deforestation and biodiversity loss, pollution inputs, including pesticides and social conflicts related to land access. It is especially clear that the access to land by inheritance is difficult for women. Note, however, that apart from pollution by inputs that may be specific to cotton, other problems are common to the entire agricultural sector. The ecological impacts of land degradation are: (i) the increase in the area planted area; (ii) chemical pollution of water resources; (iii) loss of agricultural productivity; (iv) changing the flow regime; (v) deterioration of the landscape, and (vi) the loss of plant cover and biodiversity. Habitat loss and terrestrial flora in Togo is largely due to forest clearing related to shifting cultivation system practiced by slash and burn farmers.

The sub-sector of plant production still faces a number of constraints, namely a low crop productivity due to (i) low investment in the sub-sector, (ii) the application of marginal technologies caused by the failure the extension system and agricultural advisory support and (iii) an insufficiently oriented development research; edaphic and degradation of forest resources due to (i) over-exploitation in some areas, (ii) the low use of soil conservation techniques, (iii) the degradation of forest and tree resources, due to the extension of cultivation, overexploitation of firewood and charcoal, and cultural constraints of land for replanting and (iv) excessive dependence vis-à-vis a small number of export crops (cotton, coffee, and, marginally, cocoa) which sectors have the other fragilities in organizational terms and sensitivity to world prices.

***Problematic***

Togo's agriculture is rain-fed agriculture dominated by small producers. Indeed, it mainly depends on climatic conditions vary greatly disrupt agricultural activities. This high variability is characterized often by a late start and an early end to the rainy season compared to the usual crop calendar, the onset of dry spells and poor spatial and temporal distribution of rainfall. This strong climate variability disorients farmers in their usual crop often affecting crops in full vegetative phase and causing losses of significant returns.

The most northern regions (Kara, Savannah) are regularly affected by famine, a consequence of climate anomalies that significantly reduce agricultural production. This demonstrates the relatively high level of vulnerability of the agricultural sector of Togo to the adverse effects of change and climate variability reinforced by vulnerability studies conducted as part of the Second National Communication on Climate Change. Indeed, this study demonstrated only horizons 2025, 2050 and 2100, Togo would record losses of production of its main food crops (maize and rice) respectively 5% to 10% accompanied by huge losses in farm receipts small producers, thus weakening the country's food security. This situation will exacerbate rural poverty and significantly reduce the capacity to withstand climate shocks.

Yet despite, sufficient water resources and a potential irrigable land of about 86000 ha, control of water for irrigation is still in its infancy.

It is for this purpose that this project is an appropriate adaptive response to the strong climate variability through the water control to secure agricultural production activities of the communities. Beyond securing the production, this project intends to promote the diversification of livelihoods, the development of agricultural products and the improvement of local governance for better support adverse effects of change and variability climate[19].

***Recommended adaptation measures***

In connection with the analyzes of climate, socioeconomic and environmental scenarios, the following adaptation measures are recommended at national level[20]:

- Support to the Ministry of Environment and Forest Resources

Main objectives - Awareness and training of local people on adaptation measures at local level: the development of social cohesion, confidence in oneself and savings opportunities.

- Food security and agriculture sub-sector

  General objectives for agricultural development and food security:

- increase in crop yields, livestock and fisheries products, all economic regions of the country concerned;
- reduction of spaces allocated to agricultural practices, all economic regions of the country concerned;
- development of the Environmental and Social Management Framework in the implementation of agricultural intensification program.

The measures to adapt to climate change to limit the declines in output and yields of agricultural products

- Support to the Ministry of Agriculture, Livestock and Fisheries (MAEP) in its Agricultural intensification program with food security objectives.

The specific objectives are:

– Introduction of livestock species adapted to drought,

– Introduction of crops adapted to drought.

– Development of water control mechanisms (water dams construction) crop diversification

All economic regions are concerned but specifically savannah regions and Kara.

**Project target area**

The project will be located in Mandouri, capital Kpendjal prefecture in the Savannah region in Togo. The project area is located in the canton of Mandouri

[19] Rapport final étude de vulnérabilité et adaptation au changement climatique –Secteur de l'agriculture, foresterie et affectation des terres- Projet Troisième communication (2015)
[20] Etudes de la vulnérabilité et de l'adaptation aux changements climatiques – secteur de l'agriculture, Foresterie et affectation des terres (Troisième communication nationale)

The project site is located 2 km from the city of Mandouri and consists of 4 parcels of 36 ha each or 144 ha in total.

In general, beneficiaries are made up of the population of the prefecture Kpendjal including that of the Canton of Mandouri, about 155 091 inhabitants including 80,628 women.

Specifically, there are two (02) categories of direct beneficiaries which are:

- 576 farmers or 115 households. Given the average household size of 5 people per household, 2880 people will be directly affected;
- the population of the city of Mandouri (about 5203[21] inhabitants) that will benefit from social measures from the construction of mini water supply consisting of equipped drilling, a mini network, water tower and fountains powered by solar equipment. In addition, the project also includes the construction of three (03) latrines to improve sanitation at the village level.

The population of the Savannah region is estimated at 828 224 inhabitants, representing 13.4% of the total population of Togo. The population density is 96 people / km² and the annual growth rate in this region is 3.18%. The Savannah region is populated by 397,996 men and 430,228 women.
Kpendjal prefecture has a population of 155 091 inhabitants; by residence, the urban population is 5203 inhabitants (3.35%) against 149 888 (96.65%) and rural population distribution is as follows: Men: 74 463 (48.01%) Women: 80,628 (51.99%).
The population of the city of Mandouri is estimed at 5203 inhabitants.

The percentage of households owning land in the Savannah region is about 89.3%. An estimated 82.8% of households are owns of their home. The assessment of the food situation by WFP in 2008 found that the Savannah region was affected with 13.6% of households in severe food insecurity and 28.8% moderately[22] food insecure.

The climate is tropical Sudan type with two contrasting strongly seasons: a 5-month rainy season (May to October) and a dry season during the remaining seven months of the year. The temperatures vary between 17 and 39 ° C in the dry season and between 22 and 34 ° C during the rainy season.

**Background of the target area of Mandouri**

The site of Mandouri is located an area where flooding problems, access to drinking water, soil erosion, drought are the major constraints to development. This region also records the poverty rate the highest in the country (90.5%) and thus remains highly vulnerable to adverse effects of the change and climate variability.

Indeed, the local economy is mainly based on agriculture which occupies 96% of the population of Kpenjal and depends on largely very variable weather conditions that are not mastered by producers. Moreover, the mode of production has accommodated a very sensitive type of subsistence farming to climate and which essentially revolves around the cultivation of rice and corn. This situation, combined with a total lack of diversification of livelihood activities shows the high degree of community vulnerability that mastery over his crop calendar.

In terms of production, 56.4% of assets are women who play an important role and are the engine of development of agriculture. Despite this importance in the development of

[21] Rapport du recensement général de la population et de l'habitat du Togo de 2010
[22] Enquête rapide sur la sécurité alimentaire des ménages dans les régions de la Savanes et de la Kara. Avril 2010

agricultural activities in the community, they are marginalized and have little access to land quality because it is only the men who own them. Young people are unemployed and are often tempted by rural exodus. Particular attention will be paid to these groups in the development and implementation of the project.

The beneficiaries' targeted communities consist of structured smallholder families (women, youth, market gardeners, low-income workers).

The area of intervention is also an area of pastoral activities and ultimate passage of cattle transiting south in search of pasture and water points during the dry season. This is the source of often deadly conflicts between farmers and herders.

In this respect, particular attention should be given during the implementation of the project on the management of conflicts between farmers and pastoralists.

In the project area, people buy their drinking water from rivers, boreholes and individual wells. Rural households have much less access than urban households with drinking water. The populations face two crucial problems:

- In the rainy season, surface water is polluted and expose populations to waterborne diseases (diarrheal diseases, parasitic diseases, malaria) the very difficult health consequences for vulnerable populations. During flooding (eg the flooding period in August 2013), the rivers of waters are slimy but still eaten by people who source only the river;

- In the dry season, people and animals lack clean water.

The indicator of access to drinking water in the region of savannas in 2007[23] is 38.4%. The drinking water is a problem in general in the prefecture of Kpendjal with an access rate of 14.1%. This access to safe water rate is only 6.3% and 6.5% in the municipality and the canton of Mandouri respectively according to data from the Poverty Mapping[24]. Women have generally the responsibility in the household to collect water, which is a time consuming and difficult task when they have to carry over long distances heavy buckets or water cans. They are paying the health consequences, but also of education and income-generating activities. This greatly contributes to their vulnerability to climate change.

**Status of the agricultural sector and irrigation sub-sector**

**<u>The agricultural sector in Mandouri</u>**

Agriculture is dominated by farms ranging from 1 to over 5 hectares and characterized mainly by food crops. Agricultural employment concerns the hand of family permanent work and paid labor. Solidarity is practiced frequently in the form of work against invitation to share meals, where the person who receives the invitation must provide food and drink to those who come to work at home. Paid work varies effort and equipment used:

- Sharecropping without food equivalent to 500 F or 600 F per day for all agricultural operations;
- Sharecropping with food is charged to 250 F or 350 F per day for all agricultural operations;

Plowing and ridging are coupled respectively to 10 000 F to 12 000 F per ha per operation.

Agricultural employment in the Prefecture is on average equal to 99.34%. Agricultural production is the main activity of the Prefecture: 96% of jobs and 90% of revenues. There are

[23] Direction Générale de l'Eau et de l'Assainissement-2007
[24] Cartographie de la pauvreté, Lomé 2011

30,000 farmers who emphasize 110,000 ha annually. Land use is highest in the north (+ 80%) sectors remain available in the south. Women's participation in economic life is marked by work in the fields, processing and marketing of agricultural products.

The main food crops in the project area are: Maize, millet, 3 months, 6 months of millet, sorghum, rice, cowpeas, soybeans. Millet 3 months is used as solder culture. The main cash crops are: cotton and peanuts. Note that in all of the Savannah Region, 28 000 hectares of cotton crops were planned but 27,139 hectares were completed during the 2011/2012 crop year, an achievement rate of 97%. Vegetable crops are composed of: onions, tomatoes, watermelons, carrots, okra, Guinea sorrel, cabbage, peppers...

Animal traction and use of tractors allow obtaining significant yields. Unfortunately, agricultural equipment failures and lack of skilled labor for repairs weather and climate are bottlenecks in agriculture throughout the prefecture Kpendjal.

**Location of the irrigation sub-sector**

The irrigation sub-sector in the project area is not operational. The planning studies and development of lowlands launched by the Support Project for Agricultural Development in Togo (PADAT) led to the identification of two types of lowlands.
It is estimated that about 718 hectares of developable PADAT area in the prefecture of Kpendjal. Significant exceptional floods were experienced. That is why we need a type 2 arrangement that works for flood discharge. For the shallows where you have to type1 of the development, there are no ravines or waterways within them. These are not rough shoals. But their watersheds have significant topography and runoff are not grouped in flows during periods of flooding. In total, 156 slums were identified and selected in the Savannah Region to be built with an area of 2520 ha. These slums are located in 129 villages in 24 townships in 04 prefectures.
City Mandouri is not spared from the flooding caused by torrential rains that have battered the Savannah Region with property damage. Apart from roads, houses, there are thousands of hectares of maize, sorghum and rice which are mostly flooded.

**Livestock – Fishing**

Prefecture Kpendjal is traditionally a region facing farming. It has some advantages for the success of animal production:

- Peasants traditionally cattle owners;
- Presence of Fulani herdsmen;
- Areas of low population density where herds can stay dry season.

However, it should not be forgotten in return:

- An unfavorable health situation;
- Areas where population density is very important and therefore causes the migration of cattle;
- The scarcity of water points;
- Insufficient food production to eventually allow additional food.

**Project / Programme Objectives:**

*List the main objectives of the project/programme.*

**Overall objective:**

To develop water management and irrigation technologies that reduces dependence on rainfall for agricultural production

The overall objective of the project is to improve the level of resilience of vulnerable actors in the agricultural sector in Togo and in particularly in Mandouri (Savannah Region) by developing water management and irrigation technologies that reduce dependence on rainfall for agricultural production.

The Adaptation Fund project aims at increasing agricultural production while improving conditions and living standards of people in the project area to reduce the vulnerability of producers through the water control for production and promoting crop diversification for food security improvement and development of products for improved incomes.

**Specific objectives:**

More specifically, the project aims to: i) help secure local rice production and reducing the national deficit in rice production by an additional 9900 tons of paddy rice; ii) to promote, improve and diversify the income of beneficiaries Mandouri families.

This will involve: i) build waterworks control for irrigation of 144 hectares; ii) control the semi Californian irrigation techniques; iii) improve the availability of drinking water for people and; iv) promote diversification and valorization of products to improve the income of beneficiaries families.

**Expected results:**

Expected results focus on the following aspects:

- food self-sufficiency and sustainable land management through better water management for agricultural production are obtained ;
- resilience of producers is raised up by improving their income and promoting new income-generating activities ;
- new agricultural production techniques are adopted by farmers, breeders and fish farmers ;
- cooperative structures are boosted ;
- technicians are trained and population is sensitized to the technical use of rainwater for irrigation of crops ;
- populations and local representatives of the region have a better understanding of climate change impacts and can become involved in the implementation of adaptation measures ;
- Climate change is set up in priority at the local level and its mainstreaming into policies development at the local scale is systematic.

