



CONCEPT NOTE FOR A REGIONAL PROJECT

PART I: PROJECT INFORMATION

Title of Project	INTEGRATION OF CLIMATE CHANGE ADAPTATION AND MITIGATION MEASURES IN THE CONCERTED MANAGEMENT OF THE WAP TRANSBOUNDARY COMPLEXE: ADAPT-WAP PROJECT
Countries:	Benin, Burkina Faso, Niger
Thematic Focal Area ¹ :	Disaster risk reduction and early warning systems
Type of Implementing Entity	Regional Implementation Entity (RIE)
Implementing Entity:	Sahara and Sahel Observatory (OSS)
Executing Entities:	Regional level: Project Management Team (PMT) hosted by OSS National level: National Project Management Units (NPMUs) : <ul style="list-style-type: none"> • Benin : Centre National de Gestion des Réserves de Faune (CENAGREF), • Burkina Faso : Direction Générale des Eaux et Forêts (DGEF), • Niger : Direction Générale des Eaux et Forêts (DGEF) and Centre National de Suivi Environnemental et Ecologique (CNSEE)
Amount of Financing requested:	8.55 MK\$ (in U.S. Dollars equivalent)

1.1. Project Background and Context:

The W-Arly-Pendjari (WAP) Complex is one of Africa's most important compositions of terrestrial transboundary ecosystems. It is considered as the largest and most important continuum of unharmed ecosystems in the West African savannah belt. Shared by Benin, Burkina and Niger, this network of protected areas consists of a number of areas with different status and protection regimes. In addition to the W Transboundary Biosphere Reserve (WTBR), shared by the three countries, the WAP complex covers the Arly National Park in Burkina Faso and the Pendjari National Park in Benin. Including the riparian zones, the WAP Complex extends over a total area of around 50,000 km² (43% in Benin, 36% in Burkina Faso and 21% in Niger). It displays considerable biological diversity that contributes to the economic and social development of the sub-region. In peripheral areas of the complex and at a distance of about 40 km from its protected

¹Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance; Management of Natural Resources.

areas, there are more than 500 towns and villages totalling 1 million inhabitants (about 700 000 in Benin, 200 000 in Burkina Faso and 100 000 in Niger).

The natural resources of the WAP Complex represent a major asset for the local populations whose livelihoods are mainly based on agriculture, livestock breeding, fishery, forest resources (wood and non-wood products), and tourism.

However, the WAP Complex is subject to multiple pressures and threats, mainly conflicts of use, poaching, overgrazing, agricultural lands expansion, transhumance, bushfires, surface water pollution, climate change and variability, unsustainable fishery and use of wood and non-wood products. Added to this, the WAP Complex is located in an agro-pastoral region characterized by high inter-annual variability exacerbated by climate change which makes it more vulnerable.

As a response to this situation, the proposed project aims to implement concrete actions in order to increase the resilience of population and ecosystems and mitigate the impacts of climate change in the WAP Complex.

More precisely, the project will focus on the following issues:

- Droughts leading to uncontrolled movement of pastoralists,
- Floods threatening the safety of populations and plains by the loss of crops,
- Uncontrolled bushfires leading to the shrinking of forest areas and caused by both human and natural factors,
- Expansion of agricultural lands increasing pressure on natural resources and inducing loss of ecosystem services as carbon sequestration.

With all these human pressures on the WAP Complex's natural resources combined to the adverse effects of climate change, the vulnerability of populations and ecosystems is more likely to increase. *De facto*, the introduction of urgent adaptation and mitigation measures has become mandatory to increase the resilience of populations and ecosystems.

1.1.1. Protected Areas and Ecosystems and Transboundary Approach:

The "WAP" Complex is divided into two core areas: the first one is the W Regional Park, called also the W Transboundary Biosphere Reserve (WTBR), shared by the three countries (Benin, Burkina Faso and Niger) and the second one is composed by the Arly National Park, in Burkina Faso, and the Pendjari National Park, in Benin. *Cf* Map1.

The WAP Complex is a top-ranking ecological composition in West Africa and provides a space for well-preserved and conserved Sudanian ecosystems². About 4 000 000 ha of the Complex area is protected, half of it has a National Park Status (W and Pendjari).

The management approaches of the WAP Complex have fundamentally changed after the independence of the concerned countries in the 1960s and a centralized management has given place to a national and more sectorial management.

In 1987, and aware of the existing gaps in regional cooperation for transboundary ecosystems management, the three countries, with the support of several international partners, joined their efforts for the elaboration and implementation of a common regional strategy for the WAP Complex conservation.

In May 2000, the «Tapoa Declaration» was a decisive step, reflecting the countries' political will and commitment to consider the W Parks as a unique entity that should be managed through a regional vision. Thanks to the Lomé III Agreements between the 71 ACP countries and European

² Source : PAG 2017-2026 WAPO/UNDP, 2016)

Economic Community (EEC), the concerned three States were provided support from the European Union for the creation of the W Regional Park Programme (ECOPAS) in January 2001. On November 04, 2002, the W Regional Park acquired the label of the W Transboundary Biosphere Reserve (WTBR).

In addition, the Arly-Pendjari National Parks in Burkina Faso and Benin have also very recently benefited from 10-year development and management plans. These plans set up the technical, institutional, and legal orientations and measures for a better management of these National Parks through an integrated regional vision.

The WAP Complex has been for the last few years the focus of several projects that aimed essentially to preserve its ecosystems and improve populations' livelihoods:

- Parc W - ECOPAS programme– research component -ECOPAS, 2001 to 2008. This project aimed to conserve the biodiversity of the W Transboundary Complex savannahs (Benin, Burkina Faso and Niger). The project was funded by the European Union.
- Entente Park Support Programme (Programme d'Appui aux Parcs de l'Entente (PAPE)), 2011 to 2016, implemented by UEMOA, UNDP, and NGOs and funded for the most part by the European Union.
- Governance reinforcement and natural resources valorization in the periphery of the Arly and Pendjari national parks in Burkina Faso, 2013 to 2016, implemented by the GRET and funded by the European Union.
- Programme for the Protection and Management of Natural Resources (ProCGRN): 2004 to 2014 in Benin; funded by Benin and the BMZ and implemented by the GIZ.
- Enhancing the Effectiveness and Catalyzing the Sustainability of the W-Arly-Pendjari (WAP) Protected Area System: 2008 to 2013 funded by the GEF and implemented by the UNOPS.

1.1.2. Project Area:

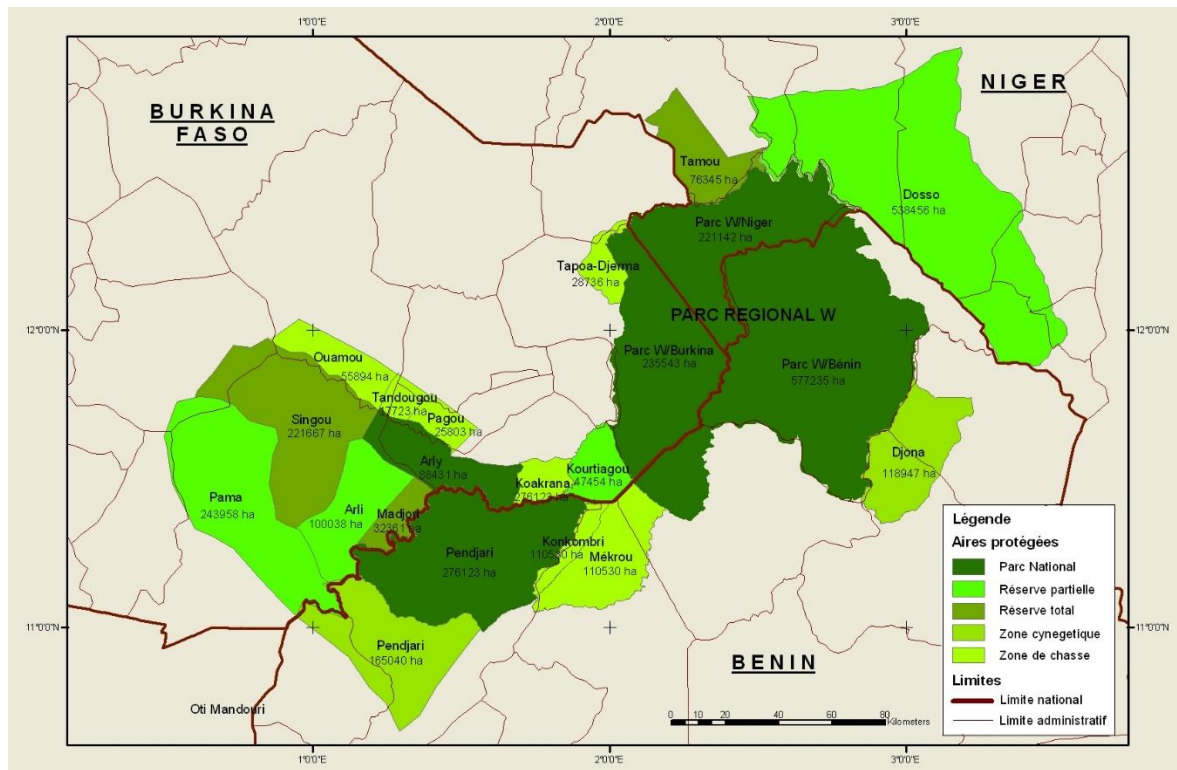
Physical characteristics:

Geographical location

Including the W-TBR, Arly and Pendjari Parks, the WAP Complex covers a total area of 5.000.000 ha, of which 3 094 026 ha are protected areas³.

- The W Transboundary Biosphere Reserve (W TBR) is located between latitudes 11° and 12°35 North and longitudes 2° and 3°50 East. Its protected areas has a total size of about 1 823 280 ha, distributed in the three countries as follows:
 - Benin : 795 280 ha
 - Burkina Faso :316 000 ha
 - Niger : 712 000 ha
- The Arly National Park is located between latitudes 11° and 12° North and longitudes 00° and 02° East. It is located in the extreme south-east of Burkina Faso, and about 500 km from Ouagadougou. It is situated in the Tapoa province and has a total area of 818 046 ha.
- The Pendjari Biosphere Reserve (PBR) is located between latitudes 10°30' and 11°30' North and longitudes 0°50' and 2°00' East. It is located in the extreme north-west of Benin, and about 650 km from Cotonou. It is situated in the Atacora department and has a total area of 452 700 ha.

³UNDP Project Document «Enhancing the Effectiveness and Catalyzing the Sustainability of the W-Arly-Pendjari (WAP) Protected Area System »



Map 1: Geographical location of the WAP Complex

Climate change and variability

The WAP Complex is characterized by a continental climate. However, and given the large extent of its area, there is a clear climatic and bioclimatic difference between the three-existing regions of the Complex.

The Sudano-Sahelian Climate in the Benin region

In this region, the precipitation is varying between 500 and 750mm. According to the climatic diagram of the Kandi station, two major seasons characterize this region: i) a rainy season (from mid-May to October) with an average monthly temperature of 26°C, and ii) a dry season (from March to mid-May) corresponds to a hot period with an average monthly temperature ranging between 30°C and 34°C and a maximum up to 40°C; a cool period (between October and February) with a monthly temperature average of 25°C and a minimum of 12°C. This is Harmattan season.

The Sudanian Climate in the Burkina Faso region

The average of annual precipitation in this region is about 750 mm, varying from 600 to 950mm (Fontès and Guinko, 1995). According to the climate data registered in Diapaga, the average minimum temperature is 14,9°C in January, whereas the average maximum temperature in the period between March and June is of 35°C, and may reach sometimes 40 °C.

Two main seasons characterize this region: i) a dry season (from November to April) characterized by rainfall shortage and average temperature that may attain 33°C, and ii) a rainy season (from June to October) with maximum of precipitations in July and August.

The Sahelo-Sudanian Climate in the region of Niger

This climate is characterised by precipitations ranging between 450mm and 600 mm and two main seasons: i) a wet season (from May to September) with maximum precipitations recorded in July/ August, and ii) a dry season (October to April) with cold weather from November to February

(January is the coldest month with an average temperature of 24°C) and a hot weather from March to June accompanied by the Harmattan (35°C as an average temperature during the hottest month of May). The temperature is at its maximum in April and May (with a temperature more than 40°C) and at its minimum (20°C) between December and January.

Hydrography

The WAP Complex region includes several watercourses, namely the Niger River and its three tributaries: Tapoa in the North, Mekrou (410 km) in the West and Alibori (338 km) in the East, in addition to several other tributaries.

In Benin, the WAP Complex is drained by the Alibori and Mekrou rivers, which border the Complex respectively in its East and West parts. Some of the other major tributaries in the WAP Complex are: Kpako, Kompagarou, Bedarou, Djiga and Konekoga, which are all intermittent watercourses receiving water on both sides from other secondary streams. The rock formations of the region, arranged in long bands of NNE-SSW direction, are crossed at two points by the Mekrou River giving birth to the Koudou falls and to a series of rapids and narrow passages, most notably the “gorge de la Mékrou”.

In Burkina Faso, the Complex is supplied by two main catchments: (i) The Niger River basin in the North, drained by the rivers and its tributaries: Diamangou, Tapoa, Goulbi, Mékrou and Tvénétiegale; (ii) The Volta basin through the Pendjari River in the South and which comprises the Bokoungou, Doubodo, Kourtiagou and Arly rivers.

In Niger, five main semi-permanent watercourses, i.e. the Niger River tributaries, irrigate the Complex: Sirba, Goroubi, Diamangou, Mékrou, Tapoa.

However, water availability remains a permanent concern in the three areas of the WTBR especially towards the end of the dry season (April-May) as the majority of ponds dry up completely.

Biological Characteristics

Vegetation

The WAP Complex is extremely rich in vegetation species, which are subject to strong climate and anthropic pressure. Vegetation species differ from one Park to another.

The Complex provides *in situ* protection for at least 515 woody species grouped into 84 families. These include endemic species found within dry savannahs and forests, some of them are now endangered or vulnerable.

In the W Park: vegetation is marked by abundant herbaceous and in particular, by graminaceous plants. Other more closed vegetation formations as the dry forests or open woodlands are also found, especially in the southern part of the Park. The W Park contains also about 1000 Sudanian species of plants. In general, vegetation formations in the complex are of several distinct types and may be subdivided into two main types:

(i) shrubby and woody type including species of the Combretaceae family (trees and shrubs, mainly the *Combretum*, *Terminalia* and *Anogeissus leiocarpa*). It is abounding with different species of shrubs and trees as spiny plants, including numerous Acacia trees, and some other Sudanian species as the *Balanites aegyptiaca* or *Ziziphus mauritiana* etc.

(ii) *Herbaceous* annual grass and spiny plants is located in the south of the Mekrou-Niger east-west axis. The Vegetation abandons the Sahelian species, characteristic of the north part and particularly in the borders of the Tamou reserve, to endorse in the South of the Complex some of the most typical Sudanian landscapes. Vast savannahs of shrubs and trees home for large herds of elephants, buffalos, and antelopes (hippotragues, bubales, etc.) dominate the southern part.

In wet and aquatic environments, several formations exist, such as (i) rapids and waterfalls

vegetation, (ii) ponds and backwater aquatic and drifting vegetation, (iii) the "bourgou" fields, identified with the *Echinochloa stagnina* prevailing plant, which forms drifting grasslands anchored up to a depth of six meters. However, these "bourgou" fields are increasingly threatened due to overexploitation, and especially due to rice cultivation. (iv) "Semi-aquatic" vegetation which includes a number of highly diversified vegetation formations, (v) gallery forests and riparian forests, which represent distinct ecosystems along the rivers.

In the Arly Park in Burkina Faso, vegetation is characterized by highly important ecological wealth.

The dry zones are the largest formation in the park. It is home of the major part of the ungulate fauna in the Reserve by providing both shelter and food. Plant species are dominated by *Combretum* and animal species like *Cephalophus*, *Hippotragus*, *Damaliscus*. This zone is subdivided into three main types :

(i) *Bushy formations*: these formations grow essentially on porous and little fertile soils. Plant species are *Combretum micranthum*, *C. nigricans*, *Dicrostachys glomerata*, *Guiera senegalensis*, *Burkea africana*, *Anogeissus leiocarpus*, *Loudetia togoensis*, *L. annua*, *Ctenium newtonii*, *Hyperrhenia involucreta*, *Andropogon gayanus*...and animal species, for example (antelopes, elephants, and primates ...).

(ii) *Herbaceous formations*: xerophile formations are located on the summit of plateaux, graminaceous formations in lateritic bedrocks and hydrophilic formations in the flood plains of the main watercourses.

(iii) *Clearing areas* (Bowé): ranging from few hectares to several square kilometres surfaces, they are distributed on flat ferruginous lands at the plateau level. They are dominated mainly by annual species (*Loudetia togoensis*, *Aristida spp.*, *Microchloa indica*, *Andropogon fastigiatus*, *Andropogon pseudapricus*). Some other bushy species are also found (like *Combretum nigricans*, *Combretum glutinosum*, and *Acacia ataxacantha*).

The humid zones include i) permanent or temporary water bodies (rivers, ponds, and springs) and flooding zones, home for plant species (*Polygonum spp*, *Trapanatans*, *Mitragyn aineremis*, *Mimosa pigra*, *Pistia stratiotes*, *Vetiveria nigritana*, *Nymphaea spp.*) and animal species (fish, crayfish, mussels, snails, batrachians etc.) and ii) *Gallery forests* where the major plant species found are (*Anogeissus leiocarpus*, *Pterocarpus erinaceus*, *Diospyros mespiliformis*, and animal species (like bushbucks, warthogs, monkeys, Nile lizards, python, batrachians).

In the Pendjari Park, vegetation is characteristic of the Sudanian zone with a mosaic of herbaceous, shrubby, wooded savannah and open woodlands hosting a grass-dominated herbaceous layer.

To these well-distributed formations are added two other formations that are found exclusively in the vicinity of the Pendjari River: the gallery forest and riparian forest of Bondjagou, East of the Pendjari Park.

The Reserve flora is composed of a more or less wooded savannah divided into forest formations, of which 5% is covered by shrubby savannah and 80% by open woodlands. In total, 241 plant species are present distributed among 53 families.

In a number of places in the Reserve, and particularly along the Pendjari River and the Atacora cliff, the presence of specific and anthropogenic vegetation provides evidence for the previous existence of many villages before the Reserve creation. The *Andansonia digitata* and *Anogeissus leiocarpus* species confirm this conclusion, in addition to the shea (*Vitellaria paradoxa*) and néré (*Parkia biglobosa*) trees indicating the traces of old fields.

Contrary to the relief, the plant formations are varied and distinguish the external aspect of the Reserve. They also provide a diverse habitat for wildlife species.

Fauna

The WAP Complex is home to numerous vulnerable species and is most important for the last Sudanian and Sahelian mammal populations. In particular, it hosts different species of birds (378), insects (94), fishes (80) and some reptiles and amphibians in its protected areas⁴.

The mammal fauna of the WAP Complex has been studied by several scientific authors as Rouamba et al. (2002), Bouché et al. (2003) and Bouché et al. (2012). Generally, 52 mammal species (except for the small rodents and chiropterans) were recorded, including the Elephant (*Loxodonta Africana*), Buffalo (*Syncerus caffer nanus*), Kob (*Kobuskob*), Waterbuck (*Kobus ellipsiprymnus defassa*), Reedbuck (*Redunca redunca*), Damaliscus (*Damaliscus lunatus korrigum*), Kongoni (*Alcephalus buselaphus*), Giraffe (*Giraffa camelopardalis*), Hippopotamus (*Hippopotamus amphibius*), Hippotragus (*Hippotragus equinus*), Lion (*Panthera leo*), Cheetah (*Acinonyx jubatus*) and a variety of monkeys (*cynocephalus*, *patas*, *green monkey*...).

According to the IUCN's list, the Reserve species existing in the complex and endangered at the international level are the cheetah (*Acinonyx jubatus*), the African wild dog (*Lycaon pictus*), the Elephant (*Loxodonta africana*) and the Manatee (*Trichechus manatus*).

The cheetah is the emblem of the Pendjari National Park. It is found in the Park's herbaceous savannahs, especially along the Pendjari River. The Complex encompasses a small number (some fifty) of lions probably due to competition with other carnivorous animals, such as, in addition to the Cheetah, the lycaon, the hyena, the jackel, and the leopard. The Pendjari lions are characterized by the almost total absence of the mane for the males.

Some of the rare but not endangered species present in the Complex are the damaliscus, the groot otter, the lion, the leopard, the Defassa waterbuck, the reedbuck, and the golden jackal. Except for the hippotragus, whose number has increased between 2003 and 2012, the number of all other species is decreasing. This may be explained by poaching and water scarcity.

For avian fauna, and according to Adjakpa (2004), some 360 species are found in the Complex. There are no endemic species in the Complex, but endangered species (Adjakpa, 2003) as the vulture (*Trigonoceps occipitalis*), the eagle owl (*Bubo africanus*), the roller (*Coracias garrulus*), the secretary bird (*Sagittarius serpentarius*) and the falco (*Falcocuvieri*) (Grell et al., 2002).

The most frequent bird species found in the Complex are the bateleur eagle (*Terathopius ecaudatus*), the spur-winged goose (*Plectropterus gambensis*), the Great African bustard (*Otis ferox*), the Great Calao of Abyssinia (*Buceros abyssinicus*), the guineafowl (*Numida meleagris*), the double spurred francolin (*Francolinus bicalcarus bicalcaratus*), the rock chicken (*Ptilopachus petosus*), and the crowned crane (*Balearica pavonina*).

The Complex encompasses about 150 of reptile and amphibian species (Cury et al., 2008; Mensah 2009). Arboreal agames and turtles are widespread with nearly 80 species (Cury et al., 2008). Species such as the sand snake (*Genus psammophis*), the common agama (*Agama agama*), the lizard (*Nucrus genus*), the skink (*Mabuya megalura*), the African rock python (*Python sebae*), the soft-shell turtle (*Cyclanorbis genus*), the Nile crocodile (*Crocodilus niloticus suchus*) and the Nile monitor (*Varanus niloticus*) are also frequently encountered in the Complex.

The Complex constitutes a refuge and predilection area for fish fauna and it harbors more than 2/3 of the fish species, of which are more than 80% endemic. Some of the most frequently encountered fish species in the complex are the *Synodontis arnoulti*, the *Tilapia mariae*, the *Hydracon spp.*, the *Lates spp.*, the *Labeo spp.*, the *Bagrus spp.*, the *Slestes spp.*, the *Hetrotis spp.*, the *Parailia spiniserrata*.

In general, the knowledge of the Complex's fauna (reproductive biology, population dynamics, effects of anthropogenic factors and climate variability, etc.) is still partial and limited.

⁴ Joyce Francisco: "results-based management within the framework of the UNOPS-case of the WAP project". Master Thesis. 2011

Socio-economic characteristics:

Population livelihoods in the complex are strongly linked to natural resources exploitation and hence affected by climate change and variability.

Populations and demography

The economic structure of the Complex is based on agriculture, breeding, fishery and the exploitation of forest resources (wood and non-wood products).

The WAP is an important destination for agricultural migrants as well as an important crossing point for transhumant livestock, all attracted by the relatively greater availability of natural resources.

In the Complex's peripheral areas, and at a distance of less than 40 km from its protected areas, there are hundreds of cities and villages inhabited by a total population of about 1 million inhabitants.

In Benin: In general, the riparian population is composed of a number of ethnic groups: the Bariba, the Dendi and related groups, the Peulh and other minorities (MISAT, 1997).

Estimated at about 700 000 inhabitants, the population is more concentrated in the communes of Banikoara, Kandi and Malanville (RGPH 4/INSAE, 2013).

In Burkina Faso: estimated at about 200 000, the riparian population is constituted essentially of the Gourmantchés, the Haoussa, the Peulhs and the Mossi. Gulmancema is the first spoken language at the local level. It is often associated with the Mooré, the Fulfulde and the Dgerma languages (ES/CEBNF Project, 2002).

In Niger: The riparian population is mainly composed of Peulh, Haoussa, Zarma, Sonrai, Touaregs and Foulmangani people. This population is estimated at about 227 517 inhabitants and is estimated to 100 000.

The population in this part is distributed unequally among the communes and more concentration in the communes of Falmey and Tamou.

Major Economic Activities

Based on the existing documents and the results of the consultative workshop organized in Tapoa (February 2017), agriculture and livestock breeding are the two main economic activities practiced in the riparian communes of the complex in the three countries.

Farming is practiced by the main part of the population, followed by breeding. Social changes have taken place and most of the producers combine both farming and breeding activities and most of them are agro-pastoralists.

The riparian communes have a significant agricultural potential based on the climate and quality of soil which are both favourable for conducting agricultural activities especially in the Southern part.

Other secondary economic activities exist and include forest exploitation, fishery, handicrafts, trade, apiculture, tourism and picking. These activities contribute to the diversification of incomes and the amelioration of the livelihoods for the local populations.

However, uncontrolled and conducted in unsustainable manners, all of these activities have a negative impact on natural resources. As mentioned above, the expansion of agricultural lands has disturbed the ecological stability of the WAP Complex and affected the potential of its ecosystem services.

The continuous growth of the local population and the flows of transhumant pastoralists and herders present additional factors of pressure on the WAP Complex.

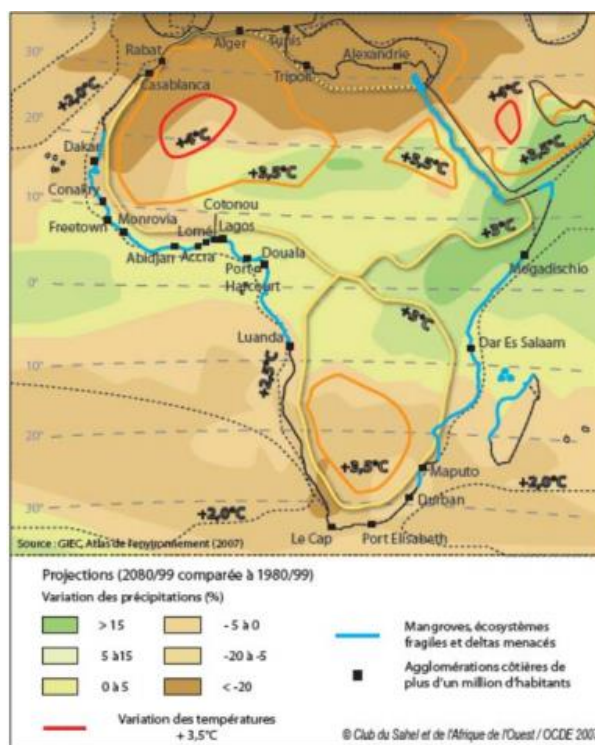
In a context affected by climate change and socio-economic mutation, the ways of land and water management must be reviewed in order to alleviate the pressure on the Complex ecosystem and

to improve the populations livelihoods.

Vulnerability to Climate Change:

The IPCC fifth assessment report says that "warming in the climate system is unequivocal and since 1950 many changes have been observed throughout the climate system that are unprecedented over decades to millennia".

Most of climate models confirm the projected future temperature trends, both at the global and continental levels. The IPCC foresees a rise in temperatures of 3 °C and 4 °C in Africa between the periods 1980/1999 and 2080/2099. This increase would be less in the coastal and equatorial areas (+ 3 °C) but higher in the western part of the Sahara (+ 4 °C), Cf. Map 2.



Map 2: Temperature Projections in Africa for the period 2080-2099 compared to the period 1980-1999

The WAP Complex is subject today to a changing climate inducing negative effects on precipitations trends in time and space, a continuous increase of temperature and season creep. Climate projections for 2032 and 2050 for the complex region shows an increase in the order of 2 °C and 2,5°C for annual temperature and a decrease in the order of 10% for annual precipitations.

The frequency of rainfall deficit that have marked the region since 1970 is increasing. This change in climate parameters affects the reproduction of the animal populations, the composition of the different plant formations and the phytomass production in the Complex. Hence, the equilibrium of the complex is found threatened today.

Researches on the impact of climate variability on biological resources (modeling of the ecological niches of rare species, the future production of phytomass, regional load capacity) and on water resources (hydrographic network, permanent and/or temporary water points) are necessary to anticipate the adverse effects of climate change and to strengthen populations and ecosystems' resilience.

According to climate change scenarios mentioned above, the bordering population of the WAP Complex, which currently counts more than one million inhabitants, will be strongly affected in terms

of its agricultural and pastoral management practices on existing natural resources and ecosystems. This is the reason why urgent adaptation and mitigation measures based on scientific data and know-how are needed for the Complex.

Pressures on the WAP Complex

Despite all the efforts engaged by actors and stakeholders, the natural resources and ecosystems of the WAP Complex remain threatened by several factors, including mainly land clearing, agricultural and rangelands expansion, poaching, fires, mining, population growth, migration, unsustainable use of non-wood products, land and water pollution, and especially climate variability, including the increase of climatic hazards and natural disasters' frequency and periodicity.

Food insecurity, structural obstacles related to inadequate synergy between stakeholders, different management modes and protection status, non-harmonized regulations among the three countries, and irregular and floating financial support are additional factors making an urgent regional and transboundary approach mandatory for the Complex conservation.

Details of the different sources of pressure at the Complex⁵ are described in the following chapter:

Non-rational agricultural practices :

Agriculture is the main activity conducted by the population in the WAP Complex bordering areas. However, these agricultural practices lead to different impacts, as runoff pollution (especially by the cotton fields), erosion and land degradation.

Agrochemical runoff directly impacts aquatic and other biodiversity as agro-chemicals are transported into the WAP Complex. Erosion directly affects biodiversity by causing siltation of rivers and ponds. This affects the retention capacity of such ponds causing water shortages during the dry season. Early drying out of ponds forces wild animals to concentrate around the remaining few water points, thus facilitating poaching.

Land erosion and degradation due to agriculture activities have other indirect effects on WAP biodiversity. By causing a decline in agricultural productivity, these phenomena are responsible for land shortages, pushing people to seek out for new fertile land to clear for cultivation. Land shortages are also related to high rates of natural population growth (2-3% per annum) and a steady flow of immigrants who are authorized by local communities to operate within areas on the periphery of the Complex. Together, these factors result in decreasing availability of arable land per capita has created incentives for agricultural encroachment within the WAP Complex.

The introduction and extension of cash crops such as cotton, which is the main source of revenue for a large segment of the riparian populations, has contributed to the conversion of most available lands into cotton fields and less land is available for growing crops. This reveals a limited awareness from the local population of major regulations governing the Complex as well as apathy concerning the issue of conservation.

Uncontrolled transhumance

Each year during the dry season, transhumance exerts heavy pressure on fodder and water resources in the different parts of the Complex, and notably in areas located in the vicinity of the W-ARLY- Pendjari Parks.

The presence of livestock within the WAP Complex gives rise to several threats to ecosystems and species, such disturbance of wildlife, competition over the use of feed resources, risk of zoonosis

⁵Participatory governance of protected areas: case of the Niger W Biosphere Reserve, , SOULEY Kabirou, 2016 and the project document of the « Enhancing the Effectiveness and Catalyzing the Sustainability of the W-Arly-Pendjari (WAP) Protected Area System” GEF/UNDP's project

transmission, risk of poisoning of wild carnivores by herders, poaching, etc.

An aerial survey conducted in 2003 on the entire set of the WAPO Complex (W, Arly, Pendjari, Oti-Mondouri), showed that bovine population is estimated at about 65 000. Pastoralists have increasing incentives to bring livestock into the Complex, because of land degradation, in landscape areas and limited risk of penalties.

“Uncontrolled transhumance” (and illegal) stands as a significant threat to the area. In order to tackle this problem, a number of agreements were concluded on the exact location of transhumance routes, checkpoints, rest areas, watering points as well as destination sites for transhumant cattle. These infrastructures need to be realized in order to operationalize the agreements.

Poaching

Poaching is one of the major causes of degradation and pressure on ecosystems and fauna species at the Complex. Several factors contribute to the proliferation of poaching, including mainly easy availability of firearms, high level of demand for bushmeat, relatively high standard of living of the riparian population, in addition inadequate legal and regulatory instruments and provisions and limited inter-state coordination (needed to address the significant cross-border component of poaching). Inter-state poaching control agreements have been reached by the three countries-for instance between Burkina Faso and Benin in 1984, and among all three countries in 1987. The application of the agreement remains very limited due to lack of tools and means.

Uncontrolled bushfires

The management of biotopes and species is partially hampered by bush fires. This scourge occurs as a result of poor knowledge of the stakes among riparian residents. Moreover, it is a deeply linked to practice in local cultures and customs. It is often associated with poaching. In fact, a large part of the savannahs are devastated each year by uncontrolled bushfires mainly for fishery and pastoral lands management. Historically, the savannahs’ ecosystems have adapted to these fires. Unfortunately, their resilience is being undermined today as the occurrence of these fires is more related to weather conditions, and climate change in particular.

Siltation and pollution of surface waters

The introduction and intensification of industrial crops such as cotton and low-input agricultural practices (including plant and animal production) exacerbate the adverse effects of wind and water erosion, ultimately leading to the gradual silting up of streams and rivers.

The silting up of the Niger River has reached such a point that a specific project has been implemented by the Niger Basin Authority (NBA) with GEF funding, addressing this issue among others. Furthermore, surface waters are becoming increasingly polluted by pesticides and other agro-chemicals, which threaten fauna and flora species, particularly those living in wetlands.

Non-wood forest product exploitation

Non-wood forest products contribute a great deal to food security at the complex level. This sector provides employment opportunities for the populations, especially for women.

Many endemic species found within the WAP Complex are now endangered or vulnerable due to unsustainable use related to food, pharmaceutical, pastoral and handicraft production. It is thus highly important to develop this sector in a sustainable way in order to protect vulnerable and endangered species and promote available resources which could create job opportunities and valorize related products (honey, néré, shea ...).

Woodcutting

Given its significant forest potential, the WAP Complex and its area of influence are almost permanently subject to activities of wood gathering for charcoal production. Cutting down trees in the three countries is subject to national regulations. However, due to lack of means, forest management services have so far been unable to control, or to organize this activity in a sustainable manner, around the WAP areas, despite success in other areas outside the Complex.

Fishery

Fishes and other aquatic animals are severely endangered within the WAP Complex. The main danger comes from the utilization of chemical products, leading to high mortality rates. The definition of a fishing strategy processes at different levels have revealed several gaps and weaknesses, including the absence of common and harmonious policy for fishery management in the WAP Complex.

Pastoral Pressure

Illegal transhumance in the Complex protected areas is adopted as an alternative solution by the majority of herders. This is translated in a continuous increase in the number of bovine population which moves from the Parks peripheral areas to the center. Out of the 1933 bovines owned by 33 herders, 1765 i.e. 91,3%, are transhumant.

The total reserve of fauna in the Tamou commune comprises two transhumance axes that extend up to Burkina Faso passing respectively by Kaleyenou and Zoumboukoli. The neighbor commune of Torodi, in Niger, encompasses four large transhumant routes that lead all to Burkina Faso through four main entries (Tchéllol Ballol, N'gnaro, Kerta, and Tampéna Bakano). The left bank of the Niger River (partial reserve of the Dosso fauna) encompasses eight transhumance routes located in the territories of Kirtachi and Falmey, and which all lead to the Benin part of the WAP Complex. (SOULEY K., 2004).

1.2. Project Objectives

The ADAPT-WAP aims to strengthen the resilience of ecosystems and improve populations' livelihoods within the WAP Complex facing climate change through the establishment of a Multi-Risk Early Warning System and the implementation of concrete adaptation measures.

This project will allow to consolidate synergies between the three beneficiary countries by strengthening the sustainable and participatory management of the Complex and its natural resources while contributing to resolving conflicts between the different users.