**Project / Programme Components and Financing:**

*Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.*

| Project/Programme Components | Expected Concrete Outputs | Expected Outcomes | Amount (US$) |
|---|---|---|---|
| 1. Support for water resources control and production | Hydro-agricultural installation of 144 ha equipped with a semi-Californian irrigation system ;<br><br>Construction of socio-economic infrastructure ( mini network of drinking water supply, drying area, store room, toilet, fish ponds, nursery);<br><br>Acquisition and installation of solar equipment;<br><br>Acquisition of agricultural equipment kites (a 75 hp tractor to plow + disk + 3 sprayers + 10x10 drive a subsoiler to 3 teeth + a trailer + a combine rotabatteur + a + a huller)<br><br>Support for producers on the techniques of agro-forest grazing and fish production<br><br>Implementation of a management system and knowledge broadcasts | water resources management system is set up for irrigation<br><br>Beneficiaries' quality of life of people is improved<br><br>Sustainable farming practices are being implemented<br><br>Beneficiaries' incomes are improved through the use of renewable energy | 5 000 000 |
| 2. Support for diversification of livelihoods | The practice of gardening is integrated for a sustainable management of soil and of populations revenue diversification<br><br>Livestock activities, beekeeping and agroforestry are practiced to diversify and improve people's incomes<br><br>Access to microcredit has improved | Incomes sources of populations are diversified and improved<br><br>Diversification initiatives and income generating activities of the communities are financed | 2 150 000 |

| | | | |
|---|---|---|---|
| 3. Institutional support, capacity building and knowledge generation | The risks associated with climate change are better analyzed and addressed by local authorities for an integrated water resources management, soil and conflicts<br><br>A management information system of adaptation to climate change is set up<br><br>Training of local technicians in the installation and repair of irrigation and solar equipment.<br><br>beneficiaries are trained and sensitized on the water management, production techniques, crop diversification<br><br>the capacities of the beneficiaries are reinforced for cooperative and simplified financial management in the improvement of their income<br><br>a system of management and knowledge-sharing is set up | Capacity building of local institutions and communities to better management issues related to climate change.<br><br>Capacity building of the installation and repair of irrigation and solar equipment | 1 317 125 |
| 6. Project Execution Cost | | | 762 041 |
| 7. Total Project/Programme Cost | | | 9 229 166 |
| 8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable) | | | 770 834 |
| **Amount of Financing Requested** | | | 10 000 000 |

**Projected Calendar:**

*Indicate the dates of the following milestones for the proposed project/programme*

| Milestones | Expected Dates |
|---|---|
| Start of Project/Programme Implementation | June 2017 |
| Mid-term Review (if planned) | January 2020 |
| Project/Programme Closing | 2021 |
| Terminal Evaluation | 2022 |

## PART II: PROJECT / PROGRAMME JUSTIFICATION

**A. Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.**

One of the most worrying threats currently undermines economic and social development of Africa in general and West Africa in particular is climate change. This phenomenon impacts negatively all developing sectors of countries including agriculture, livestock and fisheries. These effects result in lower yields of crops, livestock and fisheries due to changes in rainfall, long droughts and / or floods, drastic reduction of water resources, reduction of pasture, accentuation of desertification, land degradation, etc.

In Togo, a major concern is the availability of drinking water. Water resources are not always easily accessible and of good quality due to the depth of the aquifer and the process of salinization. Moreover, the favorable situation of surface water is reduced by seasonal and regional variations as well as the filling of streams and their early drying in the dry season. The balance between withdrawals and contributions that are made for the city of Lomé and the Maritime region is too precarious to ensure the water needs of the region that includes 40% of the population and 90% of the country's industries.

The Togolese economy traditionally based on agriculture, which occupies a prominent place since it accounted for 35.1% of GDP in 2000 and 38% on average during these last years. It provided more than 20% of export earnings and sustains 2/3 of the workforce. In 2010, the added value of the sector was 394.9 billion remained almost stable compared to 2009. This is mainly due to the decline in food agriculture whose added value passes from 270.9 billion in 2009 to 237.7 billion in 2010, a decrease of 1.2%. This decline is attributed to adverse weather conditions.

The project of raising the level of resilience of the actors vulnerable to climate change of agriculture sector in Togo and more specifically in the area of Mandouri finds its justification by the central role played by agriculture in the national economy (41% of the GDP in 2012) in general and population food security in particular. About 70% of people depend directly on agriculture. Moreover, at the local level, the vulnerability of the populations is accentuated by the weakness of their capacities; which prevents them from reacting to external shocks.

Indeed, the production activities are characterized by the small size of plots exploited, non-water control for the production and use of rudimentary production tools. The productions are quite low and highly dependent on rainfall variability and revenues generated are insufficient to meet the needs. Furthermore, the low diversification of production activities in the project area causes the growth of population vulnerability level and poses a real problem of food security.

The project is part of an overall objective to reduce dependence of production activities to rainfall constraints. Its implementation is consistent with the objectives of the Accelerated Growth Strategy and Employment Promotion (SCAP), the National Strategy for the long-term development based on MDGs and the National Action Plan for Climate Change Adaptation and the policy of agricultural recovery. Indeed, the development of irrigation system will control the water resources to support the economic recovery by increasing agricultural production. This will contribute to improving the food situation (fight against malnutrition and undernourishment), increasing the income of affected communities (poverty reduction) and thus to work for local development by reducing the vulnerability of communities involved in local agriculture.

For the purposes of the project, the site has been donated to the state of Togo by the beneficiaries of Mandouri. A mandate which copy is attached has been established for this purpose.

People mainly practiced rain-fed agriculture (see p18 and 19), whose future remains threatened because of the high variability within and between seasonal rainfall. Indeed, climate change is causing a shift of the rainy season and the crop calendar. The onset of the rainy season has moved from April-May to June or July during some years while the end occurs early (September).

In the northern region of Togo, which includes the area of this project, it has been observed between 1961 and 2012, a rise in temperature average of 1.2 °C and lower rainfall of 41.8 mm. Thus, people have had to change their farming and eating habits: the short-cycle maize (about 2 months) became a dominant culture in substitution of rice, millet, sorghum...

Other coping strategies consisted of the combination of several agricultural crops (millet maize and cowpea) in the same plot in order to maximize the chances of harvesting at least one product at the end of the season. None of these strategies in place were robust enough to cope with the impacts of the strong climate variability that continue to be manifested through droughts, floods, higher average temperatures and lower rainfall.

It is planned to install a semi Californian type of irrigation system that is best suited to the context of the site because of the following considerations:

- rational use of water (reduction of losses through evaporation and infiltration);
- easy to use and require less maintenance.

The installation of the irrigation system will permit not only, rice production but also improve the yields and the practice of market gardening during the dry season. The gardening ultimately contributes to improve the nutritional value of food for populations and will increase and diversify population's incomes and reduce rural exodus. Besides, concerning rice cultivation, the project involves the use of selected varieties with high yield (average yield 6 t / ha with a potential of 10 t / ha), such as ADNI 11, BG 90-2, the Wassa (IR 32000), irrigated Nerica, and Wat 310, to improve productivity.

In short, it aims to reduce the vulnerability of producers affected by a very high spatial and temporal variability of rainfall, the water control, and diversification of production activities and strengthening of local governance for better management charge of issues related to climate change.

Thus, the practical adaptation actions will focus on the following activities:

**Component 1: Support for water resources control and production**

***Expected results:*** *Hydro agricultural installations and improvement of cultivation practices*

The document of poverty reduction strategy indicates that the vulnerability rate is higher in rural areas (87.4%) with the savannah region (where the project site is located), which remains by far the poorest region of the country with an estimated incidence of poverty to 90%. The vulnerability is exacerbated by their low capacity to external climatic shocks.

Regarding information provided by the 2nd (pages 56-57) and the 3rd (pages 27-39) national communications to UNFCCC, combined with Togo's INDC Report (page 6), the project area is strongly vulnerable to climate change. It's expected that the extreme northeastern of Togo where the project area is located (Mandouri), will be affected by the increase of temperature (RCP 2.6: 28.8-29.3°C (2025), 35.6-36°C (2050), 35.6-36.2°C (2075), 35.6-36.2°C (2100);

RCP8.5: 35.4-36.0°C (2025), 36.4-37.0°C (2050), 37.6-38.2°C (2075) and 39.0-39.6°C (2100). In the meantime, rainfall is likely upsurge, causing extreme weather and climate events such as floods, etc. that will increase vulnerability of Mandouri community and landscape more than ever. In the same perspective, it's projected that agricultural sector will be affected by the loss of incomes, land degradation, loss of biodiversity, the invasion of insects harmful to crops and livestock, loss of wetlands, etc. imperiling once again Mandouri community and landscape resilience. In addition, Togo's INDC Report mention that water resources, in consideration of current and forecast demographic growth rates, the water supply would be severely affected, with a drop in stocks due to global warming and heavy pollution of drinking water reserves as a result of flooding, etc.

That's why, this project will bring adaptation strategies by providing the possibilities to develop and sustain rainfed agriculture by water control during the wet season, and diversification (because up to now, no gardening activities were possible during the dry season due to lack of water control). The warehouse will allow Mandouri's farmers to store their crops with a threefold advantage: first fill it access to crops during lean periods; then, keep them in a safe place that respect building standards, away from heat and moisture, and finally, do not discount their crops as in the past; all these issues will contribute to food security concern in Mandouri.

During the consultation process at local level, populations of Mandouri had raised a strong concern related to the difficulty of the cultural practice face to strong climate variability (drought, floods). The water control would be a considerable asset to enable people to better manage changes and impacts of climate variability on the production activities.

***Expected impact 1: 144 ha of agricultural land are arranged and equipped with a semi Californian irrigation system supplied with a solar energy source***.

Work will focus on: i) irrigation network construction, drainage networks, trail networks; ii) the acquisition and installation of pumps and accessories; iii) the acquisition and installation of solar equipment and iv) additional works consist of plowing, the clearing, the planning and delimitation of driving axes.

***Expected results: Construction of socio-economic infrastructure***

Expect impact: mini network of drinking water supply, drying area, warehouses, toilet, fish ponds, and nursery store) are built for improving the quality of life of people
The investment to realize will address the issue of water quality through: i) the building of water fountains in the city of Mandouri for drinking water supply and ii) the construction of drainage systems for evacuation of wastewater.

It is planned within the framework of the project, the social measures of the construction of mini water supply consisting of equipped drilling, a mini network, water tower and fountains powered by solar equipment. In addition, the project also includes the construction of 03 latrines to improve sanitation at the village level. These investments will be accompanied by the sensitization of beneficiaries on the waste of water, sanitation, in order to minimize the health risks related to the spread of certain diseases related to water and food (malaria, cholera, etc.).

The irrigation system certainly involves the use of pesticides; however, such products are subject to certification by the National Certification Committee, which takes into consideration the environmental standards. The Committee relies on national chemicals management programs such as the National Profile on Chemicals Management adopted and revised in 2013 and the national implementation plan of the Strategic Approach for International

Chemical Products Management (SAICM) developed in 2015. Farmers will be trained on the optimal use of chemicals through strict adherence to spreading standards of each product.

The project has planned to support fishing activities through the construction of the fish ponds, a drying area and assistance for fish production techniques. Fishing is practiced as a livelihood activity and drying is used as a method of preservation.
For agroforestry, the project will set up nursery stores.

***Expected impact 2: Improved yields of the productions through the mechanization of means of production and improved agricultural practices***

This will be the acquisition of farm machinery kites (a 75 hp tractor + a 3 disc plow + disc sprayer 10x10 + a subsoiler to 3 teeth + a trailer + a + a combine harvester rotabatteur + a husker).

In addition, the project will support beneficiaries in selecting rice varieties and other adapted crops to produce. The production support will also focus on supporting producers on production techniques agro-pastoral and fisheries and forestry.
The acquisition of agricultural equipment aimed to improve productivity (better preparation of fields, capacity to sow more surface, etc.). Notwithstanding the use of high yielding speculation, acquisition of farm equipment will also contribute to food security.

**Component 2: Support livelihoods diversification**

**Expected results**: *diversification of livelihoods of local communities through the practice of market gardening, livestock (poultry farming and beekeeping) and marketing support.*

Production activities have been defined by the beneficiaries during field consultations. They include: intensive cultivation of rice and maize in the irrigated area during the rainy season and gardening in dry season. The plant material will consist of selected rice varieties with high yield (average yield 6t/ha with a potential of 10t/ha), such as ADNI 11, BG 90-2, the Wassa (32000 IR), the irrigated Nerica, and Wat 310. For vegetable production, considered as diversification crops, the choice will be focused on the onion, tomato, chili, with possibility of adding, at small scale, okra, carrot, Ademe, cucumbers and cabbage.

Regarding diversification, in addition to gardening, the project will focus on: i) support for the development and diversification of income-generating activities (grinders, guinea fowl rearing, beekeeping, composting, etc.); ii) improving access to micro credit and iii) the development of value chain and access to market.

The project has planned to support fishing activities through the construction of the fish ponds, a drying area and assistance for fish production techniques. Fishing is practiced as a livelihood activity and drying is used as a method of preservation.
For agroforestry, the project will set up nursery stores.

As already indicated in CR9, retained production options will allow farmers to ensure their living and generate income through the selling of products. This is also the focus of this project, namely: i) improve food security of beneficiary populations and ii) promote, improve and diversify the sources of incomes of beneficiary families.