The specific objectives of the project include:

- Improving Strategic reference documents, i.e. development and management plans, by integrating the climate change issues.
- Improving populations' resilience through an Early Warning System and providing relevant and timely information on the occurrence of extreme weather events in the WAP Complex and its adjacent areas.
- Improving ecosystems' resilience (fauna and flora) and populations' livelihoods through the consolidation of infrastructure, for example transhumance corridors, drinking troughs, and anti-flood structures.
- Ensuring the sustainability of adaptation measures through the mobilization and awareness-raising of beneficiaries and partners to master the tools developed and to execute the planned activities.

Table 1: LOGICAL FRAMEWORK –ADAPT-WAP PROJECT

Component/outcome/output/activity	Notes on the budget	Cost \$	Number of units	Total budget \$
Component 1: Integration of climate change aspects and contingency plan (MHMREWS) in the WAP Complex management				
Outcome 1.1: Climate change and risks as well as contingency plan are integrated into the Complex management plans				
Output 1.1.1: The Complex development master plan integrating climate change is updated and validated				
Activity 1.1.1.1: Elaboration of mapping products (demarcation of the project area, vulnerability...) : setting up a Geographic Information System	Lump-sum	50,000	1	50,000
Activity 1.1.1.2: Implementation of 3 studies (land-tenure, socio-economics, strategic focus: institutional, administrative, legal ...)	Study	30,000	3	90,000
Activity 1.1.1.3: Update of forest and pastoral management and development plans	Plan	50,000	1	50,000
Activity 1.1.1.4: Organization of a workshop for studies and mapping products validation	Workshop	20,000	2	40,000
Activity 1.1.1.5: Design and editing of the Complex development master plan	Diagram	30,000	1	30,000
Activity 1.1.1.6: Organization of a workshop for master plan validation	Workshop	20,000	1	20,000
Output 1.1.2: Adaptation and mitigation action plans are elaborated				
Activity 1.1.2.1: Identification of the most vulnerable sites for implementation of adaptation and mitigation actions	Study	30,000	1	30,000
Activity 1.1.2.2: Organization of consultation workshops with populations and technicians for the validation of sites and adaptation and mitigation measures	Workshop (adap, Mitigation, pop, tech)	10,000	4	40,000
Activity 1.1.2.3. Elaboration of an action plan for the implementation of the identified adaptation actions	Plan	30,000	1	30,000
Activity 1.1.2.4. Elaboration of an action plan for the implementation of the identified mitigation actions	Plan	30,000	1	30,000
Activity 1.1.2.5: Organization of a workshop for the validation of the adaptation and mitigation action plans	Workshop	30,000	1	30,000
Subtotal				440,000

Component 2: Design and establishment of a multi-risk early warning system (MREWS) (drought, flood, and fires)				
Outcome 2.1: A rapid early warning system is used by the project's beneficiaries to manage emergencies				
Output 2.1.1: Preparatory studies are elaborated and validated: MREWS is designed				
Activity 2.1.1.1: Implementation of six preliminary studies for the establishment of the MREWS (from hazards identification and risks evaluation to the MREWS design and operation)	Study	20,000	6	120,000
Activity 2.1.1.2: Organization of two regional workshops for the validation of Studies	Workshop	15,000	2	30,000
Activity 2.1.1.3: Organization of three national consultation workshops with populations on the MREWS priorities	Workshop	15,000	3	45,000
Output 2.1.2: The MREWS necessary equipment are acquired and put in place				
Activity 2.1.2.1: Acquisition and installation of observation equipment (weather stations, stream gauge, sensors, piezometers...)	Lump-sum	365,000	1	365,000
Activity 2.1.2.2: Acquisition of IT equipment (servers, processing unit, software, GPS...)	Lump-sum	120,000	1	120,000
Activity 2.1.2.3: Acquisition of necessary data to the MREWS (biophysical, socio-economic, mapping...)	Lump-sum	120,000	1	120,000
Activity 2.1.2.4: Acquisition of necessary tools and equipment to broadcast warning messages to populations (beacon, flags, siren, signals, loud-speakers...)	set/country	40,000	3	120,000
Activity 2.1.2.5: Constitution and organization of the Tripartite Regional Management Unit (TRMU)	meeting	5,000	4	20,000
Activity 2.1.2.6: Rehabilitation/construction of premises for the Tripartite Regional Management Unit (TRMU)	Lump-sum	100,000	1	100,000
Output 2.1.3. The MREWS is developed and operational				
Activity 2.1.3.1: Creation of the MREWS unit under the supervision of the regional management unit				0
Activity 2.1.3.2: Organization of training sessions for the MREWS unit (MREWS use, data processing, elaboration of indicators...)	Thematic workshop	30,000	4	120,000
Activity 2.1.3.3: Organization of launching/presentation/monitoring workshops of the MREWS	Workshop	20,000	4	80,000
Activity 2.1.3.4: Organization of quarterly meetings of the Tripartite Regional Management Unit	Meeting	2,500	16	40,000
Activity 2.1.3.5: Organization of study and exchange trips	Travel	20,000	2	40,000
Activity 2.1.3.6: Acquisition of supplies/consumables for the Tripartite Regional Management Unit	Lump-sum	60,000	1	60,000
Activity 2.1.3.7: Design, validation and editing of products (MREWS letter, maps, summary reports, digital supports...)	Set/year	15,000	4	60,000
Activity 2.1.3.8: Organization two testing operations	Operation	70,000	2	140,000

Output 2.1.4: Disasters contingency plans are set up				
Activity 2.1.4.1: Elaboration of an Contingency Response Plan (ERP) against climate change related hazards at the level of the three beneficiary countries	Plan	50,000	1	50,000
Activity 2.1.4.2. Organization of training sessions on the ERP utilization aimed at the different actors involved in the three countries	3 national workshops. and 1 regional.	20,000	4	80,000
Activity 2.1.4.3. Acquisition of equipment for disasters management (3 devices for combating fires, bicycles, motorcycles, canoes, dinghies...)	set/year	130,000	3	390,000
Subtotal				2,100,000
Component 3: Improving ecosystems and populations' livelihoods resilience through the implementation of concrete adaptation and mitigation actions				
Outcome 3.1: Populations and ecosystems' resilience is improved through concrete adaptation actions				
Output 3.1.1: Water points are developed/rehabilitated at the Complex level involving local work force				
Activity 3.1.1.1: Identification of sites for the establishment of water points	survey - study	15,000	1	15,000
Activity 3.1.1.2: Identification and training of the employed work force	Workshop	5,000	1	5,000
Activity 3.1.1.3: Water points development and equipment works	5 water points/countries	10,000	15	150,000
Output 3.1.2: Transhumance routes and rest areas are constructed/created for cattle involving local work force				
Activity 3.1.2.1: Identification of the layout of the area	Survey- study	20,000	1	20,000
Activity 3.1.2.2: Identification and training of the involved work force	Workshop (resting places and drinking troughs)	5,000	2	10,000
Activity 3.1.2.3: Development of transhumance routes	Lump-sum	200,000	1	200,000
Activity 3.1.2.4: Construction of troughs and rest areas for cattle	15 water troughs and 9 resting places	10,000	24	240,000
Output 3.1.3: Firewalls strengthened and developed involving local work force				
Activity 3.1.3.1: Identification of locations for firewalls	Survey - study	20,000	1	20,000
Activity 3.1.3.2: Identification and training of the involved work force	Workshop	5,000	1	5,000
Activity 3.1.3.3: Development and cleaning of the identified sections	Lump-sum	200,000	1	200,000

Output 3.1.4: Agro-forestry and small-scale irrigation are applied				
Activity 3.1.4.1: Identification of the agroforestry species to be used	Survey - study	10,000	1	10,000
Activity 3.1.4.2: Identification and training of the agro-forestry and irrigation dedicated to the beneficiary farmers	Workshop (agro-forestry, small-scale Irrigation)	5,000	2	10,000
Activity 3.1.4.3: Creation of nurseries for the production of agroforestry plants and attribution to the beneficiaries	3 nurseries /country	10,000	9	90,000
Activity 3.1.4.4: Acquisition and attribution of irrigation equipment (drip irrigation) to beneficiaries	3 sets/country	10,000	9	90,000
Output 3.1.5: Structures and equipment are provided for fishermen				
Activity 3.1.5.1: Identification of priority landing sites along the river and its tributaries	Survey - study	10,000	1	10,000
Activity 3.1.5.2: Construction of docking structures for canoes	2 structures/country	15,000	6	90,000
Activity 3.1.5.3: Identification and training of beneficiary fishermen	Workshop	5,000	1	5,000
Activity 3.1.5.4: Acquisition and attribution of fishing equipment (conservation equipment)	1 set/country	50,000	3	150,000
Outcome 3.2: Populations and ecosystems' resilience (fauna and flora) are improved through concrete mitigation measures				
Output 3.2.1: Wooded and pastoral areas are improved and reforested				
Activity 3.2.1.1: Identification of sites for reforestation and pastoral improvement	Survey - study	10,000	1	10,000
Activity 3.2.1.2: Training of beneficiary nursery growers	Workshop	5,000	1	5,000
Activity 3.2.1.3: Creation of forest and pasture nurseries	3 Nurseries/country	10,000	9	90,000
Activity 3.2.1.4: Training of the work force involved in the reforestation works	Workshop	5,000	1	5,000
Activity 3.2.1.5: Reforestation and pastoral improvement	Lump-sum	1,200,000	1	1,200,000
Output 3.2.2: Improved cook stoves are allocated to women				
Activity 3.2.2.1: Identification of beneficiary women (inventory, selection and consultation)	Survey - study	5,000	1	5,000
Activity 3.2.2.2: Training of beneficiary women on the utilization of cook stoves	Workshop	5,000	1	5,000
Activity 3.2.2.3: Attribution of improved cook stoves to beneficiary women	Lump-sum	100,000	1	100,000
Output 3.2.3: Solar panels are installed in wells and in community infrastructures (schools, local administrations...)				
Activity 3.2.3.1: Identification of infrastructure and wells to equip	Survey - study	20,000	1	20,000
Activity 3.2.3.2: Training of beneficiaries on the utilization and maintenance of solar panels	Workshop	5,000	1	5,000
Activity 3.2.3.3: Equipment of infrastructures with solar panels	1 set/country	100,000	3	300,000

Outcome 3.3: Populations' resilience to Climate change is strengthened and their livelihoods are improved through income-generating activities				
Output 3.3.1: Revolving funds are set up to diversify income sources				
Activity 3.3.1.1: Organization of information and awareness-raising workshops for communities on revolving funds	1 Workshop/country	10,000	3	30,000
Activity 3.3.1.2: Training of beneficiaries on the use and management of revolving funds	1 Workshop/country	15,000	3	45,000
Activity 3.3.1.3: Handover and Supervision of Disbursement of the funds	Lump-sum	15,000	1	15,000
Output 3.3.2: Income-generating activities are sustained				
Activity 3.3.2.1: Selection and training of the beneficiaries of income generating activities	1 workshop	30,000	3	90,000
Activity 3.3.2.2: Acquisition and distribution of beehives to beneficiaries	600 hives/country	100	1800	180,000
Activity 3.3.2.3: Acquisition of equipment for the distillation of essential oils	1 Set/country	40,000	3	120,000
Activity 3.3.2.4: Valuation of non-timber forest products (NTFP) (shea, baobab, moringa, nereid, tamarind, gums...)	1 Set /country	40,000	3	120,000
Activity 3.3.2.5: Construction of "Nature's Stores" to offer and sell local and artisan products	1 Set /country	15,000	3	45,000
Sub-total				3,710,000
Component 4: Awareness-raising and capacity building for concerted, integrated and sustainable management of the WAP Complex				
Outcome 4.1: Concerned actors are mobilized and sensitized through adapted communication and capacity building				
Output 4.1.1: Practitioners and technicians are sensitized and trained on environmental challenges				
Activity 4.1.1.1: Elaboration of specific training modules on the main themes addressed by the project (natural resources)	Module	5,000	10	50,000
Activity 4.1.1.2. Organization of thematic training workshops for practitioners and technicians	Workshop	10,000	10	100,000
Activity 4.1.1.3. Organization of information and extension sessions aimed at decision-makers at each country level (simplified training module)	Workshop	10,000	5	50,000
Output 4.1.2: Populations are informed and sensitized				
Activity 4.1.2.1. Elaboration of an action plan about communication and awareness-raising	Plan	30,000	1	30,000
Activity 4.1.2.2: Design and development of communication supports (leaflets, posters, flyers, syntheses, documentaries , spots for local radios, phone application ...)	1 set/year	50,000	4	200,000
Activity 4.1.2.3: Creation/strengthening of environmental clubs at local institutions (colleges, high schools,) through training and equipment	Club	20,000	3	60,000
Activity 4.1.2.4 : Design of environmental education sessions for school children and women (in local language)	kits	5,000	2	10,000
Activity 4.1.2.5: Organization of environmental education sessions for pupils and women	5 sessions/country	10,000	15	150,000

Activity 4.1.2.6: Organization of awareness and information days for populations (cultural and artistic activities on CC mitigation and adaptation)	5 sessions/country	15,000	15	225,000
Activity 4.1.2.7: Setting up of a radio web (studio equipment, server on a portal, and a mobile application)	1 studio, 1 server, 1 portal and 1 mobile application	15,000	1	15,000
Activity 4.1.2.8: Organization of training sessions to create radio content for the riparian populations of the three countries (presenter and designer)	2 sessions /pays	10,000	6	60,000
			Subtotal	950,000
			Total components	7,200,000
Component 5: Project Execution				
Implementation costs (Implementing Unit)				702,000
Execution costs (Management Unit)				648,000
			Total project	8 550 000

1.3. Projected Calendar

The Project Duration is 4 years (48 months)

Milestones	Expected Dates
Start of Project Implementation	January 2018
Mid-term Review (if planned)	June 2020
Project/Programme Closing	December 2021
Terminal Evaluation	June 2022

PART II: PROJECT JUSTIFICATION

A. Description of the project / programme components

The WAP Complex is an area of outstanding biodiversity significance based on the following factors:

- It is the largest and most important continuum of terrestrial, semi-aquatic and aquatic ecosystems in the West African savannah belt;
- It is the most significant territory for elephant conservation in the entire West African sub-region;
- It is the most viable natural refuge, available to most of the vulnerable and/or threatened animal species in Benin, Burkina Faso and Niger;
- It is endowed with a significant network of wetlands linked to a large hydrographical network that serves as the habitat for aquatic and water dependent plant and animal species, including migratory birds;

Globally significant biodiversity is threatened within the WAP Complex by various factors, for example agricultural encroachment, uncontrolled transhumance, poaching, uncontrolled bushfires, siltation and pollution of surface waters and unsustainable harvesting of fish, timber and Non-timber forest products (NTFPs). The impact of all these pressures are amplified by climate change effects.

The sustainability of the WAP Complex management depends on three interrelated elements:

- Active participation of the communities in the buffer and transition zones;
- Effective interrelated network for the Protected Areas;
- More coordinated efforts for the conservation of the WAP Complex.

The above described elements, although partially effective to support the conservation of WAP biodiversity, are facing many barriers that prevent, operating effectively and sustainably.

In addition to the various threats that hinder the management of the complex, the latter is affected by the effects of climate change whose impacts are increasingly visible on natural resources and ecosystems. Thus, it appears that urgent adaptation and mitigation measures are needed to maintain the equilibrium of the Complex to ensure the integrity of its ecosystems and to improve the livelihoods of its adjacent populations.

Adaptation and Mitigation Measures

The three concerned countries (Benin, Burkina Faso and Niger) with the support of the OSS propose, through the present project request, the development and implementation of a concerted and synergistic adaptation strategy to be integrated in the regional management plan of the WAP Complex. This strategy will include concrete pilot adaptation actions and a Multi Risk Early Warning System (MREWS).

The project will complete the development of activities already undertaken in the region and will focus on adaptation to climate change and mitigation measures. It will strengthen the capacities of national and sub-regional institutions involved in the management of the WAP Complex and the management of natural resources of the adjacent areas. This project proposal is based on four components, combining regional, national, and local actions. The following components and activities, as shown above, will be undertaken:

- Component 1: Integration of climate change aspects and a contingency plan in the management of the WAP Complex;
- Component 2: Design and establishment of a Multi-Risk Early Warning System (MREWS), related to droughts, floods, and fires;
- Component 3: Enhancement of the resilience of ecosystems and populations through the implementation of concrete adaptation and mitigation actions, and
- Component 4: Awareness-raising and capacity building for the concerted and integrated sustainable management of the WAP Complex.

The activities of component 3 will include concrete adaptation and mitigation actions to be conducted in-field with a view to reduce the communities' vulnerability to climate change. The grant will be used for the implementation of the contingency plan and for various actions. Namely, it will aim at protecting and rehabilitating ecosystems, diversifying livelihoods, setting up structures for resources mobilization, encouraging renewable energy use, raising awareness of populations, managers and technicians mainly on best practices of natural resources management. In fact, the implementation of updated regional and national management plans, integrating climate change aspects will allow a better protection and a concerted management of natural resources. Thus, adapted to the specificities of the WAP Complex, these new management plans will reduce the risks of conflicts between the several users.

The project will use the local know-how of the three beneficiary countries and will offer a regional platform for the exchange of experiences and effective natural management practices. These conditions will help to preserve the Complex's ecosystems and hence to improve the livelihoods of its local populations. The Multi-Risk Early Warning System and the adaptation measures to be developed by this project will generate successful lessons and ensure the validation of best practices to be documented and, above all, replicated in other areas.

In the framework of this project, a regional approach will be adopted, that allows a holistic treatment of major themes at the Complex level while taking into account the different characteristics of each country. The ecosystems, like biotic communities, migratory wildlife, rivers and streams, and user populations such as transhumant pastoralists, fishermen, etc. that are directly affected by extreme weather events are, indeed, transboundary. Thus, a regional, harmonized and common approach is needed to resolve border problems. Beside this, it will help to maximize the learning and sharing of lessons among the concerned actors and stakeholders.

The project activities will be designed in alignment with existing national and regional strategies. It will emphasize the development of a global master plan for the whole Complex and the integration of climate change aspects in the existing specific park management plans. The expected results will help to improve the WAP management and development plan elaborated within the framework of the ECOPAS/W regional program ("Protected Ecosystems in Sahelian Africa"). The project results will also feed into the sub-regional action plan for reducing vulnerability to climate change (PASR-RV-AO), adopted in 2010 by the Heads of States of the Economic Community of West African States (ECOWAS). This issue will be conducted in a participatory manner in order to be in line with the national and sub-regional development plans and strategies.

The Project will allocate **US\$ 3.710.000 to Component 3** for the implementation of concrete adaptation actions for resilient and sustained ecosystems in the WAP Complex. The benefits of these actions will include improved economic productivity and better livelihoods. This Component is the most important as it will ensure the introduction of concrete climate change adaptation actions in the WAP Complex, which will also allow to reduce the loss of incomes due to extreme events.

In addition, **US\$ 2.100.000** will be foreseen to **Component 2** for the establishment of a MREWS to natural disasters and **US\$ 440.000** for the integration of the climate dimension and an contingency plan into the development and management plan of the Complex, to be developed within the **Component 1**.

Furthermore, **US\$ 950.000** will be allocated to **Component 4** for strengthening the capacities of institutions and communities and for knowledge management. The regional approach will enhance cost effectiveness of capacity building and will ensure the scaling up of tools and processes application and replication. To ensure a more effective and enhanced knowledge sharing, the project will provide an opportunity for networking with stakeholders concerning climate change adaptation, environment and development planning.

The **project preparation** will be carried out through four steps and at regional, national and local levels:

- i. Identification and definition of stakeholders and beneficiaries,
- ii. Exchanges between OSS, as Implementing Entity, and the identified national partners,
- iii. Consultation for preliminary surveys focused on local actors like farmers, households managed by women, vulnerable groups as indigenous peoples, and
- iv. Organisation of national and regional workshops, bringing together the different stakeholders to validate the final project document that derive from a common vision

The project sustainability will be maintained thanks to the commitment of certain key stakeholders, targeted for capacity building, including staff of extension services from various areas such as forestry, agriculture, pastoralism, water, environment, and community development. After having mastered the tools elaborated in the framework of the project through training sessions, the technicians will be able to manage the overall achievements even after the end of the project. In addition to the ownership of the tools, the project will implement innovative solutions that will generate financial benefits that will be used to sustain the monitoring activities, i.e. access fees, breed improvement centre, etc.

The present project is classified under category B in accordance with the Social and Environmental Policy of the Adaptation Fund. A social and environmental assessment will be conducted as a preliminary step to the submission of the full project proposal.

Components and expected outcomes of the project

The project aims to improve the riparian populations' livelihoods in the WAP Complex and to increase the resilience of ecosystems, which are threatened today more than ever by a consistently changing climate and recurrent natural disasters. These threats may exacerbate the situation of a large part of vulnerable and endangered people and natural resources, if no urgent and direct actions are undertaken to preserve them.

Component 1: Integration of climate change aspects and contingency plan in the WAP Complex management:

Encompassing multiple protected areas, the WAP Complex is of particular importance in West Africa as it offers shelter and habitat to a wide variety of fauna and flora. The pressure exerted on the WAP Complex by the riparian populations made it even more vulnerable to Climate Change. Therefore, the Complex has attracted, during the last few decades, the attention of both, public authorities of the three neighbour countries and a number of international institutions. In fact, several projects/programmes were implemented that has led to the elaboration of plans aiming for a common management of protected areas and natural ecosystems of the Complex.

In this framework, the proposed project dedicates the first component to the elaboration of a regional master plan and the updating of existing national and local action plans, integrating climate change aspects and defining the adaptation and mitigation measures to be implemented.

This first component is structured as follows:

Outcome 1.1: The climate change dimension and the contingency plan are integrated into the Complex master plan

This outcome is set up to complete and harmonize the management tools, studies, databases, digital and mapping supports already in place for the WAP Complex, but which remain fragmented and disparate until today. It mainly aims to mainstream the climate change dimension and its risks in the existing individual parks management plans and into WAP complex global master plan. The activities to be carried out to achieve this outcome are:

Output 1.1.1: The Complex management master plan integrating climate change is developed and validated:

- Activity 1.1.1.1: Set up of a Geographic Information System and elaboration of mapping products (demarcation of the project area, vulnerability...)
- Activity 1.1.1.2: Implementation of three studies about land-tenure, socio-economics, and strategic orientation (institutional, administrative, legal ...)
- Activity 1.1.1.3: Update of forest and pastoral management and development plans
- Activity 1.1.1.4: Organization of a workshop for the validation of studies and mapping products
- Activity 1.1.1.5: Design and editing of the master plan
- Activity 1.1.1.6: Organization of a workshop for the validation of the master plan

Output 1.1.2: The adaptation and mitigation action plans are elaborated

- Activity 1.1.2.1: Identification of the most vulnerable sites for the implementation of adaptation and mitigation actions
- Activity 1.1.2.2: Organization of consultation workshops with populations and technicians for the validation of sites and adaptation and mitigation measures
- Activity 1.1.2.3: Elaboration of an action plan for the implementation of the identified adaptation actions
- Activity 1.1.2.4: Elaboration of an action plan for the implementation of the identified mitigation actions
- Activity 1.1.2.5: Organization of a workshop for the validation of the adaptation and mitigation action plans

Component 2: Design and establishment of a Multi-Risk Early Warning System (MREWS) related to droughts, floods, and fires

Natural disasters are one of the most serious threats affecting the integrity of ecosystems and the security of the riparian populations of the WAP Complex. The establishment of an operational, reliable and efficient Early Warning System in the WAP Complex is one of the major objectives of this project. The setting up of a detailed contingency plan is of capital importance to reduce the negative impacts of hazards due to climate change. This plan will be made available to different users and stakeholders.

This component is structured around the following outcome:

Outcome 2.1: A Multi-Risk Early Warning System (MREWS) is used by the project's beneficiaries to manage emergencies

The MREWS is a tool for elaborating and provided information for the WAP Complex's different users, including the populations and the users of forest, pastoral and agricultural areas. The MREWS will be community-based and adapted to the socio-ecological context of the WAP Complex for a better preparedness to manage natural disasters and extreme climate events.

The following activities and measures are proposed:

Output 2.1.1: The preparatory studies are elaborated and validated: The MREWS is designed

- Activity 2.1.1.1: Implementation of six preliminary studies for the establishment of the MREWS, from hazards identification and risks evaluation to the MREWS design and implementation
- Activity 2.1.1.2: Organization of two regional workshops for the validation of studies
- Activity 2.1.1.3: Organization of three national consultation workshops with populations on the use of the MREWS

Output 2.1.2: The necessary MREWS equipment are acquired and put in place

- Activity 2.1.2.1: Acquisition and installation of observation equipment (weather stations, stream gauge, sensors, piezometers...)
- Activity 2.1.2.2: Acquisition of IT equipment (servers, processing unit, software, GPS...)
- Activity 2.1.2.3: Acquisition of necessary data related to the MREWS (biophysical, socio-economic, mapping...)
- Activity 2.1.2.4: Acquisition of necessary tools and equipment for broadcasting warning messages to populations (beacon, flags, siren, signals, loud-speakers...)
- Activity 2.1.2.5: Constitution and organization of the Tripartite Regional Management Unit (TRMU)
- Activity 2.1.2.6: Rehabilitation/construction of premises for the Tripartite Regional Management Unit (TRMU)

Output 2.1.3: The MREWS is developed and operational

- Activity 2.1.3.1: Creation of the MREWS Unit under the supervision of the Tripartite Regional Management Unit
- Activity 2.1.3.2: Organization of training sessions for the MREWS unit (MREWS use, data processing, elaboration of indicators...)
- Activity 2.1.3.3: Organization of workshops for presenting the MREWS
- Activity 2.1.3.4: Organization of quarterly meetings of the Tripartite Regional Management Unit (TRMU)
- Activity 2.1.3.5: Organization of study and exchange trips
- Activity 2.1.3.6: Acquisition of supplies and consumables for the Tripartite Regional Management Unit
- Activity 2.1.3.7: Design, validation and editing of products (MREWS letter, maps, briefs, reports, digital supports...)
- Activity 2.1.3.8: Organization of two testing operations

Output 2.1.4: A Disasters contingency plans are set up

- Activity 2.1.4.1: Elaboration of a contingency Response Plan against climate change related hazards at the level of the three beneficiary countries
- Activity 2.1.4.2: Organization of training sessions on the contingency Response Plan deployment, aimed at different actors involved in the three countries
- Activity 2.1.4.3: Acquisition of equipment for disasters management (3 devices for combating fires, bicycles, motorcycles, canoes, dinghies...)

Component 3: Improvement of the resilience of ecosystems and populations' livelihoods through the implementation of concrete adaptation and mitigation actions

The impact of climate change on natural resources and populations livelihoods is a fact in the WAP Complex. In order to address this critical situation, the project proposes the implementation of both adaptation and mitigation actions with the aim to maintain the ecological equilibrium of the WAP Complex and to improve the resilience of its riparian populations. The major focused themes, will be, natural resources and ecosystems (water, soil, forest and pastoral ecosystems) as well as common agricultural practices within the Complex (transhumance, overgrazing, illegal logging). This component will allow the implementation of measures to improve infrastructures for the benefit of farmers, fishermen, pastoralists, to develop silvopastoralism, to promote renewable

energies and to create a revolving system.

This component will have three main outcomes:

Outcome 3.1: The resilience of ecosystems and populations is improved through concrete adaptation actions

Under this outcome, the project will conduct activities that will help to reduce the adverse impact of climate change on the integrity and equilibrium of the natural resources, in order to maintain and preserve ecosystem services. The adaptive capacity of the population living around the Complex, will also be enhanced via concrete adaptation measures (development of infrastructures: water points, transhumance paths ...) and through promoting other activities as agroforestry and small-scale irrigation. The different actions to be undertaken will be realized involving the local workforce.

The planned outputs and activities with this outcome are:

Output 3.1.1: The Water points are developed or rehabilitated

- Activity 3.1.1.1: Identification of sites for the establishment of water points
- Activity 3.1.1.2: Identification and training of the employed workforce
- Activity 3.1.1.3: Development of water points through the installation of equipment

Output 3.1.2: Transhumance routes and rest areas for cattle are constructed

- Activity 3.1.2.1: Identification of the layout of routes and rest areas
- Activity 3.1.2.2: Identification and training of the involved workforce
- Activity 3.1.2.3: Creation of transhumance routes
- Activity 3.1.2.4: Construction of drinking troughs and rest areas for cattle

Output 3.1.3: Firewalls are strengthened and developed

- Activity 3.1.3.1: Identification of firewalls locations
- Activity 3.1.3.2: Identification and training of the involved workforce
- Activity 3.1.3.3: Development and clearing of the identified sections

Output 3.1.4: Agro-forestry and small-scale irrigation are applied

- Activity 3.1.4.1: Identification of the agroforestry species to be used
- Activity 3.1.2.2: Identification and training on agro-forestry and irrigation dedicated to the beneficiary farmers
- Activity 3.1.4.3: Creation of nurseries for the production of agroforestry plants and attribution to the beneficiaries
- Activity 3.1.4.4: Acquisition and attribution of drip irrigation equipment to beneficiaries

Output 3.1.5: Structures and equipment for fishermen are provided

- Activity 3.1.5.1: Identification of priority landing sites along the river and its tributaries
- Activity 3.1.5.2: Construction of docking structures for canoes
- Activity 3.1.5.3: Identification and training of beneficiary fishermen
- Activity 3.1.5.4: Acquisition and attribution of fishing equipment (conservation equipment)

Outcome 3.2: Resilience of ecosystems and populations are improved through concrete mitigation measures

To enhance mitigation measures in African countries, the present project includes several activities for GHG mitigation and promotion of renewable energy as solar and wind energies. This will contribute to achieve the Nationally Determined Contributions (NDCs) of the three beneficiary countries as well as the global objectives set up within the framework of the Agreement at the COP21 to the UNFCCC held in Paris in 2015.

This outcome will be structured with three outputs as follows:

Output 3.2.1: Wooded and pastoral areas are improved and reforested

- Activity 3.2.1.1: Identification of sites for reforestation and pastoral improvement
- Activity 3.2.1.2: Training of beneficiary nursery growers
- Activity 3.2.1.3: Creation of forest and pasture nurseries
- Activity 3.2.1.4: Training of the work force involved in the reforestation works
- Activity 3.2.1.5: Reforestation and pastoral improvement

Output 3.2.2: Improved cooking stoves are allocated to women

- Activity 3.2.2.1: Identification of beneficiary women (inventory, selection and consultation)
- Activity 3.2.2.2: Training of beneficiary women on the utilization of **cooking stoves**
- Activity 3.2.2.3: Allocation of improved **cooking stoves** to beneficiary women

Output 3.2.3: Solar panels are installed in wells and in community infrastructures (schools, administration offices...)

- Activity 3.2.3.1: Identification of infrastructure and wells to be equipped
- Activity 3.2.3.2: Training of beneficiaries on the utilization and maintenance of solar panels
- Activity 3.2.3.3: Equipment of infrastructures with solar panels

Outcome 3.3: The resilience of populations to Climate change is strengthened and their livelihoods are improved through income-generating activities

The involvement of the riparian population and the improvement of their livelihoods are prerequisites for the success and sustainability of the project activities. The resilience of the local population will be strengthened through the establishment of a micro-finance mechanism for the creation of income-generating activities for the beneficiaries.

This outcome will be achieved through the following outputs and activities:

Output 3.3.1: Revolving funds are set up to support diversification of incomes

- Activity 3.3.1.1 : Organization of information events and awareness-raising workshops for communities on revolving funds
- Activity 3.3.1.2 : Training of beneficiaries on the use and management of revolving funds
- Activity 3.3.1.3 : Handover and Supervision of Disbursement of the funds

Output 3.3.2: Income-generating activities are sustained

- Activity 3.3.2.1: Selection and training of the beneficiaries on income generating activities
- Activity 3.3.2.2: Acquisition and distribution of beehives to beneficiaries
- Activity 3.3.2.3: Acquisition of equipment for the distillation of essential oils
- Activity 3.3.2.4: Valuation of non-timber forest products (NTFP) such as shea, baobab, moringa, néré, tamarind, gums, etc.
- Activity 3.3.2.5: Construction of "Nature's Stores" to present and sell local handcrafts

Component 4: Awareness-raising and capacity building for concerted, integrated and sustainable management of the WAP Complex

The success and sustainability of programs and projects is very often determined by the degree of the awareness of target groups and their adaptive capacity. therefore, an entire component dedicated to awareness-raising, communication and capacity building is proposed. This component has a cross-cutting dimension, it will concern different targeted groups and will focus on the major challenges and issues in the WAP Complex. A strategy and an action plan for communication and awareness-raising will be developed and will serve as a decision-support tool for the concerned managers and authorities in the three countries.

This component will have the following outcome:

Outcome 4.1: The concerned actors are mobilized and sensitized through adapted communication and capacity building

In order to achieve the project goals, all target groups (decision-makers, youths, pupils, women, etc) will be involved in training, capacity building, and environmental education sessions. This will lead to a better understanding of concepts in relation with the major themes of this project as: climate change, natural disasters, natural resources, and biodiversity. The trainings will also cover the use of the tools and products to be developed by the project.

Communication and awareness channels, tools and supports that will be used, will be identified taking into consideration the specific characteristics of the target area and the available means (Radios, SMS, WEB, environmental clubs...).

This outcome will be achieved through the following outputs and activities:

Output 4.1.1: Practitioners, technicians and decision makers are sensitized and trained on environmental challenges

- Activity 4.1.1.1: Elaboration of specific training modules on the main themes addressed by the project
- Activity 4.1.1.2: Organization of thematic training workshops for practitioners and technicians
- Activity 4.1.1.3: Organization of information events and extension sessions aimed at decision-makers at each country level

Output 4.1.2: Populations are sensitized and informed

- Activity 4.1.2.1: Elaboration of a strategy and an action plan for communication and awareness-raising
- Activity 4.1.2.2: Design and development of communication supports (leaflets, posters, flyers, syntheses, documentaries, spots for local radios, phone application ...)
- Activity 4.1.2.3: Creation/strengthening of environmental clubs at local institutions (colleges, high schools) through training and equipment
- Activity 4.1.2.4 : Design of environmental education sessions for pupils and women in local language
- Activity 4.1.2.5 : Organization of environmental education sessions for pupils and women
- Activity 4.1.2.6 : Organization of awareness and information days for populations (cultural and artistic activities on climate change adaptation and mitigation)
- Activity 4.1.2.7: Set- up of a radio web (studio equipment, web server, and a mobile phone application)
- Activity 4.1.2.8: Organization of training sessions to create radio programs for the riparian populations of the three countries (radio announcer and program designer)

B. New and innovative solutions and approaches

As previously described, the project will develop and promote innovative solutions and approaches in order to facilitate and to enhance the communication between the various stakeholders to achieve the targets of the project at the regional scale. This issue will be presented more in details in the full proposal and discussed during the consultative workshops.

The project will promote innovative solutions and new tools adapted to the regional context. It will use remote sensing and GIS and new communication technologies as mentioned above in Table 1.

These technologies will be used to develop the MREWS tools and messages for broadcasting. In addition, it will use existing linkages with relevant national level sectors and other regional forums to share lessons and policy recommendations. Also, face-to-face interactions during regional workshops and meetings will be facilitated. Furthermore, the promotion of innovative solutions will be considered in various activities of the project through the involvement of different stakeholders and target groups, such as youths, women, private sector, NGOs, and civil society, in the design of the alert system, the updating of the management plan or the execution of the

activities. This approach will foster ownership of the project and ensure the sustainability of its achievements.