**Expected impact 1: diversification activities are practiced and the products are valued**

This component aims to strengthen the livelihoods of beneficiaries through the development of market gardening and poultry. Furthermore, the project will support the beneficiaries for

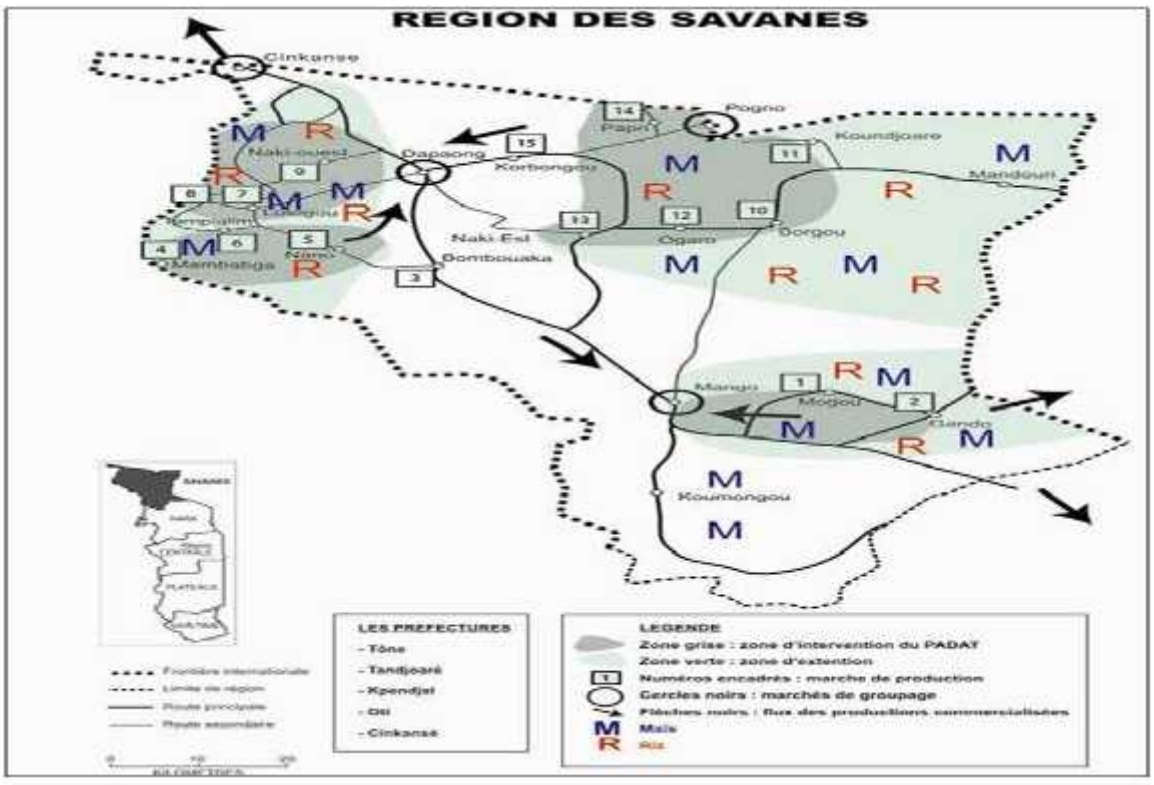
Conservation (warehouse building, drying areas for rice), processing for market garden crops and marketing.

The construction of warehouses will offer people the following possibilities: i) the storage of their produce all year in a safe place; ii) access and availability of surplus production that can cover food needs during the dry season and iii) the selling of part of agricultural surpluses throughout the year in order to diversify incomes.

Compared to the transformation and conservation, NGOs at the local level may be involved in strengthening community capacity and organize them for better control of production activities.

For marketing, the project will ensure strengthening the capacities of the populations on the information required for decision making and advantageously allow better inter act with the different actors of the chain for mutual benefit. Farmers will be trained in market investigation to ensure a balance between availability and demand of the local and national market. They will learn to recognize, understand and implement the components of the supply chain. They will also understand how to connect with consumers. At this level, generation and knowledge management will be important. The project will identify all key stakeholders to respond to them in a participatory evaluation process of the market needs and identifying specific solutions.

The markets targeted by the project are: the prefectoral Mandouri market, the big market of the prefecture, the cantonal secondary markets and Dapaong regional market that is accessible through the National Highway 24 under construction. To date, it takes about 1 hour and 30 minutes to connect Mandouri to Dapaong. The finishing of the National Road is planned in 1 year and should improve access to markets, but at the moment all these localities are accessible through tracks. Farmers can access the different weekly markets of Mandouri (Thursday), Dapaong (Wednesday and Saturday), Koundjoaré (Tuesday) and Bagre (Monday).




**See map 1: flows productions sold in the Savannah region**

**Expected impact 2: access to agricultural microcredit facility**

The project will establish a loan bonus system or a guarantee fund for loans to farmers to support activities related to the diversification and commercialization. To date, the three microfinance institutions operating in the project area:

- Union des Caisses Mutuelles d'Epargne et de Crédit des Savanes (U-CMECS) ;
- Coopérative d'Epargne et de Crédit Mandouri (COOPEC MANDOURI) affiliated to FUCEC-TOGO Network et ;
- Coopérative d'Epargne et de Crédit pour le Soutien aux Initiatives des Femmes pour l'Autopromotion (COOPEC SIFA)
- The project will not create a microcredit institution. The objective is to facilitate access to credit for producers. To this end, the project will build on the most successful microcredit institutions in the project area. According to the socioeconomic study and consultations with people and the Togolese part, farmers face difficulties in ensuring a sustainable procurement of agricultural inputs mainly because of the cost of credit. Indeed, due to the impacts of climate change on production and yields, crops productions are no longer sufficient to supply food for consumption and selling. This causes delays in reimbursement or unpaid credit. In addition, the project area was remote, making it difficult to access markets for the selling of products.
-
- As support, the project proposes to select the successful microcredit institutions with support from the Ministry for the Economy and Finance for the establishment of a more accessible financing system. The thoughts have focused on the establishment of a bonus system or guaranteed loans to farmers including the land users of the site and the product processing cooperatives.
-
- In order to ensure sustainability of the project, it is envisaged a loan bonus system that is aimed to reassign AF resources to selected institutions (for this purpose a loan contract at subsidized rate will be signed between the State and these microfinance institutions) to reduce credit interest rates. This will also help sustain the resources that will be restored gradually as repayments contrary to a guarantee fund, which could run out in the short and medium term.
-
- For better loan repayment, there is a capacity building of credit institutions for the management and monitoring of loans, and recipients (women's cooperatives, farmers, poultry, etc.). For recipients, the capacity building program will emphasize the mechanism and the need for ownership of a simplified financial management and value chain.
- These funds will allow agricultural inputs supply and product processing. The construction of the road Dapong –Mandouri will facilitate access to the regional market.

Women's access to financial services will be strengthened notably through a preferential support the project will provide to the existing women microfinance in order to ensure that a large number of women in the project area have privileged access to loans, to improve their agricultural activities.

**Component 3: Institutional support, capacity building and knowledge generation**

***Expected results:*** *Capacity building of local institutions and communities to better manage issues relating to climate change*.

**Expected impact 1: local institutions and communities are more sensitized and climate change is better understood and taken into account in the policies development at the local level.**

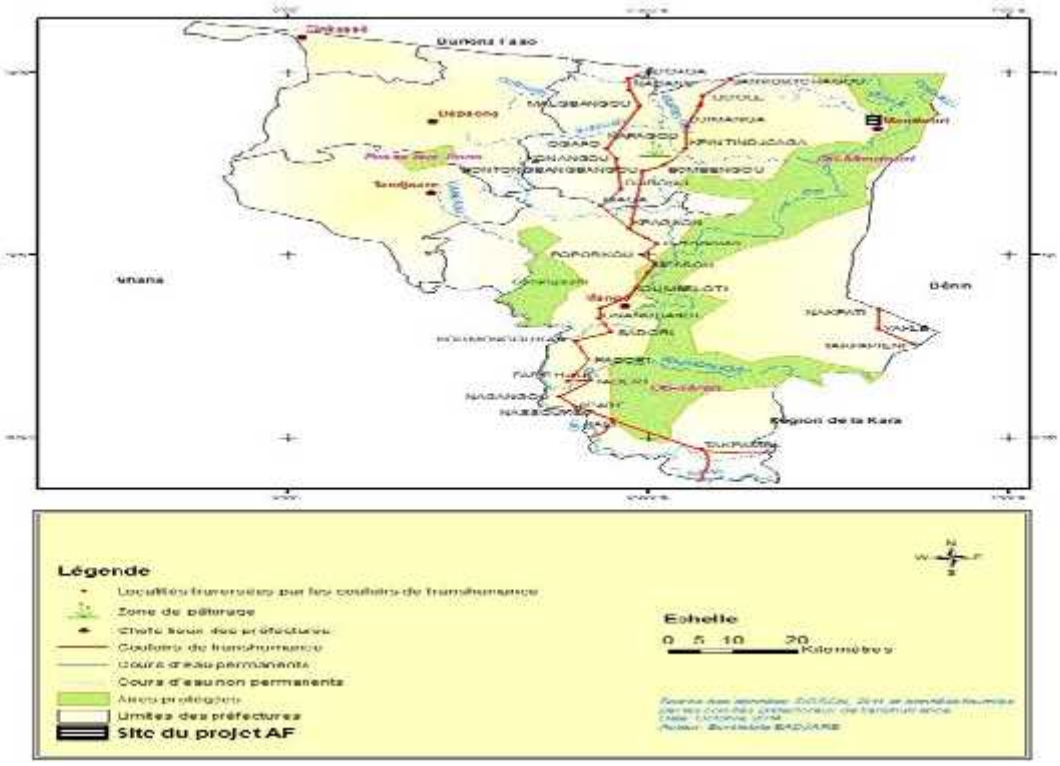
The capacities of the different actors and stakeholders will be strengthened in order to pass "from climate risk to resilience," being proven that the risk reduction can be a substantial contribution to adaptation to climate change. Therefore, capacity building is provided in the risk assessment, risk reduction, vulnerability assessment, and adaptation technologies.

In addition, this component will also focus on strengthening the technical, organizational and environmental actors regarding: (i) environmental skills; (ii) joint management of water resources and conflict management, and (vi) environmental monitoring.

Regarding the environmental and social measures, the planned measures are:

- Implementation of environmental measures of the Environmental and Social Management Plan (ESMP) (development of local conventions, compensatory afforestation, integrated resource management, establishment of a mini-AEP (a well-equipped drilling+ a mini castle water fountains + 3 fountains) in the city of Mandouri etc.);
- Implementation of the action plan and Resettlement (PAR);
- Establishment of a restoration plan means of production (temporary);
- Establishment of the Stakeholder Engagement Plan to strengthen ownership of the project;
- Establishment of the Grievance Resolution Plan in order to resolve any conflicts that might impair the operation of the project;
- Implementation of a plan of prevention and management of pollution.

Conflicts between farmers and herders that were recorded in the Savannah area are those related to transhumance. To overcome these problems, Togo has developed a new map that defines transhumance corridors, reception areas and grazing areas **(see Map 2).**




Map2: Transhumance corridors

The transhumance management is ensured by a national committee. The committee's work is done by a regional committee and at the prefecture level by a prefectural committee. Thus,

the committee of the Kpendjal prefecture is chaired by the Prefect and includes several actors including herders and farmers.

Transhumance corridors that have been clearly defined by the Togolese authorities in accordance with Regulation n ° 0072007/cm/UEMOA related to the security of plants, animals and food in the UEMOA which Article 75 deals with cross-border transhumance states that "Member States implement the necessary procedures and actions to facilitate the movement of transhumance animals and, in particular, adopt international transhumance certificate of ECOWAS" published by the Council of Ministers of UEMOA dated April 6, 2007.

Note that according to the map of transhumance corridors of the Savannah region, the project site is located far from the corridors. However, there are in the area of the project, conflicts from wandering animals in farming period. These conflicts are managed through consultation between farmers and herders. Strengthening the methods of storage of agricultural by-products for animal feeding will interest farmers in the project and prevent conflicts.

In any case, the project will rely on NGOs involved in the community, the local authorities and the experience of the existing committees in charge of settling disputes at the local level, to raise awareness. Moreover, the focus will be on boosting frameworks for dialogue between the various stakeholders and the project will assist in tracing and securing grazing areas to prevent and manage the risks associated with conflicts.

It is important to note that in the context of the preparation of the full draft document, another visit and consultation of the beneficiaries will be done and will be an opportunity for the BOAD to insist again on the success factors that require the involvement and ownership of all stakeholders, including organizations of livestock farmers in the project area, and to make proposals for prevention and mitigation of any potential conflict risks.

**Expected impact 2: Strengthening financial management of cooperatives and beneficiaries Maintenance Engineering equipment**

This will involve strengthening the capacity of beneficiary communities regarding: (i) financial and simplified accounting management; (ii) cooperative organization; (vi) training of local technicians in the installation and repair of irrigation equipment and solar.

The institutions with the skills to train farmers in various areas are:
- *Institut de Conseil et d'Appui Technique (ICAT)*: with a mission to contribute to the support to the rural world. It works in the promotion of rural areas, through the dissemination of appropriate crop management and support for the structuring of professional organizations.

- The *Centre d'Animation Rurale of Tambimong-Ogaro (CARTO)*: dynamic in the region, provides training and resettlement of young farm couples in their original environment. This Center has an accommodation capacity of 24 couples per year. The training is mainly focused on soil conservation techniques, improved fertility, animal traction, and peasant organization.

- The NGO *Recherche Appui et Formation aux Initiatives d'Auto-développement (RAFIA)*: works in empowering grassroots organizations and increase their self-development; capitalized and support community development initiatives; form for capacity building at the grassroots; capitalize on and disseminate the experience gained in self-development; promoting community relations in economic and social self-development; support basic initiatives aimed at the protection and sustainable management of the environment; promote all income-generating activities for vulnerable populations, including young people and women.

- *The Centre de Formation Rurale of Tami (CFRT)*: provides training to young rural couples to allow these families to improve their living conditions, and to achieve food self-sufficiency. It works for agricultural training, learning animal traction, the use of selected seeds and natural fertilizers, breeding, gardening. It also trains on literacy, mathematical ability, hygiene, childcare, sewing, knitting, cooking recipes...

- *Coordination Togolaise des Organisations paysannes et de Producteurs Agricoles (CTOP)*: works in promoting and constantly defending the value of a professional agriculture, competitive, dynamic and sustainable for family farmers' farms. To do this, it undertook in particular to develop and implement rural information education and communication policy, support for the development of concerted and aggressive strategies of business development, supports its members in accessing and using new information and communication technologies (ICT), negotiate and link its members with banking institutions and decentralized financing, organization of seminars and thematic workshops training, conferences, etc., organizing debates and conferences on media.