C. Socio-economic and environmental benefits of the project

At the socio-economic level:

The project will directly contribute to improve the populations' livelihoods, in the three beneficiary countries through innovative approaches and mechanisms, as well as through the development of income-generating activities. The improvement of infrastructures and the organization of transhumance will also help to increase the income from livestock breeding and agricultural activities practiced to date in the region. This would ensure food security for the affected population and would reduce people's instability and migration within the Complex.

The approach to be adopted by the project will contribute to managing conflicts between communities related to access to and use of natural resources. Vulnerable groups (Women and children) will be specifically targeted by the project to assure their participation in all its activities (training and community based management).

The livelihoods improvement will be based on the development of alternative income generation activities such as beekeeping, handcrafts, essential oils extraction, valorization and commercialization of the forest non-timber products. To support the development of these activities in this context, a revolving funds scheme will be set up, since the activities will focus on poorer households.

Some activities of the project are specifically targeting woman and vulnerable groups. To reduce pressure on forest and other ecosystems and natural resources, improved cook stoves will be introduced thereby improving resilience to climate change. The stoves will also have the positive side effect of reducing women's and children's burden of collecting fuel wood. Women could then spend more time on productive activities. The youth will also be engaged in activities such as tree seedlings production in tree nurseries.

In general, the project will contribute to stabilizing and improving the situation in rural areas and thereby preventing migration of young men to urban centers in search of income generation activities.

At the environmental level:

The project will have very high impacts on the natural ecosystems of the WAP complex and on the population living around it. Indeed, the implementation of the proposed Multi-Risk Early Warning System (MREWS) will allow the reduction of the impacts related to climate changes disasters. The information that the MREWS will generate at the appropriated moment will help the complex managers and population to trigger the contingency plan (EP), and hence to reduce the damages. The project will develop a specific EP on the base of the analysis of the vulnerabilities of ecosystems and population.

The improvement of the actual parks management plans and the development of the complex master plan by mainstreaming climate change will have concrete benefits on the ecosystems through adoption of adapted approaches, measures and actions. In another hand, these strategic documents will contain measures to restore ecosystems and rehabilitate forest and pastoral areas. The restoration of these habitats will have benefic impacts on the preservation and development of the existing animal and plant biodiversity. These strategic documents will also emphasis on mitigation measures focusing on reforestation promoting carbon sequestration and the uses of renewable energies to alleviate pressure on woody ecosystems. Developing such strategic documents should ensure the durability of the projects results.

On the ground and during the project implementation period, the activities to be undertaken will have direct environmental benefits. The nurseries to be developed, the sites to be reforested, the management tools to be achieved such as water points, the trails for transhumance to be realized, the intervention tools to be furnished, etc. will have concrete impacts on the existing ecosystems.

The design of the project will promote activities compatible with the ecological and social context

of the complex such as agroecology, agroforestry and adapted pastoralism.

The lessons learnt and the good practices to be adopted will be extended to other parks and sites in the three involved countries and in the sub region. This will be favored through the involvement of the population and actors at local and central level.

The sensitization and communication planned activities will ensure the mobilization of decision makers and local population and their engagement for a sustainable management of the ecosystems in the complex and around it (the buffer zone). Awareness raising is the basis for sustaining the project's achievements in favor of the preservation of the natural resources of the complex.

Capacity building of the population and involved stakeholders will focus on the approaches and adapted technics of management of the different the complex components.

D. Cost-effectiveness of the project

The proposed project is focusing its actions on a transboundary agro-ecological transition zone. The project with all its activities directly related to the adaptation of agriculture and Natural Resource Management to climate change, is both catalytic, pioneer and innovative in addition to its positive cost-benefit ratio. The implementation of activities such as support livestock mobility and cross border transhumance cannot be coordinated only at the national level. Therefore, regional coordination has a comparative advantage and cost-effectiveness.

The development of the Multi-Risk Early Warning System, the various infrastructures and managements and the acquisition of productive assets (e.g. energy efficient cook stoves), are relevant needs expressed by the three involved countries and have been selected based on available studies and technical feasibility analyses and on the basis of their potential for generating multiple social, economic and environmental benefits. Experience from adaptation projects has shown that building adaptation measures based on ecosystem management principles will deliver better returns on natural, human and economic capital investments, while at the same time maintaining resilient ecosystems, using less natural resources and reducing social disparities.

From an environmental perspective, this project is expected to generate significant benefits through the protection and rehabilitation of degraded and fragile ecosystems in the WAP Complex, who will then be able to continue to provide key ecosystem services, including water filtration (rivers, wetlands, peatlands), flood protection, carbon sinks (forests), as well as biodiversity that is vital to the continued livelihoods of rural communities. The approach taken for the development of this project has also sought to build on linkages and synergy with other projects under implementation or/and development, which is expected to generate multiple benefits nationally. By so doing, the project presents the least costly means of achieving rapid benefits.

The advantages of these investments will consist mainly in improving approaches for the rational conservation and management of the WAP Complex' forest formations, rangelands, water resources, lands, and fish resources, etc. and in strengthening the livelihoods of its adjacent population. Furthermore, the project will allow putting in place an efficient and operational Multi Risk Early Warning System which will serve to control natural hazards caused by climate change and variability, and which will substantially help to alleviate the damage on ecosystems and local livelihoods caused by these natural disasters. Concrete adaptation and mitigation measures will certainly contribute to more resilient ecosystems and natural resources to climate change and variability, and, consequently, to well-preserved ecosystem services.

E. Consistency of the project with national strategies and action plans for sustainable development

The present project is in line with the different national environmental and sustainable development strategies and action plans implemented in the three concerned countries⁶ : Benin, Burkina Faso and Niger.

The main national strategies and action plans which the project is aligned with are presented below:

Benin:

Within the framework of the national Agenda 21, the Government of Benin elaborated a National Sustainable Development Strategy (SNDD). The document was validated in September 2005 by the concerned stakeholders and adopted by the Government of Benin in March 2006. The SNDD defines a number of objectively verifiable indicators and mechanisms for the efficient implementation of the national Agenda 21.

The Strategy offers a reference framework for the development of a dynamic relation between all the actors concerned by the implementation of the Agenda 21 and the integration of the sustainable development component in all development actions, both at local and national levels. The SNDD is structured into 8 chapters and presents two strategic development areas, namely:

- Sectorial strategic fields: forestry, agriculture, livestock breeding, fishery, tourism, health, pollution, water resources protection;
- Inter-sectorial strategic fields: legislative and legal framework, macro-economic framework, education, training and research, democracy and good governance, gender sustainable development relation, poverty reduction, credit system, international cooperation, ICTs.

Since 1999, Benin has committed to the elaboration and implementation of poverty reduction strategies. Following the Interim Poverty Reduction Strategy (IPSR), drafted in 2000, Benin has developed three (3) other poverty reduction strategy papers:

- Poverty Reduction Strategy (PRS 1) 2003-2005 which served as a strategic reference and dialogue framework with Technical and Financial Partners (TFP);
- Growth Strategy for Poverty Reduction (PRS 2) 2007-2009;
- Growth Strategy for Poverty Reduction (PRS) 2011-2015. This Strategy is the result of a large participatory process that closely associated public administration, economic operators and the civil society. Generally, the PRS is inspired from the long-term vision described in the "National Long-term Outlook Studies", « Benin-Alafia 2025 » and is based on the Strategic Development Guidelines defined by the Government in 2006. This Strategy will contribute to the achievement of the Millennium Development Goals (MDGs) and is one of the country's mechanisms for resources mobilization and coordination.

As for land tenure, the major actions undertaken by the Government of Benin are as follows:

- The elaboration of a national land tenure policy;
- The enactment of a law on rural land tenure and the elaboration of rural land tenure plans;
- The elaboration of land registers in urban centres;
- The improvement of the mapping and topographic capacities of institutions in charge of land tenure;
- The formalization of land tenure rights at lower cost;

⁶Source: UN Conference on the Rio +20 Development goals, information document on DG in Benin, March 2012.

- The education of and communication with the population;
- The improvement of land tenure information registration and management and the outplacement of traffickers.

The present project is in line with the guidelines and objectives of the National Adaptation Programme of Action (NAPA) of Benin, elaborated in 2008 in accordance with the requirements of the United Nations Framework Convention on Climate Change (UNFCCC).

This Action Plan envisages several priority adaptation actions and measures, including among others:

- Urgent adaptation measures in all sectors, including agriculture, forests and rangelands,
- Establishment of a rapid Early Warning System to ensure food security,
- Adaptation of households to climate change through the promotion of renewable energy and economic and performing cookers,
- Mobilization of surface waters to increase adaptation to climate change in the communes.

In addition, the project responds to the *effect 6* of the United Nations Development Assistance Framework (UNDAF) in Benin 2014-2018, which stipulates that « By 2018, the institutions and populations of the intervention communes ensure a better management of the environment, natural resources, energy, living conditions, consequences of climate change, crises and natural disasters ».

Burkina Faso:

Sustainable development in Burkina Faso has achieved remarkable results at environmental, socio-economic and cultural levels. At the environmental level, several achievements were obtained in terms of research in soil and water conservation (drip irrigation, implusium, etc.), grafting techniques of wild fruit trees (shea, néré, jujube, etc.), introduction of high-value and high-output forest species and crop varieties, development of energy-saving technologies (improved cook stoves, economic cookers locally called "bitatorés"), in addition to other technologies using new renewable energies (like solar dryer, solar boiler, biodigester), the sustainable management of natural resources (demarcation and safeguard of rehabilitated lands, elaboration of sustainable management plans for forests and pastoral and silvo-pastoral areas), and the promotion of eco-citizenship. Despite the significant success, the country still faces several obstacles.

To cope with this situation, Burkina Faso has defined a number of policies and strategies, aiming at promoting the environment and natural resources⁷ such as:

- Poverty Reduction Strategy (PRS) 2000-2010
- Rural Development Strategy 2003-2015
- Letter for the Development of the Energy Sector (LPDSE) 2000
- Action Plan for Integrated Natural Resources Management (PAGIRE) 2003
- Action Plan and Investment Programme for the Livestock Sector (PAPISE) 2009
- National Environmental Education Strategy (SNEE) 2001
- National Environmental Education Action Plan for Sustainable Development (PANEDD)
- National Population Policy (PNP) 2010
- National Gender Policy (PNG) 2009

⁷Source: Sustainable Development Policy of Burkina-Faso, October 2013

- National Action Programme for Combating Desertification (PAN/LCD) 1994
- National Strategy and Action Plan on Biological Diversity
- National Strategy (called also National Communication) on Climate Change 2000
- National Action Programme for Climate Change Adaptation (PANA) 2006
- National Forest Policy (PNF) 1996
- National Environmental Policy (PNE) 2006
- Environmental Plan for Sustainable Development (PEDD) 2006.

In terms of adaptation to climate change, Burkina Faso has been implementing since 2007 an Action Plan which enabled a full diagnosis of the vulnerability of different sectors and the identification of priority activities, measures and projects. These priorities include:

- Early warning system
- Promotion of irrigation
- Development and management of water plans
- Production of fodder
- Development of natural formations
- Combating erosion
- Optimisation of irrigation
- Protection of pastoral areas
- Promotion of SWC/SDR
- Management of fauna and habitat
- Protection of water against pollution
- Promotion and improvement of households.

It should be noted that the objectives of the ADAPT-WAP project are consistent with several of the above-listed priorities and will support them through the establishment of an Early Warning System and the conservation of fauna and habitat in the Complex.

The project responds also to *effect 1* of the United Nations Development Assistance Framework UNDAF-Burkina Faso « Accelerated economic growth is sustainable and pro-poor”.

Niger:

In Niger, the National Environmental Plan for Sustainable Development (PNEDD)⁸ is equivalent to the National Agenda 21. It was elaborated in 1998 with the goal of expanding and sustaining development options for future generations. Its main objective is to afford favourable conditions for ensuring food security in the country, resolving the domestic energy crisis, improving sanitation and promoting economic development. To this end, the PNEDD has four complementary sub-objectives:

- Ensure a more rational management of natural resources in the framework of combating desertification by adopting a more holistic and systematic approach in addressing this issue;
- Integrate major environmental concerns in policies, programs and projects conducted for each development sector;
- Promote the involvement, empowerment and participation of populations in the management of their natural resource and environment, which would in turn contribute

⁸source CHM, Niger

to the preservation and improvement of their livelihoods;

- Build efficient partnerships among different actors involved in the issues of environment and sustainable development in Niger.

The PNEDD comprises of six priority programs:

- National Action Programme for Combating Desertification and for Natural Resources Management;
- Biological Diversity Management Programme;
- Climate Change Adaptation Programme;
- Water and Sustainable Development Programme;
- Urban Environment and Living Conditions Programme;
- Energy and Sustainable Development Programme.

The National Action Plan for Adaptation to Climate Change of Niger was elaborated in 2006 and identified several priority activities related to different sectors. In accordance with its objectives and scope, the present project will contribute to the implementation of some of these priority activities.

Finally, the project responds to *effect 1* of the UNDAF-Niger “By 2018, vulnerable households and targeted communities have increased their resilience in terms of food security, environment, disasters and socio-economic inclusion”.

F. Compliance with national technical standards

The project will be conducted with the full respect of national strategies and action plans for adaptation to climate change, biodiversity management, fight against land degradation, environment conservation, water and ecosystems sustainable management, and poverty reduction. All relevant national technical standards as environmental and social studies guidelines, land tenure regulations, etc, will be considered during the project implementation. Some resources from the project budget will be used to tackle difficulties encountered in natural resources management. Regarding this issue and in line with the national technical standards, the project aims to develop an Multi-Risk Early Warning System (MREWS) and a contingency plan to mitigate the negative potential impacts of threats and hazards that could affect local populations' livelihoods and ecosystems.

The proposed project will comply with the environmental standards of the three concerned countries. It will be in line with the guidelines of the National Sustainable Development Strategies (SNDS) and with the major guidelines of the national Agenda 21 and with the Poverty Reduction Strategy Paper (PRSP). More particularly, the project will support the implementation of sectorial and thematic action plans and strategies such as water strategy and forest and pastoral strategy. It will also contribute to achieve the objectives of the national action plan for combating desertification, the national biodiversity strategy and plan, and the Nationally Determined Contributions (NDC) and the National Adaptation Programme of Action (NAPA). Indeed, the NAPAs provide a reliable tool for the Least Developed Countries to identify priority activities, which respond to their urgent and immediate needs for adaptation. In West Africa and in the Sahel region, 14 countries, including Benin, Burkina Faso, and Niger, have developed their NAPAs. Their main objective is to draw a list of priority adaptation activities and project profiles that are intended to address the identified needs.

G. Complementarity with other projects

The project area has been the focus of several programs and initiatives pertaining to the management of natural resources and ecosystems namely the project Protected Ecosystems in Sahelian Africa (ECOPAS), the Support Programme to the W Park (PAPE), and the Support Programme to the Management of Protected Areas (PAGAP).

These projects aim essentially to enhance the management approaches in order to ensure the sustainability of resources and to improve populations' livelihoods.

However, analysis showed that the results obtained by these interventions remain limited. The last Development and Management Plan of the W Park (2017-2026), finalized in September 2016 with the support of the UNDP and the EU, as well as the two Development and Management Plans of the Arly Park (Burkina Faso) and the Pendjari Park (Benin), elaborated in 2016, are the most recent documents elaborated for the management of the WAP Complex. The various components of these Plans were based on lessons learned from previous initiatives as the Management Action Plan of the W Park (2006-2010).

In general, all these development and management plans aimed to consolidate the achievements of the transboundary and communal management of the WAP protected areas (WTBR, Arly and Pendjari) and to contribute at the same time to the sustainable development of its riparian populations. It aimed specifically to:

- Strengthen the management of the WTBR, Arly and Pendjari System;
- Conserve the WAP biodiversity and habitat in a concerted manner;
- Foster the development of the fauna population of the Complex through a sustainable management and development strategy;
- Improve knowledge through environmental education and set up rational technical and scientific networks;
- Promote shared management with local communities for sustainable development;
- Develop adapted touristic activities and services;
- Promote an equal distribution of biodiversity advantages and opportunities among the public institutions, private sector and riparian populations;
- Respond to the requirements of the UNESCO's World's Heritage and the Man & Biosphere (MAB) network.

Based on these objectives and components, the present project is designed to bridge gaps by integrating components that have not been taken into consideration by other projects or programmes, such as the current MAP. Among these components, we can mention:

- Establishment of a Multi-Risk Early Warning System (MREWS);
- Integration of climate change dimension and contingency plans in the management of the WAP Complex;
- Improving the resilience of ecosystems and populations' livelihoods to climate change;
- Capacity Building and awareness-raising of different actors and targeted groups.

In order to enhance synergy and complementarity with other projects and activities under way in the region, it is likely that other components / activities will be integrated into the project without compromising the general objectives previously agreed on.

H. Knowledge Management and Learning Strategies

Important processes and lessons to be learned from the present project will be documented and shared with all stakeholders in the region. This item focused on in component 4 will also facilitate the joint learning and sharing of experiences at different levels. The documentation and sharing activities will be an integral part of the existing monitoring and evaluation systems or the ones to be designed to adjust the project's future implementation. Moreover, the participatory and transboundary management of the WAP Complex will be a unique pilot experience to be replicated within the Complex and beyond.

The next table (x) provides information on the existing constraints/baselines and the guiding activities proposed within the framework of the project knowledge management strategy:

Table n°2: Constraints and proposed activities

Constraints/Baselines	Proposed activities
<p>Lack or inadequacy of exemplary practices and approaches in the region in terms of:</p> <ul style="list-style-type: none"> • Preventive management of natural disasters and Multi Risk Early Warning Systems (MREWS), • Consideration of adaptation and mitigation measures in the WAP Complex management, • Community management of crises and emergencies, • Monitoring of income-generating activities in favour of the local population, • Linkage between scientific knowledge and local know-how, • Coordination and partnership with stakeholders for joint action at the local and regional levels. 	<ul style="list-style-type: none"> • Documentation of the project activities and results, • Development of case studies based on project interventions as advisory and participatory processes, • Identification and implementation of adaptation and mitigation measures, • Establishment of a community-based action plan involving the local population, • Facilitation of the uptake and exchange of successful experiences and lessons learned of the project, • Documentation of response strategies to help future design, extension and up scaling of the project interventions and to influence practices and policy making.

I. Consultative process

Among its missions, OSS organizes various meetings and discussions with the national institutions of its member countries within the framework of projects and development program that it conducts. Thus, during various exchanges, the countries emphasized the importance of the preservation of the WAP ecosystem and the need to enhance the resilience of its populations.

As a response to this need expressed by the involved countries, OSS has established contacts and exchanges with the Adaptation Fund since 2016 and submitted a pre-concept for this regional project, which further was endorsed.

The development process of this project started with various exchanges with several actors in Benin, Burkina Faso and Niger. The exchanges were mainly conducted with the Centre National de Gestion des Réserves de Faune (CENAGREF) in Benin, Direction Générale des Eaux et Forêts (DGEF) in Burkina Faso, and Direction Générale des Eaux et Forêts(DGEF) and Centre National de Suivi Environnemental et Ecologique (CNSEE) in Niger.

Firstly, and within the preparatory phases of this project concept, OSS organized a regional consultation workshop to discuss the main goals of the project, its expected outcomes and activities to be executed under its different component.

This workshop was held from 3 to 5 February 2017 in Tapoa (Niger W Park) and was attended by Forest General Directors, decision-makers, managers in charge of the WAP Complex at national and local level, representatives of the riparian populations, local authorities and associations of the three countries.

For an efficient transboundary management and in order to address Climate Change issues, a multi-disciplinary, multi-sectoral and multi-institutional approach is required. In designing this project Concept, the main stakeholders were consulted and their inputs were integrated in the various components and activities to be implemented. The proposed project design facilitates multi-stakeholder participation and collaboration starting right from its development up to its implementation. It promotes consultations, participatory processes and dialogues among the various stakeholders of government, non-government, private sector, development partners, and

local communities. This approach will create ownership by the various stakeholders, and ensure sustainability of project interventions by creating institutionalized systems. This is also expected to establish a mechanism for scaling-up similar approaches and interventions.

The above-mentioned consultation workshop aimed to:

- Inform partners and beneficiary populations about the project and its objectives;
- Learn more about the participants’ needs and expectations. The participants’ suggestions and recommendations have been taken into consideration in drafting the present document.

The different parties consulted during the project preparation process are the following:

Table n° 3: Parties consulted

No	Organization
National Level	
1	Benin : Centre National de Gestion des Réserves de Faune (CENAGREF)
2	Burkina Faso : Direction Générale des Eaux et Forêts (DGEF)
3	Niger : * Direction Générale des Eaux et Forêts (DGEF) * Centre National de Suivi Environnemental et Ecologique (CNSEE)
Local Level	
1	The managers of the three W Parks
2	Representatives of the populations

The major themes that have been tackled were:

- The relevance and necessity of establishing an MREWS and an contingency plan to manage disasters;
- The nature of the project and its specific role in the management of natural disasters and emergencies;
- The project potential contribution in the conservation of the Complex’s ecosystems and natural resources;
- The involvement of the riparian population and the improvement their livelihoods;
- The main actors, their roles, responsibilities and contribution during the project implementation;
- The strengthening of the project management structures;
- The strengthening of the awareness-raising and communication activities aimed at the project actors and stakeholders;
- The role of women and youths in the project implementation;
- The complementarity and synergy with other similar projects.

The whole recommendations and ideas are gathered in a single report which was shared among the three countries. The workshop report is annexed to the present document.

As this project will gather representatives and actors of the three concerned countries, the coordination will be carried out in close collaboration with the local management structures. The local communities will have a crucial role in the implementation of the components and activities

Finally, the development of the project full proposal will also follow a very long and wide consultative and participatory process at various levels in the three countries. This participatory process will help to draft the full document of the project and to identify priority actions for a better management of the Complex to improve the riparian populations’ livelihoods.

The project will involve actors from different levels, including the local level through a “Tripartite Regional Management Unit” and the active participation of NGOs, populations, youths, women and the private sector.

Priority interventions and actions will be identified, selected and hierarchized through a community-based and participatory process. The communities’ most vulnerable groups such as

women, children, elders, persons with disabilities, etc. will be specifically targeted by the present project.

J. Justification of the funding request

According to the “Disaster Risk Management Strategy in West Africa and the Sahel” (2011-2013), food security in West African countries is strongly affected by climate and environmental changes. Due to climate change, the frequency and intensity of natural disasters have increased, especially in terms of extreme weather events as droughts and floods. The most important decrease in precipitation was recorded in the Sahel region, even though the Sudanian and Guinean areas were also affected. In addition, this change in rainfall patterns has been manifested since 2005 in irregular and violent precipitations which caused recurrent floods and consequently significant damage to public infrastructures, houses, crops and livestock.

Indeed, the frequency and intensity of climate hazards and natural disasters have significantly increased and, today, their impacts are more visible. Given the vulnerability of its ecosystems and population, Africa is one of the most affected continents by natural disasters. The latter has significant impact on natural resources, ecosystems and on the livelihoods. Due to the above-mentioned vulnerability of the WAP, these impacts are expected to be amplified.

The impact of these natural disasters is more severe on the most vulnerable and poor populations, especially those who rely on agriculture and livestock breeding for their livelihoods. The latter are faced with recurrent risks, which often lead to a decrease of the production, loss of livestock, and limited availability of fish and forest resources.

The WAP Complex vulnerability to natural disasters, justifies the setup of a Multi-Risk Early Warning System against climate change-related disasters. The MREWS and its contingency plan will allow, the identification and implementation of adaptation and mitigation measures, to improve the riparian populations livelihoods, and to conduct awareness-raising and communication activities. This regional project will adopt a coherent, integrative and inclusive approach that is in concordance with the national strategies in the three countries and responds to the expectations of their local populations, and comply with the strategic guidelines of the Adaptation Fund, the OSS and the different regional and international Agreements and Conventions.

In fact, the local populations of the three concerned countries have convergent needs and expectations: the development of pastoral and agricultural lands, the improvement of their livelihoods through, the diversification of income-generating activities, the establishment of an Early Warning System against climate change related hazards, the improvement of infrastructure and capacity building, etc. These needs were confirmed during the regional consultation workshop organized by OSS in the framework of the development of the present proposal.

The project is also in line with the OSS Strategy 2020, especially in terms of natural resources and disasters management. OSS’ priorities include the fight against land degradation and the promotion and conservation of biodiversity and natural resources in the Sahara and Sahel region.

The project objectives as well as its activities listed above match perfectly the Adaptation Fund’s objectives and domains. The institutional measures, mechanisms and actions to be developed under this project will help to increase the resilience of populations and ecosystems to climate change.

The project and international orientations

The issue of transboundary management is relevant to the Sustainable Development Goals (SDGs) 13 and 15, concerning respectively « take urgent actions to combat climate change and its impacts » and « life on land ». The project responds also to the SDG1 “No poverty” and SDG7 “Affordable Clean Energy”.

The project will also meet the recommendations and orientations of many international and regional Agreements and Conventions, such as the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention for Combating Desertification

(UNCCD), and the United Nations Convention on Biological Diversity (UNCBD). In addition, it is in line with several priority fields of action defined in the «**Land Matters for Climate: Reducing the Gap and Approaching the Target** » document, elaborated and edited by the UNCCD.

Among these actions, the main focus will be on:

- Immediate Action: Policies and incentives that promote sustainable land management, including enhanced carbon stocks through land rehabilitation and ecosystem restoration, may will be the missing piece of the climate puzzle that helps to reduce the remaining emissions gap in a demonstrable and cost-effective manner.
- Setting Priorities: The transition to climate-smart land management practices, including for example low-emissions agriculture, agroforestry and the restoration of high carbon-value ecosystems, such as forests and peatlands, will require sectoral coordination, multi-stakeholder engagement and new approaches to integrated land use planning.
- Multiple Benefits: Adopting and scaling up more sustainable management practices in the land use sector not holds significant mitigation potential, but very often provides short-term benefits in terms of land productivity and food security while, at the same time, helping to ensure the long-term resilience and adaptive capacity of the more vulnerable communities.

The management of the WAP transboundary Complex is relevant to the goal 1.3 of the CBD's Programme of Work on Protected Areas: "To establish and strengthen regional networks, transboundary protected areas (TBPAs) and collaboration between neighbouring protected areas across national boundaries " and the Aichi's Target 11: " By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. ".

Worth to recall here also the 4 priorities of the Sendai Framework of Disaster Risk Reduction (2015-2030), adopted in March 2015 in Sendai, Japan, and its paragraph (a) of point 28 of priority 2: « Strengthening disaster risk governance to manage disaster risk ». The paragraph stipulates the following "To guide action at the regional level through agreed regional and sub-regional strategies and mechanisms for cooperation for disaster risk reduction, as appropriate, in the light of the present Framework, in order to foster more efficient planning, create common information systems and exchange good practices and programmes for cooperation and capacity development, in particular to address common and transboundary disaster risks".

The final outreach of the project is in accordance with the priorities of the UNFCCC regarding the support to give to population in developing countries to reduce their vulnerability to climate change and to contribute to the international efforts in reducing CO2 emissions.

Indeed, confirmed during the CoP22 of Marrakech, the Paris Agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 °C. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives.

K. Sustainability of project outcomes during designing the project

The project aims to strengthen the resilience of ecosystems and to improve populations' livelihoods in the WAP complex through the establishment of a Multi-Risk Early Warning System (MREWS) and the implementation of concrete adaptation and mitigation measures.

The project will provide an opportunity to consolidate synergy among the three beneficiary countries in order to improve the participatory and sustainable management of the WAP Complex as well as to resolve conflicts between the different users.

The overall objective of the project will be achieved through the following specific objectives:

- Improve Strategic reference documents, i.e. development and management plans, by integrating climate change issue.
- Improve populations' resilience through an Early Warning System and provide relevant and timely information on the occurrence of extreme weather events related to climate change in the WAP Complex and its adjacent areas.
- Improve ecosystems' resilience (fauna and flora) and populations' livelihoods through the consolidation of infrastructure, for example transhumance corridors, drinking troughs, and anti-flood structures.
- Ensure the sustainability of adaptation measures through the mobilization and awareness-raising of beneficiaries and partners to master the developed tools and execute the needed work.

The improvement of ecosystems' resilience and the establishment of new infrastructures, including a structure for the sustainable management of the Early Warning System, are all factors that will help to guarantee the sustainability of the project achievements and results. In addition, the enhancement of the local populations' livelihoods and their reconciliation with natural resources will help to alleviate the pressure exerted on these resources and will contribute to maintain the ecological equilibrium of the Complex.

The sustainability of the project will be further ensured by the participatory and consultative process to be adopted for and during the implementation of activities which will help to encourage the project appropriation by the local authorities and communities of the three concerned countries. The project will rely on financial resources mobilization for the implementation of the activities as well as of the Management Plans mentioned above, which will contribute to ensure the continuity of the process after the closure of the project, especially with the expected active participation of NGOs, populations and the private sector.

The economic viability of activities, especially those involving populations, is highly dependent on their compatibility with the existing systems and practises at community level and on the availability of resources. Moreover, the creation of "Revolving Funds" linked to the management of micro projects (a revolving system) will also contribute to the anchoring and making sustainable the project approaches.

While organizing consultations for the full proposal, issues of sustainability will be discussed with ministries, regional institutions and partners to encourage them to allocate some resources and ensure the sustainability of the project achievements. Beneficiary countries are committed to support the implementation of project activities and this approach is also necessary for sustainability. Ministries may allocate some resources to insure the continuation of some activities and regional institutions, involved in the Steering Committee (ACMAD, AGRHYMET, CILSS, UEMOA, UE and ECOWAS) will also be encouraged to secure the continuation of activities of the project which are in lines with their mandate.

L. Overview of the environmental and social impacts and risks identified as being relevant to the project

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	Yes. The project complies with domestic laws and policies.	No. The project complies with domestic laws and policies of the three countries (Benin, Niger and Burkina Faso)
Access and Equity	Yes. In general, the project promotes fair and equitable access to project benefits. However, the nature of the project does not allow all community members to benefit from the project in the same way.	There is a risk that access to benefits related to capacity building would not provide equal access opportunities. Since some activities of the project are not intended to provide a benefit for all.
Marginalized and Vulnerable Groups	No initiatives are identified with specific orientation or execution that could generate a negative impact on marginalized and/or vulnerable groups.	The project activities will be monitored closely, particularly with regards to the former use of resources in the Complex area, in order to ensure that these measures are accompanied with activities aiming for livelihood improvement and other means to ensure subsistence through the exploitation of those resources.
Human Rights	No activities are identified whose execution is not in line with the established international human rights. Project objectives promote basic human rights for equitable access to the various activities to be implemented and to capacity building as well as access to information.	The project will guarantee human rights respect for all stakeholders and local population in accordance with its objectives and scope.
Gender Equity and Women's Empowerment	The activities of the project are oriented to promote a fair and equal development between men and women. The project promotes equal participation in decision-making processes by ensuring the representation of women at the different steps and levels.	An in-depth gender analysis of the involvement of men and women for the proposed options as concrete adaptation activities must be undertaken
Core Labour Rights	The project respects the labour standards	

Indigenous Peoples	The project promotes the respect of the rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples. In the local communities, different tribes exist, but no sharp distinction between indigenous and non-indigenous people can be made.	There is a risk that the traditional use of natural resources and land use rights are undermined. Therefore, a detailed analysis about rights and land use, particularly with regards to water and forest resources, must be undertaken in the initial project phase.
Involuntary Resettlement	The project will not be involved in resettlement activity of communities.	
Protection of Natural Habitats	The protection of ecosystems and its natural habitats and biological diversity is a core objective of component 1, 2 and 3 of the project.	The implementation of all the activities related to the protection and management of ecosystems and natural habitats shall be closely monitored to evaluate if the expected positive impact is achieved or if any unexpected negative side effects are generated.
Conservation of Biological Diversity		
Climate Change	The project does not only increase the adaptation capacity of the local population and the resilience of the ecosystems, but also contributes to mitigate CC impacts through the introduction of improved stoves and reforestation initiatives.	-
Pollution Prevention and Resource Efficiency	The project will contribute to energy efficiency, efficient use of water and prevention of water pollution.	-
Public Health	The project will not have negative impacts on public health. On the contrary, the project will contribute to improve health conditions of the communities by monitoring ecosystems, water and soil quality. The SAP will also contribute to prevent the population from natural disasters, to improve income for getting access to health facilities, etc.	-
Physical and Cultural Heritage	The project will not have any activity related to affecting physical and cultural heritages. Their	-

	protection/conservation will rather be promoted by the project.	
Lands and Soil Conservation	Soil conservation and reduction of land degradation through the pastoral management activities, and reforestation.	The implementation of all the activities related to the protection and management of land shall be closely monitored to evaluate if the expected positive impact is achieved or if any unexpected negative side effects are generated. An environmental and social assessment will be conducted during the full proposal preparation

PART III: IMPLEMENTATION ARRANGEMENTS

A. Project management arrangements at the regional and national level, including coordination arrangements within countries and among them.

The project will involve stakeholders at regional, national and local level.

- **At the local level:** The project is based on a participatory approach that aims to involve all stakeholders at the local level. The development and implementation of the project will require the mobilization of populations and other local authorities as well as associations, NGOs, representatives of villages, women cooperatives, etc. The tripartite committee, which includes representatives and managers from the three countries, will be strengthened so that it can assume its management and coordination responsibilities in the best way. The project includes capacity-building activities for the benefit of all actors at the local level and all managers (materials, training, awareness-raising ...) in order to be able to assume their respective responsibilities. They will also be trained, for better control and use of the MREWS, for the effective implementation of the contingency plan, as well as the implementation of silvopastoral activities.
- **At the national level:** The project will be implemented by national executing entities who will be mandated in consultation with the Ministries in charge of Environment in the three beneficiary countries:

Benin: The Ministry of Environment, Housing and Urban Development (Ministère de l'Environnement, de l'Habitat et de l'Urbanisme (MEHU) in charge of Climate Change issues, Reforestation and Natural Resources Protection through the CENAGREF (Centre National de Gestion des Réserves de Faune),

Burkina Faso: The Ministry of Environment and Sustainable Development (Ministère de l'Environnement et du Développement Durable), through the Directorate General of Water Resources and Forests (DGEF),

Niger: The Ministry of Environment, Urban hygiene and Sustainable Development (Ministère de l'environnement, de la salubrité urbaine et du développement durable) through the National Centre for Ecological and Environmental Monitoring (CNSEE) and the General Directorate of Water and Forests (DGEF).

These different national entities were fully involved throughout the project design process, and identification of its components and activities.

Representatives of these entities will be part of the project Steering Committee.

- **At the regional level:** The project will be implemented by the Sahara and Sahel Observatory (OSS) who will serve as the Regional Implementing Entity (RIE) and will be in charge of all financial, monitoring and reporting aspects to the Adaptation Fund. The project will be executed by a Project Management Team (PMT) to be hosted by OSS and the national executing institutions. The project will be implemented by a Project Management Team hosted by OSS, which will collaborate with the Tripartite Regional Management Unit and the National executing entities. The Project Management Team, to be chaired by the OSS Environment Program Coordinator, will have a multidisciplinary competence, bringing together at least one project coordinator, two environmental experts and one financial expert. The unit will ensure the good execution of the various components of the project and ensure coordination between the different national and local entities. On the other hand, the unit centralizes, compiles and analyses the financial and technical monitoring reports while ensuring that the project's logical framework, objectives and expected results are achieved.