- NGO *IT-Village* has a professional technical training school called Centre Bonita. This Center trains young people among other modern carpentry, masonry modern, beekeeping, agroforestry, business management accounting.

The target groups which will be trained and sensitized include:
- Agricultural producers including farmers' cooperatives;
- Associations of women and youth;
- Mandouri community;
- The mixed farmer- herders groups;
- Decentralized technical services such as the prefectural Agriculture service, Livestock service and Fisheries service, the prefectural service for management of the environment and forest resources

Training kits, a communication strategy with a communication plan will be developed. These documents will define the main target groups, essential and specific messages and target group the training profile.

**Expected impact 3: lessons learned from the national projects in progress are capitalized and a system to disseminate the knowledge acquired in the project is set up at local level**

This will involve establishing synergies between the project and existing projects at the national level include:

• PGCIT project partially funded by the FEM5 regards the operationalization of the early warning system;

• ADAPT GEF and IFAD, which aims to reduce the impact of climate change on rural vulnerable groups, as well as the natural resources essential to sustain agricultural production and increase food security.

To disseminate knowledge, good agricultural practices that are adopted will be disseminated through training / awareness sessions; of spots broadcast in local radio and documentary films. Information on the project will be produced and disseminated among the authorities, technical and financial partners and beneficiaries.
Moreover, a local database will be created for the collection and processing, preservation and dissemination of data sheets, educational tools and other materials training for their replication.

**B. Describe how the project / program provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.**

**Economic benefits**:

The current climate variability, particularly in rainfall patterns, with reduced precipitation in some years, or offset them against the crop calendar, cause a decrease in rice production, generating episodes of famine.

Rice cultivation is still the main source of food for the people of the area Mandouri, whose surplus production also serve as main source of income. The project will secure the supply of water in rice production in order to free it from dependence on changes in increasingly frequent rainfall / rainfall.

It will also i) increase the area currently under cultivation, ii) diversify agricultural production through the development of market garden production against season, iii) strengthen small livestock.

Accompanying people in their cultural route will also improve yields and reduce input requirements. Securing rice production and increasing yields, diversification of agricultural production, will not only ensure food security but also to generate income, reducing food shortages and enabling the poorest to have access to a power supply and minimum income.

Generally, in the prefecture of Kpendjal, animal traction and use of tractors has improved production through larger areas sowed. With regard to Mandouri, implantation area of the project, there is to date only one tractor for 50 ha in ZAAP perimeter. The project will contribute to the mechanization of agricultural production in Mandouri throughout the year as a result of the irrigation system, improve production to ensure better food security and selling of products (raw and processed), that would allow the generation and diversification of income.

The project will also diversify and increase revenue through the supports that will be made to improve farming.

Indirectly increased production will generate more activities and transactions that will have a beneficial effect on local employment, especially for young labor in the rice fields and women in market gardening production and trade. Support will be provided to encourage micro-credit that will benefit women's groups.

This project will also:

• enable a more complete utilization of biomass with the use of agricultural residues (rice stalks, residues of market gardeners) mainly for cattle feed. This system will improve pastoral production (meat, milk) and contribute to the improvement of people's living conditions;

• improved inputs. : The development of livestock manure will production effect that enter soil amendment. The use of organic manure will cause a decrease in the use of chemical fertilizers, thus lower production costs to the producer and the conversation of soil carbon;
• Local firewood production: the introduction of trees and shrubs in plots contribute to meeting the food needs of the people first, and also to meet the demand for fuel wood and timber to implement local populations. This has the advantage of contributing to the conservation and preservation of heritage and wood existing biodiversity.

• the introduction of an agricultural system in equilibrium with its environment. This system will bring local people to develop an economy based on the respect of environmental balances that enable them to sustainably produce at lower cost, while preserving natural resources for future generations.

**Social advantages:**

The implementation of the project will enable the development of socio-economic activities in which young people will benefit (labor), so the achievement of food self-sufficiency reducing food purchases, contributing to the improved coverage health (construction of health infrastructure), improving access to drinking water (repairing water towers), and strengthening women's economic capacity.

Women in the prefecture of Kpendjal constitute an important force at work. The majority of women are active in the agricultural sector where they are present at all phases of production. The Women Leaders Network's actions for Disaster Risk Reduction (DRR) are very visible Mandouri. It may be noted to their credit reforestation 400 feet palmyra in the prefecture. However, many barriers limit the active and effective participation of women in local development processes.

The implementation of Mandouri AF project will take into account the appearance Genre developed plots by assigning a quota for women and / or women's associations. The additional revenue generated by this project AF may be invested in the education of children.

A gender inequalities study will be included in the project preparation phase in order to identify the inequalities in term of land access, land ownership, labor, etc., and to mainstream the gender equity and women's empowerment issues in the project.

The new irrigation system will save time that can be reinvested to develop other economic activities, and increase the added value of agricultural production through primary processing such as husking rice.

**Environmental benefits:**

• On the environmental level, the project will:

- To improve the conservation of ecosystems (reduction of deforestation and implement reforestation actions: windbreaks, hedgerows, thickets, alignment plantations and shading, etc.).

- Improved water management (reducing evaporation losses, water use at the best cultural moment). The irrigation system is constituted by buried pipelines or "semi-Californian" system. It is a network of underground pipes terminated by irrigation out of the ground terminals at each plot. This system saves water that could be lost through evaporation and supports without much damage the floods.

- Improving soil quality through the establishment of Defence and Restoration works Soil and fixing the banks, and improving the productive potential;

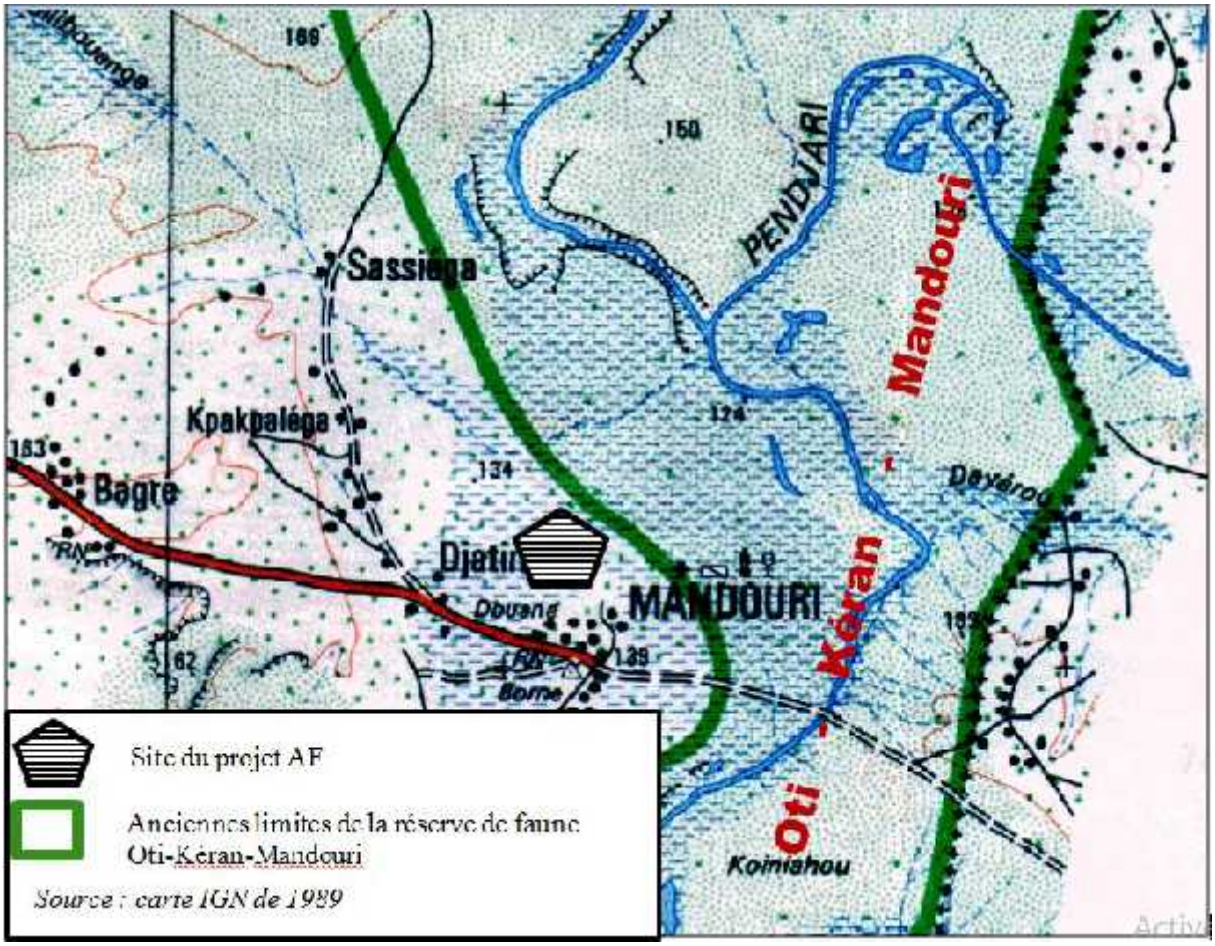
- The use of organic fertilizers and biological pesticides contribute to reducing the use of chemicals fertilizers, pesticides and chemical herbicides, reducing water pollution, soil and ecosystems. The use of organic manure and biological pesticides also contribute to improving the quality of food products (organic products).

• In terms of the conservation of biodiversity, land perimeter Mandouri encourage people to free spaces in the Wildlife Reserve Mandouri they invade recent years; the development of this scope will not result in further deforestation because the influence of the project was already exploited by producers of the ZAPP project.

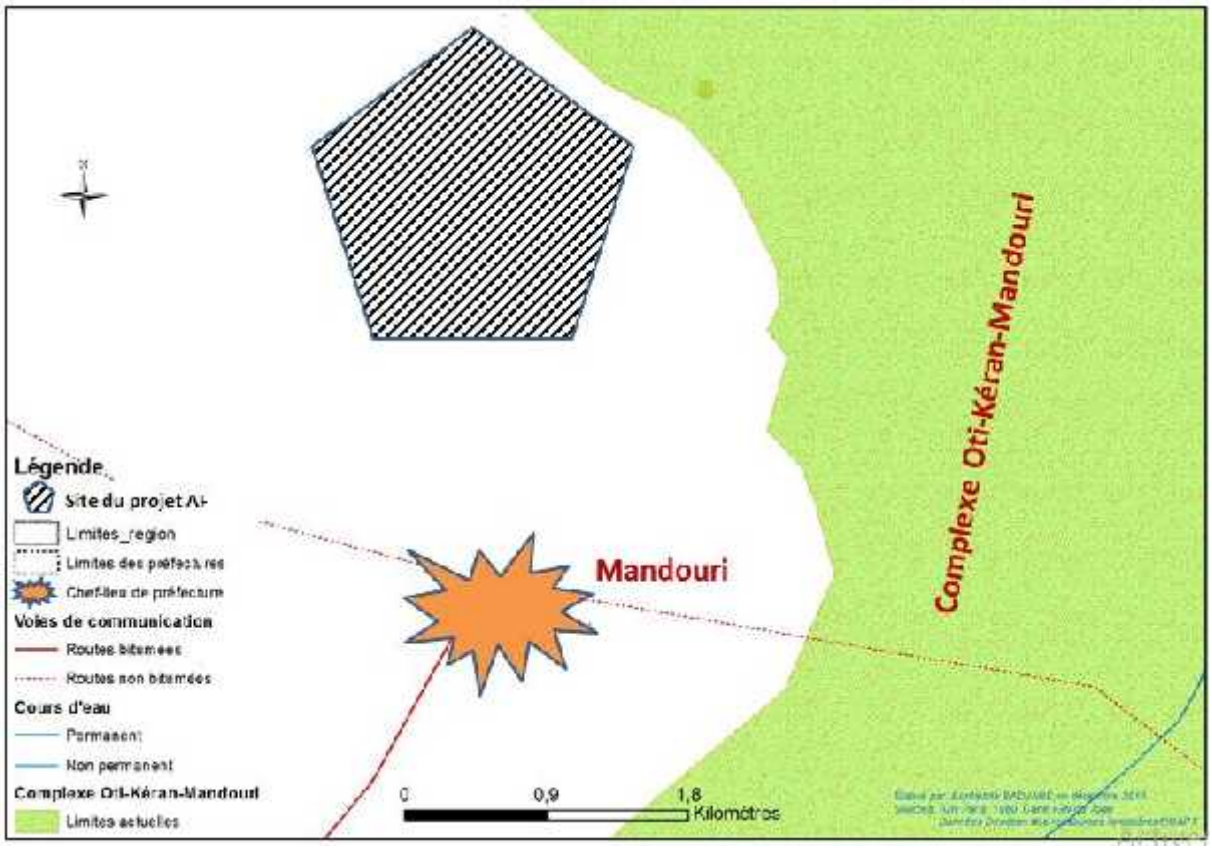
Regarding the conservation of biodiversity, the project will strengthen the efforts of the government and its technical and financial partners. Indeed, one of the major causes of the invasion of protected areas by local residents is the search for fertile land. This is a consequence of the extensive practice of slash and burn agriculture.

The project will permit to concentrate farmers on the same perimeter. This will prevent uncontrolled expansion of cultivated areas. Thus, the project falls within the framework of the development of accompanying actions of local populations of protected areas through the development of land and improved cultivation techniques resilient to climate change. This is a complementary project to the "*projet de Renforcement du rôle de conservation du système national d'aires protégées in Togo*" (PARFT) funded by GEF, UNDP, UEMOA, FAO and the Government of Togo. The project site will not encroach on the new boundaries of the Oti-Kera-Mandouri complex as indicated in the **map n°3 and 4** of the project site location out of the reserve. There is a planned additional study that will actualize the perimeter boundaries of the 144 ha that taking into considerations the wildlife reserve.