Other international and regional organizations will also be involved, in particular by being part of the project steering committee (CILSS, ECOWAS, UEMOA, IUCN, EU).

The following figure (figure 1) shows the role of the different entities of the project at the local, regional and national levels:

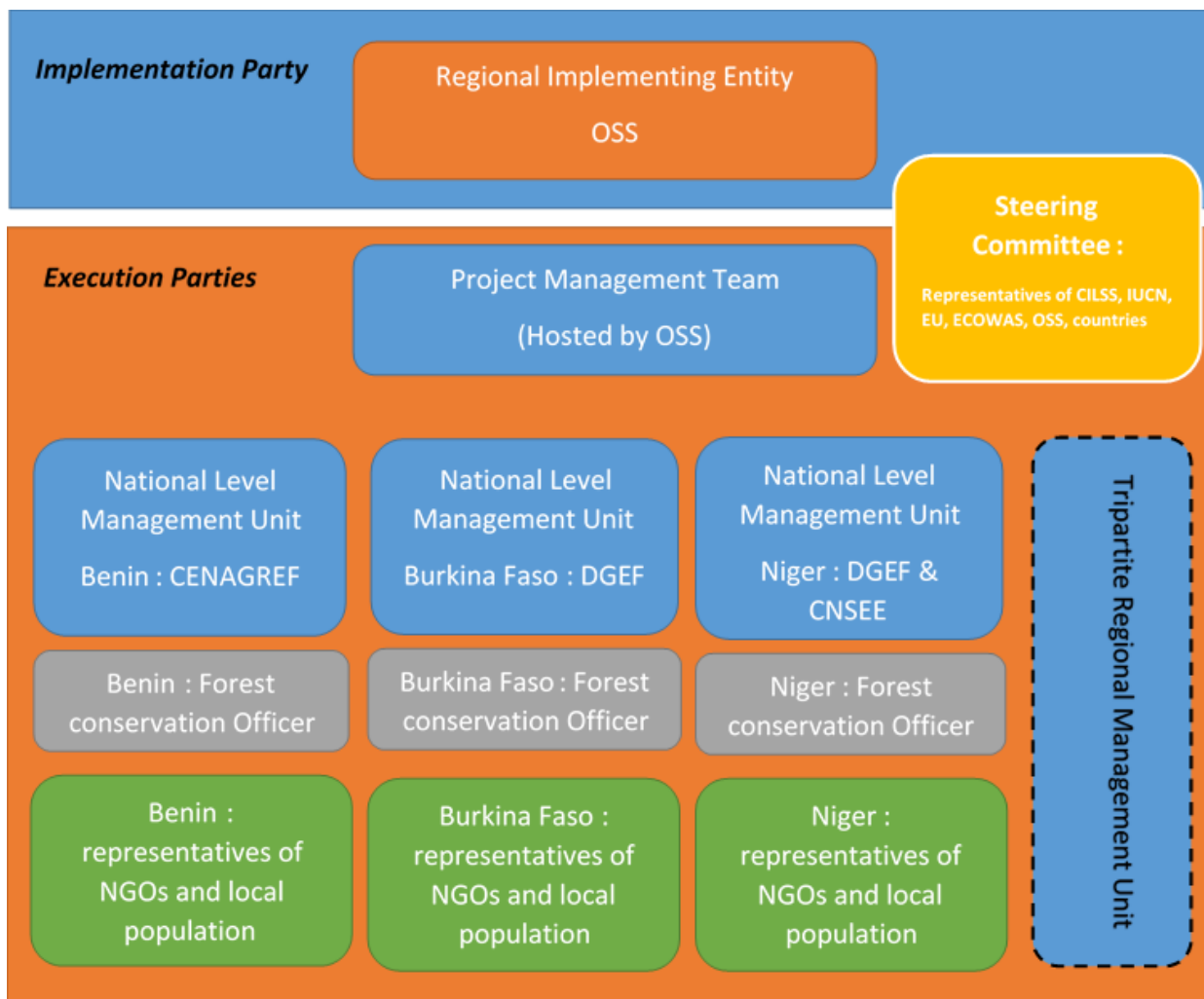


Figure 1. Institutional arrangements

B. Financial and project risk management measures

A first screening of the financial, management, environmental and social risk has been established and the potential risks and response measures identified are described in the following table (table 5). It is although important to underline that a comprehensive analysis of the financial framework and risk management of the project will be developed during the formulation of the full proposal of the project.

This framework will be specified in the procedural and operational manual to be agreed upon between the main stakeholders.

In order to manage financial risks, a reference framework will be established to specify the modalities of budget and fiduciary management that will govern the relations and operation of the entities involved in implementing the project.

Table 5: Financial and management risk measures

No	Identified Risks	Level (H, M, L)	Risk Management Measures
1	Changes in the governments may cause possible shifts in responsible persons at central and national levels	M	Risk is minimized through project coordination among stakeholders at national, departmental and local levels.
2	Lack of coordination between different entities (regional, territorial and national governments).	L	The establishing of a project Tripartite Regional Management Unit and the communication between different stakeholders will be facilitated and streamlined. The project will also TRMU
3	Collaboration amongst the relevant technical institutions	M	The relevant institutions should be involved right from the project inception phase and continuously in planning, implementation, Programme review, and reporting.
4	High expectations by communities and local government for quick investments on the ground	H	More awareness-raising programs for explaining the immediate contribution of the project and its long-term results
5	Mismatch between the Complex and administrative boundaries	L	Promote the Complex-based management and development. The involvement of local authorities would allow to contain the border problem
6	Inadequate baseline data / resource potential	M	Establish baseline situation before/after the project implementation. The project will acquire the appropriate data. A GIS will be developed and periodically fed with information and indicators derived from satellite data
7	Low technology / adoption rate by communities	L	Promote, demonstrate and train population on new technologies and practices. On the other Hand, the project will develop products and tools adapted to the local realities.
8	Local communities with limited participation and willingness to promote project initiatives	L	Increase sensitization at the local communities level, work with available local structures, ensure

			active involvement of community organizations in the project implementation
9	Project resource capture	L	Follow transparent and participatory processes in selecting beneficiaries of the project, using agreed criteria i.e. defining criteria and processes to select community members who are eligible to get access to the revolving fund

C. Alignment of Environmental and Social risk management measures with the Environmental and Social Policy of the Adaptation Fund

At this stage, a brief overview of Environmental and Social potential risks is specified in the table below (table 6). As mentioned above, and during the full proposal preparation, an Environmental and Social Management Plan (ESMP) will be developed in collaboration with relevant authorities. Further detailed ESMP for each intervention will be formulated during the inception phase of project implementation.

Table 6: Environmental and Social risk management measures

No	Identified Risks	Level (H, M, L)	Risk Management Measures
1	The delineation of degraded areas for rehabilitation may shift the pressure to non-degraded areas and some conservation measures and, if not carefully selected, may aggravate the degradation	M	Select carefully areas for rehabilitation and include the population in the rehabilitation activities. Introduce alternative income generation activities for livelihood diversification to reduce the pressure on natural resources. Monitor protected areas as well as the surrounding environment
2	The activities may have a negative environmental impact and cause social conflict with users	M	Strengthen the coordination and conflict resolution mechanisms at the WAP Complex. The M&E system and the GIS tools to be developed will help the identification of negative impacts
3	Natural resource use-related conflicts	M	Include all stakeholders in consultation at local level, strengthen the existing local conflict resolution mechanism, and integrate conflict resolution mechanism in natural resources management structures

D. Monitoring and evaluation arrangements budget and plan

1- Monitoring and Evaluation System dedicated to the project progress

In order to evaluate the impacts of the planned activities and to support decision makers and managers of the Complex in planning and adjusting the programs and activities, a M&E system will be developed and implemented. The system will be structured and organized according to the different levels of interventions:

- Local level: for the conservators
- National level: for the centralized technical departments
- Regional level: for the project Management Team, i.e. the “consultation” unit

Information collected and integrated into the system at local and national levels will be used to calculate global indicators salient for the regional level, and vice versa. The indicators to be developed will cover ecological (change in vegetation cover surface and state, carbon sequestration, etc.), and socio-economic (number of beneficiaries, amelioration of the incomes, etc.) issues. The M&E system will serve as a powerful and effective tool for the management of the Complex. It will valorize the GIS to be implemented in the framework of the project but also contribute to feed it with data and information. The two systems (GIS and M&E) will be interconnected and operate complementarily and will serve as management tools during the project implementation and to be sustained after its closure.

Finally, the population will take part in the M&E activities such as the definition of indicators and the interpretation of their calculated values. They will also be part of the process of identifying corrective actions to tackle potential problems or insufficiencies raised by the M&E.

Indeed, the M&E system will adopt a participatory approach and will be a combinatory tool, even managed by technicians of the local services. This will reinforce the collaboration between the population and technical authorities and consequently solve problems of conflicts of interest.

2- Monitoring and Evaluation for the project management

The Ethics and Finance Committee (EFC), with the support of the Adaptation Fund Secretariat, monitors the Adaptation Fund's portfolio of projects and programmes. The Board requires that projects and programmes under implementation submit annual status reports to the EFC and that the implementing entities ensure that capacity exists to measure and monitor results of the executing entities at the country-level.

The OSS guarantees that the Executive Entity will undertake the monitoring and evaluation (M&E) and prepare the yearly reports. To this effect, the Executive Entity will be entirely devoted to an effective and efficient project implementation.

Quarterly Progress Reports will be prepared by the Executive Entity and verified by OSS. Annual Project Reports will be prepared to monitor progress. These annual reports include, but are not limited to, reporting on the following issues:

- Progress made towards the project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative);
- Project outputs delivered per project Outcome (annual);
- Lessons learned / Best practices;
- Annual expenditure reports;
- Reporting on project risk management.

A joint review mission to the project sites will be conducted twice a year. The joint review will include representatives from countries, executing and implementing entities, stakeholders from local administrations and representative of the communities. The first mission will focus on reviewing the M & E plan while the following ones will focus on the results. Every mission will provide an on-site technical support to the project staff on the ground.

In terms of financial monitoring, the project team will provide the OSS with certified periodic financial statements. Audits of the project will follow international standards regulations and rules and applicable audit policies.

During the project implementation, Annual Work Plans (AWPs) and Quarterly Work Plans (QWPs) will be used to refine project delivery targets and realign project work upon consultation and endorsement by OSS.

The project will undergo an independent mid-term review, which will determine progress being made towards the achievement of outcomes and identify adjustments if needed. It will focus on the effectiveness, efficiency and timeliness of the project implementation, highlight issues requiring decisions and actions, and present initial lessons learned about project design, implementation and management.

The findings of this review will be presented and incorporated as recommendations the mid-term project evaluation. Furthermore, a final evaluation will also be conducted. The M&E budget of the project is shown in the table below (table 7):

Table 7: Project M&E Budget (USD)

M&E Activity	Responsible parties	Budget (USD)	Time frame																Notes
			2018				2019				2020				2021				
			Quarters				Quarters				Quarters				Quarters				
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Design of a Monitoring & Evaluation System for the project		10.000																	
Initial studies to improve baseline, gender analyses, land rights analyses and environmental and social impact assessment		30.000																	
Field visits for measuring the project results for each target and reporting as well as gender and land right analysis	Monitoring & Evaluation expert / communication specialist / e project manager and Ministries in charge of Environment	40.000																	Quarterly
Monitoring and reporting the project outputs by project team	Project manager, team and Ministries in charge of Environment	30.000																	Half-yearly
Visits to field sites for joint review of status, project progress and reporting	Project team at OSS and Ministries in charge of Environment	20.000																	Yearly
Mid-term evaluation and reporting	Project manager/ M&E expert / communication specialist	20.000																	At the end of the first two years
Final evaluation and reporting	Ministries in charge of Environment	20.000																	At least two months before the project

																					closure	
Preparation and elaboration of the Final Report of the project	Project manager and ministries in charge of Environment	15.000																				At the end of the project
Final Project Audit	OSS	15.000																				At least two months before the project closure
Total M & E costs		200.000																				

E. Results framework for the project proposal, including milestones, targets and indicators.

The Project Results Framework (table 8) defines the performance indicators of the project implementation and identifies means of verification. A Monitoring and Evaluation (M&E) system will be established based on these indicators and means.

Any changes to the Results Framework require prior approval by all of the partners and OSS as implementing entity. The launching workshop is crucial to strengthen the ownership of the project results, to present its execution modalities, and to share with the different actors its implementation arrangements.

Table 8: Results framework for the project proposal

Objective	Indicator	Baseline	Target	Data source/method
<p>Objective:</p> <p>The ADAPT-WAP project aims to strengthen the resilience of ecosystems and to improve populations' livelihoods in the WAP Complex through the establishment of a multi-risk early warning system and the implementation of concrete adaptation measures.</p> <p>The project will allow to consolidate synergy between the beneficiary countries by strengthening the sustainable and participatory management of the WAP Complex and its natural resources while contributing to conflict resolution.</p>	<ul style="list-style-type: none"> • Degree of improvement of populations' resilience to climate change • Number and surface of disasters/damage controlled • Percentage of households with improved livelihoods 	<ul style="list-style-type: none"> • Resilience of populations and ecosystems is limited • Disasters are not adequately managed • Populations' livelihoods are unfavourable 	<ul style="list-style-type: none"> • 60% of ecosystems with proven improved resilience to climate change, • 60% of natural disasters are anticipated and then controlled, • Livelihood of at least 60 % of the targeted populations is improved, 	<ul style="list-style-type: none"> • Resilience evaluation Report, surveys, • Disasters monitoring reports • MREWS, GIS and M&E tools
Component 1: Integration of climate change aspects and a contingency plan (MHMREWS) in the WAP Complex Management				
Outcome 1.1: Climate change dimension and its risks as well as the	Climate change dimension is mainstreamed in the complex management plans	The existing management document doesn't integrate the climate dimension and its	• The WAP Complex master plan is developed and adopted during the first half of the 2 nd year	• Project Technical reports Monitoring and evaluation report

contingency plan are integrated into the Complex management plans	and tools	impacts on ecosystems and population	<ul style="list-style-type: none"> The existing management plans are updated and validated during the second year 	MREWS monitoring report
Output 1.1.1: The Complex's development master plan integrating climate change is updated and validated	<ul style="list-style-type: none"> Elaboration of thematic studies Finalization of the master plan Organization of workshops for the master plan validation 	<ul style="list-style-type: none"> Lack of a strategy and plans for the Complex management, Lack of basic thematic studies for the rational and sustainable management of the Complex, 	<ul style="list-style-type: none"> At least 3 thematic studies are elaborated The master plan is elaborated and validated 	<ul style="list-style-type: none"> Studies and workshop reports, Master plan document
Output 1.1.2: Adaptation and mitigation action plans are elaborated (based on the master plan)	<ul style="list-style-type: none"> Progress in terms of adaptation and mitigation measures identification Finalization of the adaptation and mitigation action plan 	<ul style="list-style-type: none"> The impacts of climate change are not well known and are not taken into account by the different actors and managers of the WAP Complex The adaptation and mitigation concepts are not taken into account in the WAP management 	<ul style="list-style-type: none"> At least 1 workshop per country is organized to identify appropriate adaptation and mitigation measures, 1 regional consultation and restitution workshop is organized, 1 adaptation and mitigation action plan is finalized, 	<ul style="list-style-type: none"> Reports of consultation workshops revised Action plan documents, Action Plan validation report by concerned actors/structures
2. Component 2: Design and establishment of a Multi-Risk Early Warning System (MREWS) related to droughts, floods, and fires				
Outcome.2. A Multi-Risk Early Warning System is used by the project's beneficiaries to manage emergencies	<ul style="list-style-type: none"> Progress in the MREWS establishment Number of beneficiaries /users/structures of the MREWS 	<ul style="list-style-type: none"> No system in place Population unaware of the relevance and utility of the MREWS and how to use it 	<ul style="list-style-type: none"> The MREWS is operational At least 70 % of the population is sensitized and master the MREWS utilization 	<ul style="list-style-type: none"> Project Technical reports Monitoring and evaluation report MREWS monitoring report
Output 2.1.1: Preparatory studies are elaborated and validated: MREWS is	<p>Progress status of:</p> <ul style="list-style-type: none"> Preparatory studies 	<ul style="list-style-type: none"> Disasters are not well managed, No coordination mechanism 	<ul style="list-style-type: none"> All preparatory studies are elaborated during the first year MREWS is developed and 	<ul style="list-style-type: none"> Studies reports, Studies validation

designed	<ul style="list-style-type: none"> • MREWS conceptual study • MREWS development • MREWS management structure 	in place for disasters monitoring and management	<p>operational during year 2</p> <ul style="list-style-type: none"> • MREWS Management Unit is set up during year 2 	<p>reports</p> <ul style="list-style-type: none"> • Management Unit creation • Report of the MREWS testing operation
Output 2.1.2: The necessary MREWS equipment are acquired and put in place	<ul style="list-style-type: none"> • Acquisition of necessary equipment for the MREWS 	<ul style="list-style-type: none"> • Lack of necessary equipment and tools for disasters monitoring and prevention 	<ul style="list-style-type: none"> • All necessary equipment and tools for the MREWS operationalization are acquired during year 2 	<ul style="list-style-type: none"> • Necessary materials and tools are acquired and installed • Project Technical reports
Output 2.1.3. The MREWS is developed and operational	<ul style="list-style-type: none"> • Operationalization of the MREWS • Utilization of the MREWS by populations and actors • Constitution of Management Units 	<ul style="list-style-type: none"> • No disasters monitoring system is in place and operational, • Negative impact of disasters on ecosystems and population is significant, • No Management/Supervision Unit is not in place and/or functional 	<ul style="list-style-type: none"> • 1 Management Committee of the MREWS is set up during the 1st half of year 1 • At least 2 training session for the MREWS Management Unit is organized during the year 2 • At least 1 testing operation is organized and successful during the 1st quarter of year 2 	<ul style="list-style-type: none"> • Minutes/reports of trainings • Project Technical reports • Report on the testing operations
Output 2.1.4. Disasters contingency plans are set up	<ul style="list-style-type: none"> • Progress of the contingency plan elaboration • Capacities and competence of managers in the contingency plan utilization 	<ul style="list-style-type: none"> • Absence of plans/strategies/approaches/equipment to intervene in case of contingency 	<ul style="list-style-type: none"> • 1 contingency plan/country is elaborated during year 1 • 1 regional contingency plan is elaborated during the year 2 • At least 2 training sessions are organized during year 1 , • At least 50 % of necessary equipment for intervention in case of contingency are acquired in the year 1 	<ul style="list-style-type: none"> • Documents of contingency plans, • Reports/minutes of training sessions, • Project Technical reports • equipment are in place