The water intake from the river is within the reserve. This intake does not affect the conservation of the wildlife area. The additional study will also ensure to minimize potential impacts on habitats and ecosystems.



Map 3: Localization of project site v/s old boundaries of the Oti-Kera-Mandouri



Map 4: Localization of project site v/s new boundaries of the Oti-Kera-Mandouri

- In terms of $CO_2$ balance and the type of technology used: the use of solar panels for the pumping station will prevent the emission of greenhouse gas that would be caused by heat pumps, besides pollution due to spillage Accidental hydrocarbons.

**C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.**

Adaptation measures are selected to mitigate the impacts of climate change in and increase the resilience of the agriculture sector of Northern Togo. The costs of such actions and the financial implications of changes in the weather conditions leading to more frequent extreme events such as floods and droughts are taken into account, and the project will enable to diminish and in some cases avoid such costs.

First, climate change affects negatively the yields in agriculture and crop patterns can be seen in the region due to unpredictable water resources. According to the documents available for Togo, mainly the third National Communication (2015) to the UNFCCC[25], the NAPA[26] and the 2015 INDC[27], changes in temperature and precipitation are expected to reduce yields and disturb crops.

| Existing climate threats | Activities designed to mitigate threats |
|---|---|
| Decreased precipitation, disruption of the rainy season and the crop calendar. Indeed, | Mobilization of water to compensate the water deficit in the crop cycle |

[25] http://unfccc.int/resource/docs/natc/tgonc3.pdf
[26] http://unfccc.int/resource/docs/napa/tgo01f.pdf
[27] http://www4.unfccc.int/submissions/INDC/Published%20Documents/Togo/1/INDC%20Togo_english%20version.pdf

| | |
|---|---|
| the start of the rainy season has moved from April to May to June or July, while the end occurs early (September) | Development of agricultural areas to help farmers increase their productivity |
| Consumption water shortage especially in the dry season | Make a mini water supply system through drilling and Mini water supply |
| In the north area of Togo, it has been observed between 1961 and 2012, a rise in average temperature of 1.2 ° C and lower rainfall of 41.8 mm. | Creation of nurseries of useful species (fruit, food, fodder etc.) to encourage reforestation based on trees species adapted to new climatic conditions |
| Risk of flooding due to the increase in the intensity of rainfall | Propose changes that can withstand flooding (semi California systems) |

The mode of irrigation adopted justified by the need to rationalize the use of water. The semi-California system significantly reduces losses by seepage and evaporation, compared to the open channel system which exhibits relatively large losses.

Moreover, it requires more maintenance (siltation, cracks, etc.). Compare to other solutions (sprinklers, drips), the latter in spite of their real benefits in saving water, require more expensive equipment and a higher level of maintenance.

The AF investment will cover 144 ha of land, introducing sustainable adaptive practices in agriculture and of natural resources management. This will include water and land management. In addition, policy improvements with the integration of climate change related considerations and training materials will indirectly benefit to the entire savannah region. The resources from the AF will be mainly for allocated to the field activities, by promoting the adoption and replication of best practices by the local communities of Mandouri and around. The interventions will strengthen the experience of the country, in terms of adaptation and environmental policy, for a scaling-up at the national level. It is planned that the activities will mainly benefit to the local communities of Mandouri. This priority given to the final beneficiaries should enable an optimal cost effectiveness of the project. The table below summarizes these social and economic benefits.

| **social benefits** | **economic benefits** |
|---|---|
| 576 farmers will be benefiting from plots managed with adaptive methods | More than 144 ha will be developed using sustainable adaptive techniques for water management and irrigation, and improved production will be introduced such as short cycle seeds |
| Rural communities will be trained and better organized around income-generating activities | The communities will benefit from demonstration centers both technically but also economically, as they will be considered various income-generating activities such as shops to sell products with high added value. |
| Participation of the civil society, through the involvement of NGOs, including women's groups already mentioned above will increase the attractivity of the region, together with consultations of stakeholders in the decision making process related to climate change, and to the reduction degradation land, and information and awareness activities | Microfinance activities will enable people to invest in agricultural production techniques related to the changing climatic context of the region. |
| Stakeholders will be formed to monitor, promote and develop the integration of | In the long term, food security will be improved following the release of adaptation |

| | |
|---|---|
| climate change in agriculture. The population will not find themselves as "abandonned" (considering that Mandouri is an extremly isolated site) | practices. This will come from increased production in the agriculture sector (eg by introducing innovations such as early maturation / crops resistant to drought) |

The water control was proposed because it best meets the concerns of the people of Mandouri who can no longer control their cropping calendar due to recurring floods and droughts that affect all production activities. The proposed method enables to secure production activities by storing and redistributing water even in times of floods or droughts.

In the preparation of the full project document stage, a study will be conducted to establish the baseline. This will better demonstrate the benefits cost effectiveness of the project as well as adaptation measures recommended.

**D.** Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

This project fully reflects the priority measures identified by the Togolese Republic in its NAPA and Strategy for Accelerated Growth and Employment Promotion (SCAPE) 2013-2017, and contributes to the development and success of the country as to the achievement of key objectives of the new program for sustainable development, following the MDGs.

The national action plan for adapting to climate change has identified agriculture as one of the priority areas that need to implement urgent adaptation measures. Among the recommended measures include:

- The adaptation of agricultural production systems in three regions including the savannah region in the implementation of cultivation techniques integrating climate change and improving the agro-meteorological information;
- Development of small irrigation in lowland areas for groups of existing gardener of Central, Kara and Savannah likely to slow down the rural exodus.

This measure will: i) improve the living conditions of vulnerable communities in Central, Kara and savannah (area of the project area) with the development of vegetable crops against-season through increased food availability during the lean season; ii) increase the income of producers, iii) develop against-season crops and iv) strengthen the capacities of producers.

According to PANA, adaptation measures developed by local people in the savannah region to cope with climate change are:
- Crops association;
- Adapting cropping calendars;
- Varieties resistant to drought;
- Introduction of improved breeds;
- Storage of agricultural by-products for animal feed;
- Colonization and exploitation of lowlands;
- Change in eating habits;
- Movement of populations in search of good land;
- Implementation of erosion control devices.

Agriculture, the main livelihood activity and one of the driving forces of Togo's economy, is a top priority for the government which, through the national agricultural development policy of Togo (PNDAT) 2013-2022 and national Program for Investment and Agriculture for Food Security (PNIASA), was involved in a number of programs, such as:

- Promotion of efficient varieties resistant to climate change;
- Strengthening the management of integrated soil fertility;
- Mapping and establishment of zones and transhumance corridors;
- Construction and / or improvement of reservoirs for micro-irrigation and watering livestock in rural areas in all regions;
- Support mapping of vulnerable areas to climate change;
- Support for the dissemination of good agro-ecological practices;
- Promotion of rice production systems with very low water consumption and low greenhouse gas emissions (ISR: rice intensification system).

In addition, the Government of Togo has demonstrated its commitment to integrating environmental considerations in its public policy of economic development. This political will is illustrated, among others, in the National Environmental Action Plan (NEAP); the National Environmental Management Program (NEMP); the National Strategy for Sustainable Development (December 2011); National Capacity Building for Environmental Management Strategy (October 2008); the National Strategy for Disaster Risk Reduction in Togo (December 2009); the National Medium-Term Priorities Framework (NMTPF) for Togo (2010-2015) and the National Action Plan for the management of coastal and marine environmental resources.

Therefore, the main environmental issues are integrated into the Accelerated Growth Strategy and promotion of employment as a development framework for filling the General Policy Statement of Togo (DPG) based on the MDGs, and finally with the ODD.

**E. Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.**

Togolese national standards will be applied to the project. Those standards are the ones concerning the obligation to ESIA, infrastructure construction standards, the water code , including those concerning the use and sharing of water in the case of joint management of the resource for irrigation, agricultural development guidelines, standards on the protection of biodiversity, the master plans of the territory and those of local authorities will be considered to ensure consistency with the proposed hydro-agricultural development.

In addition, projects entering the BOAD's portfolio are analyzed to ensure not only their compliance with national standards, but also with BOAD's environmental and social safeguards standards, which are aligned with international standards (World Bank Environmental and social safeguards policies and the IFC Performance Standards). BOAD also operates the ESIA's quality control before allowing projects to continue through the internal project cycle.

The ESIA for this project was carried out in accordance with: i) Decree No. 2006-058 / PR establishing the list of work, activities and planning documents submitted to the environmental impact study and the main rules of this study ; ii) Order No. 013 / MERF regulating the procedure, methodology and content of environmental impact studies; iii) Order No. 018 / MERF laying down the terms and procedures for informing and consulting the public to the environmental impact study process.

This present project Adaptation Fund will be carried out in accordance with the following:

- for water, environment, forestry: the water code (Act No. 2010-004 with Water Code), the Environmental Code (Act No. 2008-005 of 30 May 2008 with Framework Law on

Environment) and the forestry Code of Togo. (Act No. 2008-009 of 19 June 2008 on the Forest Code);
- for spatial planning: Law No. 2007-011 of 13 March 2007 on decentralization and local freedom, Order No. 12 of 6 February 1974 on agricultural land reform ;
- for working conditions: Act No. 2006-010 of 13 December 2006 on the Labour Code.

**F. Describe if there is duplication of project / programme with other funding sources, if any.**

There is no duplication of the project compared with other funding sources. However, opportunities for mutual exchanges or synergies exist with respect to initiatives already in the works or under implementation including project to support agricultural development in Togo PADAT cofinanced by BOAD, the Agricultural productivity Program in West Africa - Togo project (WAAPP - Togo) and project to support the agricultural sector PASA and the initiatives planned for agricultural Development Zones (ZAPP). See map1 for PADAT area.

Furthermore, the project activities will be in synergy with those of the regional project for the promotion of smart agriculture in West Africa promoted by BOAD and the ECOWAS, as regards the mastery of good agricultural practices, collection and use of weather data.

The project will support the population through the establishment of plant nurseries for the development of fruit trees. In this context, the project will build on the Women Leaders Network for Disaster and Risk Reduction for the implementation and management of this component. It should be noted that the issue of the provision of fruit plants is a request of the population.

| **Projects** | **Objective** | **Components** | **possibles Synergies** |
|---|---|---|---|
| Project to Support Agricultural Development in Togo (2011-2016) | To contribute to the improvement of food security and incomes of small farmers through the improvement of production and productivity of the targeted farms rice, maize and cassava as well as through the promotion and marketing targeted agricultural production. | • supporting production and productivity<br>• promotion of products<br>• adaptation of agricultural production to climate change | • adaptation to climate change component;<br>• Integrated soil fertility management component;<br>• development of lowlands and watersheds;<br>• establishment of storage and marketing infrastructure;<br>• diversification (market gardening, small livestock and fish farming)<br>• Environmental Protection;<br>• management of pastoral areas for transhumance operation(water points, reception area, transhumance corridor); |
| Planned areas | • Occupation of land all | • Development | • Partnership with |

| | | | |
|---|---|---|---|
| for agricultural development (ZAPP) | year<br>• Avoid pressure on the forest during the dry season<br>• Exceeding 6 tons / hectare often obtained from the site ZAAP Mandouri | • Support for the production and processing | products that enhance the forest |
| Project to support the agricultural sector (PASA) | • rehabilitate and strengthen the productive capacities of targeted beneficiaries in selected sectors and<br>• Promote an institutional environment suitable to the development of the agricultural sector in Togo. | • Promotion of strategic food crops, export crops and inland fish production<br>• Revival of the livestock sub-sector<br>• Support for capacity building and sectoral coordination | • diversification (cash crop, livestock, fish);<br>• institutional and actors capacity building ;<br>• Environmental Protection development and dissemination of technologies resistant to climate change |
| Agricultural Productivity Program in West Africa - Togo Project (PPAAO – Togo) | Generate, adapt and disseminate a range of improved sustainable production technologies of the main plant products (corn, rice, sorghum, cassava, yam, cowpea, groundnut, tomato, pineapple, cashew) and animals (poultry, small ruminants and swine);<br>• Improve the efficiency and performance of agricultural research by strengthening agricultural research institutions capacity in technical, administrative, financial and planning field;<br>• Enhance the efficiency, performance and sustainability of agricultural extension services to make them more operational. | • Promotion of conditions for subregional cooperation in the creation, dissemination and adoption of agricultural technologies<br>• Strengthening<br>• Adaptive technology transfer and research capacity<br>• Support for demand-driven technology generation, dissemination and adoption, via the priority-based funding agricultural research and advisory services in the participating countries, and complementing the activities of the core program | • dissemination of the system of rice intensification (SRI); |
| - Hydro-agricultural development projects | • increase agricultural production;<br>• contribute to improving | • Study, monitoring and control and overall project supervision | • irrigated land;<br>• Rice;<br>• Management |

| | | | |
|---|---|---|---|
| • PARTAM<br>• PBVM<br>• PDPRK<br>• PDRPD<br>• PDRI-Mô<br>• PATA - OTI | incomes and living conditions of the beneficiary populations. | • Rehabilitation works and areas development<br>• Support to Agricultural Production<br>• Environmental measures and support<br>• Awareness, organization, training and support | development;<br>• organization of producers,<br>• microcredit |

**G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.**

The project idea is based on building community capacity as to climate risks analysis and climate change impacts integration into local and national policies and cultural practices in order to improve people's means of livelihoods. .
Thus, the component 1 of the project includes a subcomponent dedicated to the establishment of "management system and sharing acquired knowledge " in the project.

This will concretely be to i) do the stocktaking of existing knowledge, ii) collect all the sheets and training modules for all capacity building activities carried out under the project for dissemination in order to replicate them throughout the region ; iii) establish a computerized system for the collection and management of meteorological information.

Map index with simplified financial management and crop techniques adapted to climatic shocks will be made available to agricultural cooperatives for duplication of good management practices and crop techniques with water control.

The project will organize study trips for the benefit of farmers, in areas with the same problems of vulnerability and the area of direct intervention of the ongoing projects in Togo including PADAT project, to understand the strategies that have been developed there in order to replicate them.

This will allow interactions and experience exchanges between Mandouri's farmers and other farmers. In addition, BOAD as REI will emphasize from all executing entities and NGO in charge of capacity building to report all activities and educational tools in order to ensure that to the community will benefit and use day by day lessons learnt and other knowledge coming from the project.

Furthermore, BOAD conducts a final evaluation of all projects in the six months following the end of the project in order to draw lessons learned on the project. The conclusions of this evaluation are disseminated at the country level and projects and lessons are systematically taken into account in the following projects.

BOAD periodically conducts retrospective evaluation of projects to measure their performance and their impact on the beneficiary communities. This assessment is validated at the end of a workshop of information sharing with beneficiaries; the findings are disseminated to all stakeholders and on the Bank's website.

The knowledge acquired in the project will be posted on the BOAD's website.

**H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable**

**groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.**

Stakeholders were consulted during the development phase of the project feasibility study. The meeting minutes show the presence of key stakeholders in discussions on the project design. The project feasibility phase allowed the stakeholders and direct beneficiaries to express their views. There is a consensus on the usefulness of the project, not only on the part of beneficiaries whose livelihoods will no longer depend on weather conditions, but also from institutional who see the consistency of the project with national development that have targeted this area, until recently recluse, as part of local development priorities.

In accordance with BOAD, instruction cycle projects, a team of experts in the areas of adaptation, environmental and social and Rural Engineering, conducted a field visit and was able to confirm that there was no a social blockage or technical constraints that could question the feasibility of the project.

The BOAD evaluation team has put an emphasis during its visit to meet the women's group, to ensure that their views had been taken into consideration during the consultation phase of the stakeholders of the feasibility study.

The main consultations were held as follows:

- for the project feasibility phase consultations were held at the regional, prefectural and villagers. They have included environmental data collection operations (impact and environmental measures) and discussions with beneficiaries. Two public consultation procedures have been used:
  - • Individual interviews with officials of the Ministries of Environment and Forestry Resources (Regional Director, Director and Head of Post Prefectural Forest);
  - the Ministry of Agriculture and its specialized departments (Regional Director, Director and Head of Prefectural CITA);
  - Projects and Programs teams;
  - NGOs and associations working in the project area;
  - Key people from diverse backgrounds.

These interviews focused on the project components. During each workshop, an attendance list was prepared.

- for the ESIA Phase: The talks focused on the organizational framework of the implementation of the identified development and environmental measures planned in the Environmental and Social Management Plan. These consultations were also held at the regional, prefectural and villagers.

- Villagers public workshops

In each village involved in the project, people were invited to an exchange workshop on the project. This workshop brought together: i) the managers of local technical services (agricultural representative, representative ICAT, DP Farmer, Chief ranger station), ii) the district chief and his secretary, iii) members of the Village Development Committee, iv) farm groups and, v) representing the women ...;

Talks with populations focused:

- The project activities;
- The positive and negative impacts of the project;
- Mitigation measures;
- Accompanying measures

During each workshop attendance list was prepared.

## I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

Regarding information provided by the 2nd (pages 56-57) and the 3rd (pages 27-39) national communications to UNFCCC, combined with Togo's INDC Report (page 6), the project area is strongly vulnerable to climate change. It's expected that the extreme northeastern of Togo where the project area is located (Mandori), will be affected by the increase of temperature (RCP 2.6: 28.8-29.3°C (2025), 35.6-36°C (2050), 35.6-36.2°C (2075), 35.6-36.2°C (2100); RCP8.5: 35.4-36.0°C (2025), 36.4-37.0°C (2050), 37.6-38.2°C (2075) and 39.0-39.6°C (2100). In the meantime, rainfall is likely upsurge, causing extreme weather and climate events such as floods, etc. that will increase vulnerability of Mandouri community and landscape more than ever. In the same perspective, it's projected that agricultural sector will be affected by the loss of incomes, land degradation, loss of biodiversity, the invasion of insects harmful to crops and livestock, loss of wetlands, etc. imperiling once again Mandouri community and landscape resilience. That's why, this project will adaptation strategies by providing the possibilities to develop and sustain rainfed agriculture by water control during the wet season, diversification (because up to now, no gardening activities were possible during the dry season due to lack of water control). The warehouse will allow Mandouri's farmers to store their crops with a threefold advantage: first fill it access to crops during lean periods; then, keep them in a safe place that respect building standards, away from heat and moisture, and finally, do not discount their crops as in the past; all these issues will contribute to food security concern in Mandouri.

The project planned to go deeper in vulnerability issues with appropriate tools at the beginning and realize a baseline study for better quantifying vulnerability assessment of project site.

**Component 1: Support to the mastery of water resources and production**

**Reference situation (without the project):**

In general, the levels of productivity and crop yields are low, for both food crops and cash crops. They vary from 1 to 2 tons / ha for cereals; from 0.5 to 1 ton / ha for pea family crops and about 10 ton / ha for tubers (yam and cassava). These yields are less than 50% of the levels achievable yields optimal culture conditions. The result is a low level of value of production per hectare, which is between 330,000 and 440,000 FCFA / ha. The best value gross returns per hectare are crops of yam about 1.8 million FCFA / ha. Production has increased substantially with the extension of cultivated areas and much less with improved yields[28]. ABIP at constant prices per agricultural worker in 2014 is 315 378 FCFA substantially equal to the GDP per capita (326 689 FCFA[29]).

The years 2007 and 2008 were particularly marked by the disastrous floods with social and economic consequences for the country: it was noted the loss of human lives, the massive destruction of roads, residential houses and fields. These phenomena, formerly located in the Maritime Regions (Gulf, Zio Lakes) and Savannah (Kpendjal) have become widespread in recent years across the country. However, the two above-mentioned areas remain the major risk areas and vulnerable.

At the prefecture Kpendjal Mandouri which is the County seat, irrigated agriculture in the project area remains to be developed. In addition, agricultural production is still characterized by low levels of agricultural mechanization and malfunctioning of some equipment and the effect of weather conditions. The planning studies and development of lowlands launched by

[28] *Ecowap+10, 2015*
[29] *Chiffres du comité de PIB*

the Support Project for Agricultural Development in Togo (PADAT) led to the identification of several sites whose construction has not yet been realized.

In September 2007, the drama endured by the populations of prefectures Kpendjal to Tône and Oti, caused the death of 20 people and caused several wounded, 24,000 displaced people, destroyed 22,129 boxes, 111 broken bridges and culverts , smashed or swept away. Also 46 educational institutions (schools and colleges) were damaged or destroyed, 3 clinics were closed. In 2007, the number of flood victims throughout the national territory was estimated at more than 231,147 (flood report in February 2008).

**Situation with the project:** The project will enable people to adapt to Climate Change by improving the access and the control of water for the production, with total water control throughout the year. In addition, the project will provide to the beneficiaries agricultural equipment and assistance for the adoption of good agricultural practices for improving rice yields, expected to reach 6 to 10 tonne/ha. For this purpose, synergies will be created including the regional project to promote smart agriculture promoted by BOAD and some ongoing projects in Togo especially ADAPT.

**Component 2: Support to the diversification of livelihoods**

**Baseline**: To date, the crop calendar in the project area is completely dependent on rainfall. Moreover, the remoteness of the area imped the correct flow of goods and the lack of infrastructure for storage, force producers to sell at a loss. Their production obtained during good rainy seasons On the top of that it should be noted that the input supply is not ensured due to the fault rate of payment and the debt ratio of the population. For these reasons the population has very limited access to micro agricultural credit.

**Situation with the project**: with better management of water resources, crops are can be diversified and can be produced throughout the year. This will ensure, one hand the producers' food security, through better means of subsistence. Through innovative funding mechanisms such as microfinance activities oriented towards new farming techniques, new seed varieties, access to micro-credit will be facilitated to ensure a sustainable supply of inputs and yields will be improved. The strengthening of capacities planned in Component 3 sensitizes beneficiaries on how to use these credits funds and the necessity to reimburse them. For this purpose, simplified financial management training will be provided.

**Component 3: Institutional support, capacity building and knowledge generation**

Reference scenario: local institutions and rural communities are not sufficiently sensitized to the problems which climate change posed in Togo in the agricultural sector. Given the lack of this type of project in the project area, the react capacities of actors are insufficient as facing the rainfall variability as production, processing and marketing of products.

Situation with the project: The project will allow :

- Managers of national administration and local decision-makers to take full extent of these impacts on agricultural output and food security;
- Producers to understand the impacts of climate change and learn coping strategies.

The project will also capitalize on the experience of adaptation projects underway in Togo and to make available to communities one of the good practices database that will be broadcast through local media, exchange sessions....

**J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme.**

The sustainability of the project results will be done through a close collaboration with communities to ensure that their needs in terms of adaptation to climate change and variability have been properly taken into account. The innovation in the project is the fact that the project is not thought for the communities but thought with communities in order to solve their problems. Communities were involved together to identify the main constraints and solutions to them on the basis of their expertise in the early stages of project identification.. At this level, consultations were held with all communities across different groups (old; adults; women; young people…) to ensure that everyone's needs are properly addressed. The diagnosis based on endogenous dynamics of communities is an important pillar of sustainability of the project results.

In addition, the project area is characterized by the existence of some development projects which can induce a low level of population susceptibility. To this end, the project beneficiaries should receive support throughout the project to improve the structure and capacity building through awareness and training sessions on management and local governance to allow greater participation in implementation and ownership of the results of the sustainability pledge project.

There are already organized and functional groups in various areas in Mandouri and its surroundings. The daily management of the infrastructures will be assigned to these groups, like other similar projects in the areas or drinking water supply projects. The mechanism is the following: the groups will be trained and supported by existing support organizations (ICAT, NGOs, etc. ITRA) in technical and financial management (use and servicing), books and rural organization (setting up of management and advice committees). A revolving fund will be set up and supply by regular contributions of group members (beneficiaries) under conditions defined by them. These funds will be used for expenses related to the management and maintenance of infrastructures. For major repairs, state technical organizations will be solicited.

The mechanism explained in page 26, is envisaged to ensure the sustainability of the facility. It has two advantages namely:

- For micro credit institutions: as the project resources are donations, they will improve their ability to respond;
- For beneficiaries: the mechanism will allow access to credit at a reduced rate.

Finally, to support the implementation, monitoring and sustainability of the mechanism, the parties directly involved will benefit from capacity building.

**K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme.**

The project is classified in category A by the standards of environmental safeguards BOAD and is the subject of special attention on the social, environmental and climate.

**• Positive impacts of installation on the environment**

The perimeter, once having facilities will produce the following impacts :

- intensification of counter season crop and market gardening ;
- strengthening producers' capacities and their overarching structures ;
- jobs creation during the construction phase;
- increasing incomes of the population through the exploitation of the perimeter;
- Improvement of the local budget revenues by levying taxes (pickups aggregates, water abstraction, clearing taxes, operating taxes perimeter, etc.);

- strengthening health coverage through the construction of health infrastructure;
- improving access to drinking water ;
- intensification of agriculture through application of technological packages;
- Intensification of livestock by the use of crop residues (rice stalks, etc.).

- **Negative impacts of installation on the environment and their responses**

| Domain | Issues | Responses |
|---|---|---|
| Social | Cohabitation between Fulani stockbreeders and farmers ; | • Committee of dialogue farmers/Fulani stockbreeders |
| | Increasing the phenomenon of immigration by the economic attraction of the zone | • Control of immigration by the village committee |
| | The exacerbation of the conflicts between established groups | • Management by the village Committee and establishment of codes of conduct |
| | Monopolization of the plots by the financial elites to the detriment of local populations | • Establishment of Committee of plots attribution |
| | not assignees of plots | • Strict control of the zone of irrigation |
| | exacerbation of the land pressure | • Support with the organization and the territorial installation of the zone to avoid land speculation |
| | Propagation of the MST/SIDA by the arrival of the workers out of zone | • Reinforcement of the medical cover and information of the populations |
| | Development of diseases related to the stagnation of water | • Reinforcement of the medical cover (infrastructures, equipment and staff)Semi-Californian system of irrigation to limit the development of the parasites along open channels |
| Environmental | Destruction of the biotopes by places in particular those of the birds | A baseline study on fauna and flora will be carried out in order to collect information on fauna and flora in the project area, identify potential impact of the project activities on fauna and flora, and determine mitigation measures. |
| | Destructuring of the soil and groundwater contamination by the pesticide residues and chemical fertilisers | • Framing of the populations for the use of the pesticides<br>• Support to develop the organic manure<br>• Follow-up of the quality of water downstream from the site |
| | Reduction in the flow of Oti | • Preliminary analyses of the capacities of sampling<br>• Conservation of the ecological flow |
| Climatic | | • Dimensioning of the works |

• Risks and dangers

Risks and hazards associated with project activities in all phases include:
- industrial accidents;
- accidents related to the use of vehicles and trucks;
- contamination of water and soil by waste from the construction site during the construction phase and;
- transmission of STIs, HIV-AIDS and other communicable diseases, due to the arrival of workers.

## PART III: IMPLEMENTATION ARRANGEMENTS

### A. Describe the arrangements for project / programme implementation.

The project Contracting Authority will be the Ministry of Environment and Forest Resources (MERF). The delegated project management will be entrusted to AGETUR and Environment Directorate will ensure the work of masters.

**Project organization**

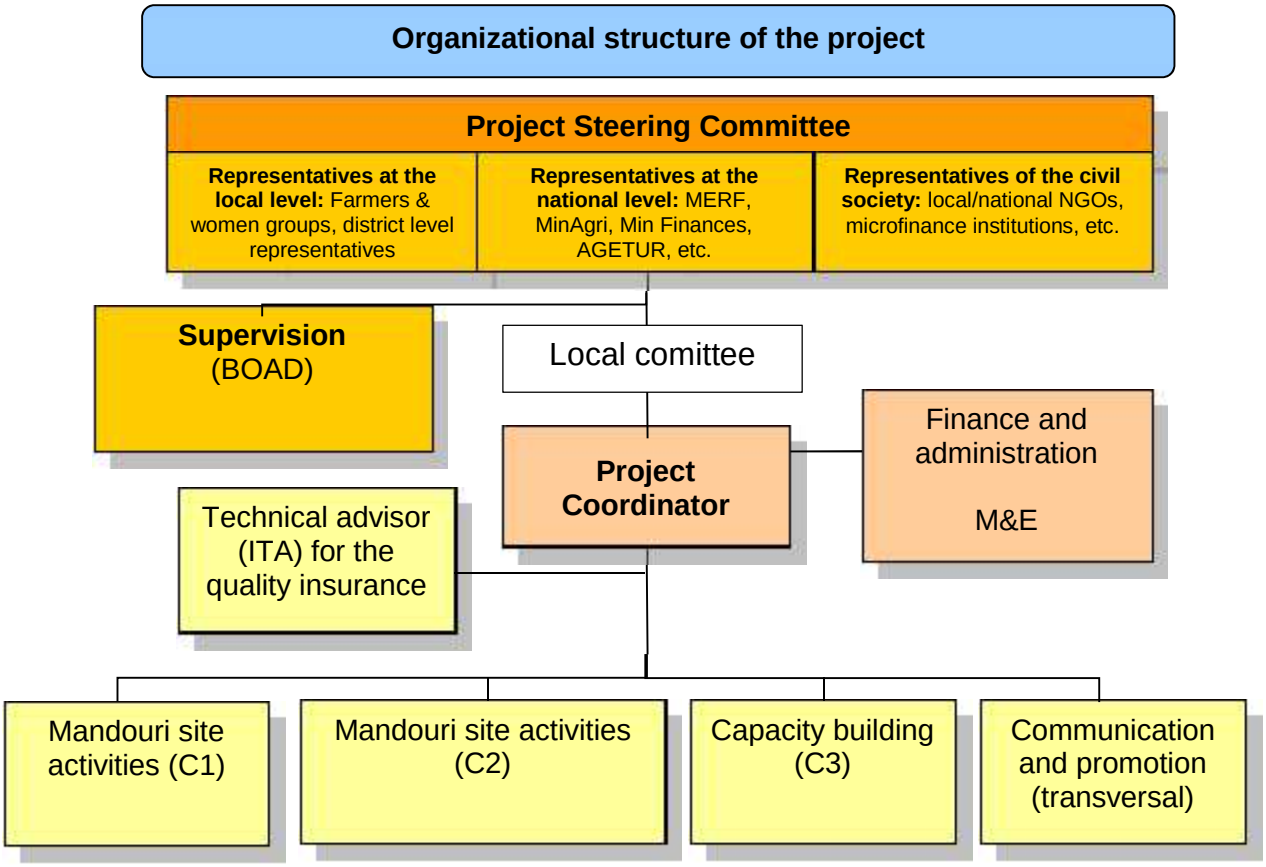
For the effective monitoring of project implementation, a Project Management Unit (PMU) will be established within the Department of the Environment of the Togolese Ministry of Environment and Forestry Resources, before the start of activities and shall consist of: i) a Project Manager, responsible for the overall coordination of the project; ii) an Monitoring and Evaluation (M&E) expert; iii) an Administration and Finance Expert; iv) an Assistant; and v) two drivers.

The tasks of the PMU will include the coordination of the implementation of the project activities, managing the contractual arrangements and the agreements, the administrative, financial, and accounting aspects, and monitoring and evaluation activities (to deliver the different progress reports).

The PMU will be assisted by an International Technical Assistance (a consulting and advisory company) to support the PMU in the implementation of the project. This office will produce monthly reports of progress, which will allow the PMU to develop quarterly reports to be submitted to the Ministry and to BOAD. BOAD will ensure the communication of the various reports to the Adaptation Fund. The PMU will also be assisted by AGETUR for the whole process of procurement (for specific assignments to consulting firms and/or NGOs).

To supervise the PMU, a Steering Committee (SC) composed of the competent bodies involved in climate change will be established. This committee will be responsible for: (i) review and approve the annual working programs proposed by the PMU; (ii) review and approve the annual activity reports and the financial statements produced by the PMU; (iii) consider the recommendations of the supervision missions and external evaluation and (iv) provide strategic orientations to the PMU for the implementation of the project activities. The SC will meet every semester in ordinary sessions and if necessary, extraordinary sessions will be convened by the President of the SC.

***Organization of the management of the project***




It will also set up a Local Advisory Committee (LAC) consisting of representatives of the Ministry of Interior, the District, neighborhoods, decentralized technical services, farmers' organizations, NGOs and final beneficiaries. It be chaired by the "*Préfet*" of Kpendjal and will meet at least once a quarter in regular session and, if necessary, convened by its President for extraordinary sessions. Its role will be to: i) ensure compliance with project commitments; ii) facilitate the implementation of the measures of the ESMP and those relating to compensation for populations in the provision of land, distribution of plots and settlement of conflicts; iii) monitoring the implementation of recommendations of the external supervision and evaluation missions of the project; and iv) to assist the PMU in its missions in relation to the national level, the beneficiaries and the decentralized services.

The M&E system of the project will be provided by the expert in charge of this activity in the PMU and will be responsible for: i) the establishment and regular updating of the basic socio-economic data on the area project ; ii) developing and monitoring the overall dash of project activities; iii) the implementation of the ESMP and monitoring of its indicators; iv) consolidation of the various reports and monitoring and evaluation on the basis of project activity reports and in accordance with the framework required by the Adaptation Fund.

Monitoring the implementation of the environmental and social measures will be done in coordination with the PMU, the technical assistance, the Department of the Environment, the National Environmental Management Agency (ANGE) and administrative and technical authorities of the Mandouri district.

General supervision of the project will be provided by the technical supervision of the project is the Ministry of Environment and Forest Resources.

BOAD, through supervision missions and biannual progress reports produced by the PMU will monitor the implementation of the project.

At the end of the project, an external and independent evaluation will be commissioned by the Adaptation Fund.

**Project Implementation**

The organization of the project involves the following:

- PMU, designed as a small unit, will play a fundamental role in financial management, programming and monitoring;

- The implementation of the field activities will be outsourced to the private sector when necessary, to specialized operators (consulting engineering firms, NGOs, companies) selected by competitive bidding processes, and / or through agreements / collaboration protocols with specialized technical services of ministries and relevant departments of the Ministry of Environment and Forest Resources as well as organizations of producers, whenever they have comparative advantages in terms of efficiency;

- Operations and infrastructure management responsibility of the beneficiaries through their organizations and the PMU initially, through water charges paid.

**B. Describe the measures for financial and project / programme risk management.**

Financial and project risks measures will be assessed as an on-going process throughout the implementation of the project. A comprehensive and detailed framework for risk management will be described in the full draft document. That framework will consider the fiduciary procedures of BOAD and Adaptation Fund

The potential risks of the project are:

| Risques | Dégrée de perception | Mesures |
|---|---|---|
| Non acceptation ou non adhésion des populations au projet No acceptance or non-support of the projet by the population | Low | The project was designed on the basis of a consultation of the concerned population and the identification of their different needs. All the project activities and the work plan of the PMU will be defined by a committee of local authorities, NGOs and population. |
| Lack of awareness of communities and stakeholders on climate change and its potential impacts | low | The project will conduct awareness activities on climate change issues and strengthen the capacity of stakeholders on adaptation and mitigation and their impacts.<br><br>This activity will involve all |

| | | |
|---|---|---|
| | | the beneficiary communities. |
| Insufficient training in water management and modern farming techniques as well as in financial management | middle | The projects will implemented measures to strengthen capacities of actors in the areas identified for improving the knowledge and good practices. |
| Difficult access to credit and inputs supply | Low | The project will introduce a guarantee fund for loans to farmers to facilitate their access to finance.<br><br>Moreover, capacity management capabilities and financial planning will improve monitoring and repayment of loans. The facility will also ensure a sustainable supply of inputs to farmers. |
| Climate risk | middle | The main climate risk that could have an impact on these investments is flooding. To avoid this risk, the warehouse will be built out of a flood zone and will respect the climate norms in terms of orientation, airflow, moisture. The same observations are valid for the parking station of agricultural equipment. In addition, site dedicated to rice farming is not located in the river bed and the main irrigation facilities will be buried; everything will be thought, done, and built taking into consideration the risk of flooding. |

**C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.**

The measures to mitigate negative impacts and enhance positive impacts are:

i) water the areas of work and movement track;

ii) set nets or tarpaulins on trucks transporting materials;

iii) Collect, process and recycle all oil residues, waste oil and waste generated during maintenance activities or repair of machinery;

iv) Strip the pits and quarries in order avoid bare slopes that can lead to reduced water concentration and a strong increase in runoff coefficient;

v) Ensure that the movement of land at the work site does not cause a large change in the runoff;

vi) Systematically collect and process the construction waste;

vii) Manage water resources in a rational way during the work by educating construction workers;

viii) Create clean water supply areas;
ix) Inform, train and raise awareness on the protection of flora and fauna;

x) Pay clearing fees according to law No. 2008-009 of 19 June 2008 on the Forest Code;

xi) Strictly prohibit burning plant residues from deforestation and clearing activities;

xii) Make IEC campaigns to inform people;

xiii) Help some farmers and shepherds who currently use the site to find other land to farm and graze before starting to manage the site;

xiv) Priority recruits local labor wherever possible;

xv) Provide the workers of the equipment necessary for their protection (nose caps, gill covers, helmets, transparent vests, gloves etc.);

xvi) Strengthen epidemiological surveillance and the health status on construction sites and local populations;

xvii) Train, inform and raise awareness on STI / AIDS and condom promotion;

xviii) Strictly observe safety measures and traffic rules to minimize accidents, traffic and those related to rock excavation;

xix) declare employees to the National Social Security Fund;

xx) use agricultural inputs (fertilizers, insecticides, herbicides, pesticides, etc.) rationally;

xxi) establish Soil Defence and Restoration (SDR) / Soil and Water Conservation and fixation of banks;

xxii) conduct reforestation activities (windbreaks, hedgerows, thickets, alignment plantations and shading, etc.);

xxiii) intensify training, information and awareness of farmers and producers to optimize the crop calendar, irrigation organization;

xxiv) do regular maintenance of irrigation and drainage canals.
Analysis of project activities against the principles of the Adaptation Fund

Analysis of project activities against the principles of the Adaptation Fund

| Checklist of environmental and social principles as per Adaptation Funds Policy | Potential impacts and mitigation measures | No further assessment required for compliance | Further assessment and management required for compliance |
|---|---|---|---|
| **Principe 1 : compliance with the law** | The project will comply with Togolese national law and possibly international when national standards are lacking, as described in Section E of Part I. | X | |
| **Principe 2 : Access and Equity** | The project will not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions to any group of the population.<br>The pressure on the distribution of land could be at the origin of conflicts.<br>The Local Advisory Committee (LAC) as presented in Section A of Part III will notably ensure a fair and equitable access to the project benefits. Priority in loans and distribution of plots will be given to local villagers. This committee will also be in charge of settling conflicts | x | |
| **Principe 3 : Marginalized and vulnerable groups** | The project will not impose any disproportionate adverse impacts on marginalized and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS.<br>The poor, women, young, old will have the opportunity to improve their income and living conditions. | X | |
| **Principe 4 : Human rights** | The project does not have potential risks with regard to human rights<br>The project area is not located on transhumance corridors defined by the Togolese authorities (as shown on map 2 at page 31), but the site of project is not located on transhumance corridors.<br>Particular attention will be given during the implementation of the project on the management of conflicts (e.g. conflicts between farmers and herders).<br>In case of conflicts between farmers and herders, the Local Advisory Committee will help to settle issues | x | |
| **Principe 5 : Gender Equity and Women's Empowerment** | Women and men will be able to participate fully and equitably in the project and both will receive comparable social and economic benefits.<br>Women's access to financial services will be strengthened notably through a preferential support that the project will provide to the existing women microfinance<br>In addition, the project plans to assign a quota of plots to women and / or women's associations. | | x<br>A gender inequalities study will be included in the project preparation phase in order to identify potential inequalities |
| **Principe 6 : Core Labour Rights** | The project will be managed with respect to the Togolese labor law which forbids forced labor, children's labor and discrimination, and which allows freedom of association. | X | |
| **Principe 7 : Indigenous people** | There is no indigenous peoples present in the project implementation area | N/A | |

| | | | |
|---|---|---|---|
| **Principe 8 : Involuntary Resettlement** | The project will not generate involuntary resettlement as there will not be physical displacement (relocation or loss of shelter) or permanent economic displacement (loss of assets or access to assets that leads to loss of income sources or other means of livelihood)<br>The beneficiaries of this project live together in the village. Some plots used currently for agricultural production areas will be temporarily disturbed during the construction works, and affected populations will be assigned temporary plots until the end of works. | X | |
| **Principe 9 : protection Natural Habitats** | The potential of the project to impact upon natural habitats is low, as the project area is located in a highly disturbed area where, for many years, local populations are settled and have been practicing agricultural production, although the position of the site within the boundaries of a wildlife reserve. The Togolese government is in the process of declassifying a part of this reserve and redefines the boundaries of the wildlife Reserve. | | X<br>A baseline study on fauna and flora will be carried out in order to collect information on fauna and flora in the project area, identify potential impact |
| **Principe 10 : Conservation Biological Diversity** | The project will not generate significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species.<br>The project area has been exploited for many years and biological diversity is already low. The project will not significantly disrupt the current biodiversity. Reforestation activities in the project area will improve biodiversity.<br>No invasive species will be introduced into the area, and the type of crops to be used in the project is those currently used. | | x<br>There is a planned additional study that will actualize the perimeter boundaries of the 144 ha that taking into considerations the wildlife reserve. |
| **Principe 11 : Climate Change** | The project activities will not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change.<br>The project will minimize the production of greenhouse gas by adopting solar energy instead of thermal power for pumping water from the Oti river and conduct it to the farm sites.<br>Rice is the currently cultivated crop on the planned site for the project, using the natural seasonal flooding. The project will extend the currently exploited surfaces, but at the same time a better rationalization of the flooding of crops offset the expansion of rice fields and extra methane emissions from rice cultivation.<br>Furthermore, plantations of shrubs and planned reforestation will capture $CO_2$ and capture surplus of greenhouse gases. | X | |
| **Principe 12 : Pollution Prevention and Resources Efficiency** | The project will maximize its energy efficiency by using solar energy instead of thermal power for pumping water.<br>The semi-Californian irrigation system allows real water savings by avoiding infiltration and evaporation during transportation and streamlining distribution. This system will minimize the use of water.<br>All rice fields infrastructures are made from locally building materials. Inorganic amendments can be precisely distributed in the irrigation system, thus limiting to the quantities strictly necessary.<br>Building local capacity to use organic manure will limit the use of chemical inputs and enable effective recycling of agricultural and livestock by-products in a circular | | x |

| | | | |
|---|---|---|---|
| | ecology system. | | |
| **Principe 13 : Public Health** | The environmental and social impact assessment of the project has identified some potential health impacts of the project, mainly during the construction phase (e.g. impact of dust, noise, STD/AIDS propagation with the arrival of foreign workers to the zone). These impacts are subject to mitigation measures presented in the environmental and social management plan.<br>The project also plans to build up the capacity of health services at the village level and improve access to potable water that will reduce water-borne diseases and improve hygiene.<br>The choice of semi Californian type of irrigation system will limit the development of waterborne parasites. | x | |
| **Principe 14 : Physical and Cultural Heritage** | The project and its components are not in an area known to have physical cultural resources, cultural sites, and sites with unique natural values. | x | |
| **Principe 15 : Lands and Soil Conservation** | Measures to prevent mitigate or control soil erosion and degradation will be implemented during the implementation of the project. For example, the project will include anti-erosion measures such as protection of banks of rice fields with shrubs that will prevent soil degradation.<br>It will also contribute to the restoration of soil fertility by promoting the use of organic manure instead of chemical fertilizers.<br>The existing soils are in most cases already used for agricultural purposes, there will be no significant change on land use. | x | |

## D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

The project will be monitored through the following M&E activities.

**Project start:**

A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, BOAD and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

a. Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of BOAD staff vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
b. Based on the project results framework and the relevant AF M&E tools if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
c. Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
d. Discuss financial reporting procedures and obligations, and arrangements for annual audit.
e. Plan and schedule Project Board meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

**Periodic Monitoring through site visits:**

BOAD will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by BOAD and will be circulated no less than one month after the visit to the project team and Project Board members.

**Mid-term of project cycle:**

The project will undergo an independent Mid-Term Review at the mid-point of project implementation. The Mid-Term Review will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The

organization, terms of reference and timing of the Mid-Term Review will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-Term Review will be prepared by BOAD based on guidance from the AF. The management response and the evaluation will be uploaded to BOAD corporate systems. The relevant AF M&E tools will also be completed during the Mid-Term Review cycle.

**End of Project:**

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with BOAD and AF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the Mid-Term Review, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by BOAD based on guidance from the AF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be prepared.

The relevant AF M&E tools will also be completed during the final evaluation.
During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

**Learning and knowledge sharing:**

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

**Audit Clause:**

The project audit will be conducted in accordance with applicable BOAD audit policies.

**E. Include a results framework for the project proposal, including milestones, targets and indicators.**

This part will be developed in the full proposal document.

**F. Demonstrate how the project / programme aligns with the Results Framework of the Adaptation Fund**

The project will be in harmony with the Strategic Results Framework of AF, whose general purpose is to "assist developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change in meeting the costs of projects and concrete adaptation programs to implement resilient to climate change. "
This part will be developed in the full proposal document.

| Project Objective(s)[30] | Project Objective Indicator(s) | Fund Outcome | Fund Outcome Indicator | Grant Amount (USD) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| **Project Outcome(s)** | **Project Outcome Indicator(s)** | **Fund Output** | **Fund Output Indicator** | **Grant Amount (USD)** |
| | | | | |
| | | | | |
| | | | | |

**G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs.**

This part will be developed in the full proposal document.

**H. Include a disbursement schedule with time-bound milestones.**

This part will be developed in the full proposal document.

[30] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

## PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

**A. Record of endorsement on behalf of the government**[31] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

| | |
|---|---|
| *Thiyu ESSOBIYOU*<br>*Directeur de l'Environnement du Togo* | Date*: January, 7th , 2016* |

**B. Implementing Entity certification** *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

| | |
|---|---|
| I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (PANA, Stratégie de Croissance Accélérée et de promotion de l'Emploi (SCAPE), Politique Nationale de Développement Agricole du Togo (PNDAT), programme national pour l'Investissement et l'Agriculture pour la Sécurité Alimentaire (PNIASA) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme. | |
| ***Almamy MBENGUE***<br><br>*Directeur de l'Environnement et de la Finance Climat*<br>Implementing Entity Coordinator | |
| Date: *February, 10th ,2016* | Tel. :+228 22 23 25 24<br>email:ambengue@boad.org |
| Project Contact Person: Mrs Fatoumata T. SANGARE | |
| Tel. :+228 22 23 27 96<br>And Email: ftoure@boad.org | |

6. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

ANNEX

# Liste de présence à Mandouri

date: 11/07/2015

| N° | Nom et Prénom(s) | | Localité/ Fonction | Contact et signature |
|---|---|---|---|---|
| 45 | Djakpéré | Tignoati CCM. | | 90.31 24 36 |
| 01 | Kombaté | Badi | Manœuvre | 90-00 14 04 |
| 02 | Koulambiki | Lamboni | Cult. | - |
| 03 | Natchembaté | Dapougnadi | " | 99-92 99 05 |
| 04 | Bomboma | Soydou | " | 97-44-86-29 |
| 05 | Kpala | Tadja | " | 99-31-68-42 |
| 06 | Lamboni | Kanbéléi | " | - |
| 07 | Kombaté | Scidou | " | 90-70-21-87 |
| 08 | Natchembaté | Diayabte | " | - |
| 09 | Douti | Binamé | " | - |
| 10 | Djamone | Tignoati | " | - |
| 11 | Alassani | Atiwa | Ménagère | 97.44-76-65 |
| 12 | Omorou | Dia | Ménagère | - |
| 13 | Sanwogou | Couni | " | 91-36-71-98 |
| 14 | Issarma | Tindampoa | " | - |
| 15 | Lamboni | Yaa | " | - |
| 16 | Lamboni | Kakoa | " | - |
| 17 | Sanwogou | Tampandi | Cult - | - |
| 18 | Djakpéré | Kossia | Ménagère | - |
| 19 | Nancharé | Nimpongnibe | " | - |
| 20 | Boureima | Awa | " | - |
| 21 | Amadou | Ano | " | - |
| 22 | Tambiaga | Kpampoa | " | - |
| 23 | Douti | Lamatchi | " | - |
| 24 | Douti | Boagni | " | - |
| 25 | Tintolgou | Issarma | Cult - | - |
| 26 | Bigou | Djolimpoa | Ménagère | - |
| 27 | Dramane | Fatouma | " | - |
| 28 | Yembiima | Fatouma | " | - |
| 29 | Soulé | Aichatou | " | - |
| 30 | Omorou | Fati | " | - |
| 31 | Kompa | Tadampo | " | - |
| 32 | Adama | Poguanga | " | - |
| 33 | Yamba | Salamatou | " | 91-55-21-82 |
| 34 | Kelé | Memouna | " | - |
| 35 | Tchindo | Amina | " | - |
| 36 | Koffi | Adissétou | " | - |
| 37 | Kombaté | Sangandja | Cult - | 98-21-18 02 |
| 38 | Lamboni | Yemboandi | Ménagère | - |
| 39 | Djakpéré | Kanga | " | 97-39-75 65 |
| 40 | Gnagou | Eli | Cult. | 99-80-51-79 |
| 41 | Sanwogou | Emile | " | 97-72-09-56 |
| 42 | Sambiandi | Komi | " | - |
| 43 | Tambiaga | Bogna | " | 99-50-73-52 |
| 44 | Ganga | Dabga | Président de la coopérative des producteurs de riz de Mandouri | 97 23-97-57 |

**MINISTERE DE LA PLANIFICATION DU DEVELOPPEMENT**

**REPUBLIQUE TOGOLAISE**

**Travail-Liberté-Patrie**

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**SECRETARIAT GENERAL**

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**DIRECTION GENERALE DE LA MOBILISATION DE L'AIDE ET DU PARTENARIAT**

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**DIRECTION DE LA COOPERATION MULTILATERALE**

Réunion : Restitution de la mission BAD d'évaluation du Projet de relèvement du niveau de résilience des acteurs vulnérables du secteur agricole.

DATE : 15 juillet 2015

## LISTE DE PRESENCE

| N° | NOM ET PRENOM | TITRE ET STRUCTURE | CONTACT (TEL +MAIL) | EMARGEMENT |
|---|---|---|---|---|
| 1 | DJOBO Gamba | chargé Dossiers BAD : MPD | 91337755 djobogamba@yahoo.fr | |
| 2 | LEBIGAZA Meinolou | ST AGETUR-TOGO | 90100890 meindou@Yahoo.fr | |
| 3 | AZIAKA Messan | DFC/AGETUR-TOGO | 90055480 maziaka-gil62@gmail.com | |
| 4 | TAMAKLOE Melissa | DGMAP, chargé OCDE | 90348077 leofils1@gmail.com | |
| 5 | KOUGBLENOU Koffi | DFCEP ; chargé d'étude | 91-94-56-90 ; 22-19-28-46 ballaektime@gmail.com | |
| 6 | M'GBOUNA L. Bagnibafela | DAF/DGTCP/MEFPD | 90936834 christbagni@gmail.com | |

| | | | | |
|---|---|---|---|---|
| 7 | KOULOUMA Patchalé | ~~DGB/DAP~~/DGTCP/MEFPD | 22381042 Koulounac@yahoo.fr | |
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| | | | | |
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MINISTERE DE LA PLANIFICATION DU DEVELOPPEMENT

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SECRETARIAT GENERAL

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DIRECTION REGIONALE DE LA PLANIFICATION,
DU DEVELOPPEMENT ET DE L'AMENAGEMENT
DU TERRITOIRE DES SAVANES
DAPAONG
BP : 04 Tél : Fax : 27-70-83-09
N°_____/2015/MPD/SG/DRPDAT – RS

REPUBLIQUE TOGOLAISE
Travail – Liberté – Patrie

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*Dapaong, le 10 /07/2015*

# REUNION D'ECHANGE ENTRE LA MISSION D'EVALUATION DU PROJET DE RELEVEMENT DU NIVEAU DE RESILIENCE DES ACTEURS VULNERABLES DU SECTEUR AGRICOLE DE KPENDJAL ET LES ACTEURS REGIONAUX DE DEVELOPPEMENT

DATE : **le 10 Juillet 2015**
LIEU : **DRPDAT / Savanes**

## LISTE DE PRESENCE

| N° | Nom et Prénoms | Structure | Fonction | Contact | Mail | Signature |
|---|---|---|---|---|---|---|
| 1. | ALLECHI Solange | BOAD | Env. | +228 22232646 | sygyi@boad.org | |
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MINISTERE DE L'ENVIRONNEMENT
ET DES RESSOURCES FORESTIERES
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SECRETARIAT GENERAL
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DIRECTION DE L'ENVIRONNEMENT
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REPUBLIQUE TOGOLAISE
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**LISTE DE PRESENCE A LA REUNION DE SYNTHESE DE LA MISSION DE TERRAIN/BOAD/ADAPTATION**

**********

DATE : 13 juillet 2015
LIEU : Salle de réunion de la direction de l'environnement

| N° | Nom et Prénom(s) | Institution | Fonction | Contact et adresse E-mail |
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| 9 | | | | |
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MINISTERE DE LA PLANIFICATION DU DEVELOPPEMENT

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DIRECTION GENERALE DE LA MOBILISATION, DE L'AIDE ET DU PARTENARIAT

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DIRECTION DE LA COOPERATION MULTILETERALE

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REPUBLIQUE TOGOLAISE

Travail – Liberté- Patrie

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Lomé, le 7/07/2015

***LISTE DE PRESENCE***

Prise de contact ; Mission BOAD d'evaluation du projet de relèvement du niveau de résilience

| N° | Nom Prénoms | Fonction/Structure | Emargement | Téléphone | E-mail |
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REPUBLIQUE TOGOLAISE
Travail – Liberté- Patrie
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Lomé, le

***LISTE DE PRESENCE***

| N° | Nom Prénoms | Fonction/Structure | Emargement | Téléphone | E-mail |
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MINISTERE DE LA PLANIFICATION DU DEVELOPPEMENT
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---
DIRECTION DE LA COOPERATION MULTILETERALE
---

REPUBLIQUE TOGOLAISE
Travail – Liberté- Patrie
---

Lomé, le

***LISTE DE PRESENCE***

| N° | Nom Prénoms | Fonction/Structure | Emargement | Téléphone | E-mail |
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| | AZIAKA Messan | DFC/AGETUR-TOGO | | 22261446 | maziaka.gil62@gmail.com |

# ILUSTRATION DE LA MISSION DE LA BOAD A MANDOURI

Figure 1: CONCERTATION AVEC LES CHEFS COMMUNAUTAIRES

Figure 2: GROUPEMENT DES FEMMES DE LA COMMUNAUTE RURALE DE MANDOURI

**Figure 3: SITE DU PROJET**