Component 3: Improving the resilience of ecosystems and populations' livelihoods through the implementation of concrete adaptation and mitigation actions

<p>Outcome.3.1: the resilience of populations and ecosystems is improved through concrete adaptation actions</p>	<ul style="list-style-type: none"> • Surface of land managed with adaptation actions • Population benefiting from adaptation actions 	<p>Ecosystems and population are vulnerable to climate change impacts and no specific strategies, action plans and tools exist to make them adapted</p>	<ul style="list-style-type: none"> • The resilience of at least 60% of the population is strengthened • At least 60% of the ecosystems are covered by adaptation actions 	<ul style="list-style-type: none"> • Project Technical reports • Monitoring and evaluation report
<p>Output 3.1.1 : Water points are developed/rehabilitated at the Complex level involving local workforce</p>	<ul style="list-style-type: none"> ▪ Creation and development of water points, ▪ Percentage of involved population 	<ul style="list-style-type: none"> • Number of water points is insufficient, • Existing water points are not well-managed, 	<ul style="list-style-type: none"> ▪ At least 6 water points are developed during year 1 ▪ 9 water points are developed during year 2, ▪ Concerned population (local workforce) is trained during year 1 	<ul style="list-style-type: none"> ▪ Water points developed ▪ Reports of populations training ▪ Project technical reports ▪ Monitoring and evaluation reports
<p>Output 3.1.2. Transhumance corridors and rest areas are constructed/created for livestock involving local workforce</p>	<ul style="list-style-type: none"> • establishment of the transhumance corridors 	<ul style="list-style-type: none"> ▪ Transhumance is not organized, ▪ Inadequate infrastructure for population and transhumant cattle ▪ Inadequate involvement of local workforce 	<ul style="list-style-type: none"> ▪ The transhumance routes are elaborated during year 2 and 3 ▪ Targeted population (local workforce) is trained ▪ 6 water troughs and rest areas are developed during year 2 ▪ 6 water troughs and rest areas are developed during year 3 	<ul style="list-style-type: none"> ▪ Materials/structures, (routes, troughs...) delivery documents ▪ Reports of workforce training sessions ▪ Project technical reports ▪ Monitoring and evaluation reports
<p>Output 3.1.3 Firewalls are strengthened and developed involving local workforce</p>	<ul style="list-style-type: none"> • Development of firewalls 	<ul style="list-style-type: none"> ▪ Insufficient firewalls in the WAP Complex, ▪ risk of uncontrolled fire extension 	<ul style="list-style-type: none"> ▪ Limits of firewalls are identified during the first half of year 2 ▪ Local workforce is trained for the firewalls implementation during the first year, ▪ 100 % of the firewalls clearing/development works are finalized during the year 3 	<ul style="list-style-type: none"> ▪ Firewalls plans elaborated and validated, ▪ Workforce training reports ▪ Project technical reports ▪ Monitoring and evaluation reports

<p>Output 3.1.4 : Agro-forestry and small-scale irrigation are applied</p>	<ul style="list-style-type: none"> • Plantation and production of agro-forest plants, • Allocation of agro forest plants and irrigation equipment to beneficiaries 	<ul style="list-style-type: none"> • Agroforestry and small-scale irrigation practices are not adopted by farmers and riparian population, • Populations/farmers are not aware of the importance of agroforestry and small-scale irrigation, 	<ul style="list-style-type: none"> ▪ Agro-forest species to be adopted are identified during year 1 ▪ 100 % of beneficiaries and targeted farmers are trained during the first two years, ▪ 6 nurseries are created during year 1 ▪ 6 nurseries are created during year 2 ▪ 30 % of necessary equipment for small-scale irrigation are allocated to beneficiaries during year 1 ▪ 100 % of small-scale irrigation equipment are acquired in year 2, 	<ul style="list-style-type: none"> ▪ Installation of nurseries, ▪ Training reports, ▪ Small-scale irrigation equipment are handed to the beneficiaries ▪ Project technical reports ▪ Monitoring and evaluation reports
<p>Output 3.1.5. Structures and equipment are provided for fishermen</p>	<ul style="list-style-type: none"> ▪ Construction of docking structures for canoes, ▪ Acquisition and attribution of fishing equipment 	<ul style="list-style-type: none"> ▪ lack of necessary materials for fishing and need to improve infrastructure fishing conditions, ▪ Fishermen do not have necessary materials for rational fishing, 	<ul style="list-style-type: none"> ▪ 100 % of docking/landing sites are identified during year 1, ▪ 6 docking structures are constructed during year 2, ▪ 100 % of beneficiary fishermen are trained during year 2 and 3, 	<ul style="list-style-type: none"> ▪ Docking structures are in place and delivered, ▪ Structures and equipment delivery documents, ▪ Fishermen training reports, ▪ equipment are attributed to fishermen (receipts). ▪ Project technical reports ▪ Monitoring and evaluation reports
<p>Outcome 3.2. the Resilience of Populations and ecosystem is improved through concrete mitigation measures</p>	<ul style="list-style-type: none"> • Land and water resources managed with mitigation actions • Population implementing mitigation actions and 	<ul style="list-style-type: none"> ▪ Ecosystems are degraded or vulnerable to climate change impacts and their services are affected ▪ Benefits of ecosystem services are decreasing and their 	<ul style="list-style-type: none"> • The resilience of at least 60% of the population is strengthened • At least 60% of the ecosystems are covered by mitigation actions 	<ul style="list-style-type: none"> • Project Technical reports ▪ Monitoring and evaluation report ▪ Information derived for GIS and M&E tools

	benefiting of their effects	benefits to population are reducing		
Output 3.2.1. Wooded and pastoral areas are improved and reforested	<ul style="list-style-type: none"> - Rehabilitation of degraded ecosystems by reforestation and assisting natural regeneration 	<ul style="list-style-type: none"> ▪ large bare and unfrosted areas/, ▪ Pastoral areas need improvement, ▪ Inadequate involvement of local work force in the Complex reforestation 	<ul style="list-style-type: none"> ▪ All sites to be reforested are identified during the year 1, ▪ 50 % of identified areas are reforested by end year 2 ▪ 80 % of identified areas are reforested by end year 3 ▪ 100 % of identified areas are reforested by end year 4 ▪ 100 % of involved workforce is trained during year 1 and 2 	<ul style="list-style-type: none"> • Project Technical reports ▪ Monitoring and evaluation report ▪ Information derived for GIS and M&E tools ▪ Workshop reports ▪ Training reports
Output 3.2.2 Improved cook stoves are allocated to women	<ul style="list-style-type: none"> • beneficiary women use cook stoves 	<ul style="list-style-type: none"> ▪ Lack of awareness about energy-saving importance, ▪ Excessive use of firewood for cooking 	<ul style="list-style-type: none"> ▪ Beneficiary women are identified at the year 1 ▪ 100 % of beneficiary women are trained at the year 2 ▪ 50 % of cook stoves are attributed during year 2 ▪ 100 % of cook stoves are attributed during year 3 	<ul style="list-style-type: none"> ▪ Training reports ▪ Certificates of cook stoves delivery • Project Technical reports ▪ Monitoring and evaluation report
Output 3.2.3. Solar panels are installed in wells and in community infrastructures (schools, dispensary, local administrations...)	<ul style="list-style-type: none"> • Solar panels acquired, installed and used 	<ul style="list-style-type: none"> ▪ No use of solar energy in the Complex and its adjacent areas, ▪ Lack of awareness about the importance and use of solar energy ▪ Woodcutting for energy use is affecting forest ecosystems 	<ul style="list-style-type: none"> ▪ All infrastructures and units to be equipped with solar energy are identified at the year 1 ▪ 1st set of solar energy equipment is installed during year 2 ▪ 2nd sets of solar equipment are installed during year 3, 	<ul style="list-style-type: none"> ▪ Identification studies/survey report, ▪ Delivery/installation certificates installation installed during year 1 of with solar energy are identified, ▪ Beneficiaries training report

				<ul style="list-style-type: none"> • Project Technical reports ▪ Monitoring and evaluation report
Outcome 3.3 : the resilience of Populations to climate change is strengthened and their livelihoods are improved through income-generating activities	<ul style="list-style-type: none"> • Livelihoods of population are improved and sources of incomes diversified 	<ul style="list-style-type: none"> ▪ Livelihoods and sources of incomes are strongly linked to natural resources and affecting ecosystems 	Income generation activities improve the livelihoods of 30% of the vulnerable population	<ul style="list-style-type: none"> • Project Technical reports ▪ Monitoring and evaluation report
Output.3.3.1. Revolving funds are set up to diversify income sources	<ul style="list-style-type: none"> • Number of beneficiaries trained, sensitized and beneficiating of revolving funds 	<ul style="list-style-type: none"> ▪ Absence of financial mechanisms for the WAP population ▪ Lack of awareness about revolving funds 	<ul style="list-style-type: none"> ▪ 3 information workshops are organized during year 1, ▪ 3 training workshops are organized for beneficiaries during year 2, 	<ul style="list-style-type: none"> ▪ Workshops reports/minutes • Project Technical reports ▪ Monitoring and evaluation report
Ouput.3.3.2. Income-generating activities are sustained	<ul style="list-style-type: none"> • Population identification process • Number of income-generating activities created for beneficiaries 	<ul style="list-style-type: none"> ▪ Impoverished livelihoods, ▪ Socio-economic activities based on subsistence agriculture and extensive livestock breeding, ▪ Environmentally unfriendly activities, 	<ul style="list-style-type: none"> ▪ 30 % of income-generating activities are created during year 2 ▪ 80 % of income generating activities are created during year 3, ▪ 100 % of income-generating activities are created during year 4 	<ul style="list-style-type: none"> ▪ Receipt certificates, ▪ Documents of Provisional/definitive receipt of handcraft stores • Project Technical reports ▪ Monitoring and evaluation report

Component 4: Awareness-raising and capacity building for concerted, integrated and sustainable management of the WAP Complex.

<p>Outcome.4 Concerned actors are mobilized and sensitized through adapted communication and capacity building</p>	<p>Stakeholders and actors are mobilized through sensitization and communication actions</p>	<p>Climate change hazards and impacts are misunderstood by population and stakeholders</p>	<ul style="list-style-type: none"> • Communication and sensitization strategies and Plan are developed the 1st year • Population is sensitized on the project thematic from the second half of the first year 	<ul style="list-style-type: none"> • Project Technical reports • Monitoring and evaluation report
<p>Output 4.1.1 : Practitioners, technicians and decision makers are sensitized and trained on environmental challenges</p>	<ul style="list-style-type: none"> • Number of training sessions, • Number of beneficiaries trained 	<ul style="list-style-type: none"> • Population is inadequately aware of environmental challenges, • Population is not well-trained with regard to environmental challenges, 	<ul style="list-style-type: none"> • 3 training sessions are organized during year 2, • 7 training sessions are organized during year 3 	<ul style="list-style-type: none"> • Workshop reports • Project Technical reports Monitoring and evaluation report
<p>Output 4.1.2. Populations are informed and sensitized</p>	<ul style="list-style-type: none"> • Progress of the elaboration of awareness-raising strategies/action plans, • Number of awareness-raising materials /supports designed and disseminated, • Number of environmental education days/sessions for populations, • Number of pupils/women trained or attended environmental education sessions 	<ul style="list-style-type: none"> • Lack of awareness activities/programs/workshops about environmental challenges aimed at actors/targeted groups 	<ul style="list-style-type: none"> • An awareness-raising strategy/action plan is elaborated during year 2, • 1 set/year of communication and sensitization supports is designed and disseminated, • 5 awareness information sessions are organized starting from year 2 , • 3 environmental clubs are created during year 3 	<ul style="list-style-type: none"> ▪ Plan/strategies documents, ▪ Training reports, training sessions, awareness and communication days, workshop reports • Project Technical reports • Monitoring and evaluation report

F. Project alignments with the Results Framework of the Adaptation Fund

This section will be developed during the drafting of the project document (full proposal)

Project Objective(s) ⁹	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)

⁹ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

G. Detailed budget

Component/outcome/output/activity	Notes on the budget	Cost \$	Number of units	Total budget \$
Component 1: Integration of climate change aspects and contingency plan (MHMREWS) in the WAP Complex management				
Outcome 1.1: Climate dimension and its risks as well as the contingency plan are integrated into the Complex management plans				
Output 1.1.1: The Complex's development master plan integrating climate change is updated and validated				
Activity 1.1.1.1: Set up of a Geographic Information System and elaboration of mapping products (demarcation of the project area, vulnerability...)	Lump-sum	50,000	1	50,000
Activity 1.1.1.2: Implementation of three studies about land-tenure, socio-economics, strategic focus (institutional, administrative, legal ...)	Study	30,000	3	90,000
Activity 1.1.1.3: Update of forest and pastoral management and development plans	Plan	50,000	1	50,000
Activity 1.1.1.4: Organization of a workshop for the validation of studies and mapping products	Workshop	20,000	2	40,000
Activity 1.1.1.5: Design and editing of the master plan for the Complex development	Diagram	30,000	1	30,000
Activity 1.1.1.6: Organization of a workshop for the validation of the master plan	Workshop	20,000	1	20,000
Output 1.1.2: Adaptation and mitigation action plans are elaborated				
Activity 1.1.2.1: Identification of the most vulnerable sites for implementation of adaptation and mitigation actions	Study	30,000	1	30,000
Activity 1.1.2.2: Organization of consultation workshops with populations and technicians for the validation of sites and adaptation and mitigation measures	Workshop	10,000	4	40,000
Activity 1.1.2.3: Elaboration of an action plan for the implementation of the identified adaptation actions	Plan	30,000	1	30,000
Activity 1.1.2.4: Elaboration of an action plan for the implementation of the identified mitigation measures	Plan	30,000	1	30,000
Activity 1.1.2.5: Organization of a workshop for the validation of the adaptation and mitigation action plans	Workshop	30,000	1	30,000
Sub-total				440,000
Component 2: Design and establishment of a Multi-Risk Early Warning System (MREWS) related to droughts, floods, and fires				
Outcome 2.1: A rapid Early Warning System is used by the project's beneficiaries to manage emergencies				
Output 2.1.1: Preparatory studies are elaborated and validated: MREWS is designed				
Activity 2.1.1.1: Implementation of six preliminary studies for the establishment of the MREWS from hazards identification and risks evaluation to the MREWS design and operation	Study	20,000	6	120,000
Activity 2.1.1.2: Organization of two regional workshops for the validation of studies	Workshop	15,000	2	30,000
Activity 2.1.1.3: Organization of three national consultation workshops with populations on the	Workshop	15,000	3	45,000

MREWS priorities				
Output 2.1.2: The necessary MREWS equipment are acquired and put in place				
Activity 2.1.2.1: Acquisition and installation of observation equipment (weather stations, stream gauge, sensors, piezometers...)	Lump-sum	365,000	1	365,000
Activity 2.1.2.2: Acquisition of IT equipment (servers, processing unit, software, GPS...)	Lump-sum	120,000	1	120,000
Activity 2.1.2.3: Acquisition of necessary data related to the MREWS (biophysical, socio-economic, mapping...)	Lump-sum	120,000	1	120,000
Activity 2.1.2.4: Acquisition of necessary tools and equipment for broadcasting warning messages to populations (beacon, flags, siren, signals, loud-speakers...)	set/country	40,000	3	120,000
Activity 2.1.2.5: Constitution and organization of the Tripartite Regional Management Unit (TRMU)	Workshop	5,000	4	20,000
Activity 2.1.2.6: Rehabilitation/construction of premises for the Tripartite Regional Management Unit	Lump-sum	100,000	1	100,000
Output 2.1.3: The MREWS is developed and operational				
Activity 2.1.3.1: Creation of the MREWS Unit under the supervision of the Tripartite Regional Management Unit				0
Activity 2.1.3.2: Organization of training sessions for the MREWS unit (MREWS use, data processing, elaboration of indicators...)	Thematic workshop	30,000	4	120,000
Activity 2.1.3.3: Organization of workshops for the launching/presentation/monitoring of the MREWS	Workshop	20,000	4	80,000
Activity 2.1.3.4: Organization of quarterly meetings of the Tripartite Regional Management Unit	Meeting	2,500	16	40,000
Activity 2.1.3.5: Organization of study and exchange trips	Travel	20,000	2	40,000
Activity 2.1.3.6: Acquisition of supplies/consumables for the Regional Management Unit	Lump-sum	60,000	1	60,000
Activity 2.1.3.7: Design, validation and editing of products (MREW Sletter, maps, summary reports, digital supports...)	Set/year	15,000	4	60,000
Activity 2.1.3.8: Organization of two testing operations	Operation	70,000	2	140,000
Output 2.1.4: Disasters contingency plans are set up				
Activity 2.1.4.1: Elaboration of an Contingency Response Plan (ERP) against climate change related hazards at the level of the three beneficiary countries	Plan	50,000	1	50,000
Activity 2.1.4.2. Organization of training sessions on the ERP utilization aimed at different actors involved in the three countries	3 national workshops and 1 regional workshop.	20,000	4	80,000
Activity 2.1.4.3. Acquisition of equipment for disasters management (three devices for combating fires, bicycles, motorcycles, canoes, dinghies...)	set/countries	130,000	3	390,000
Sub-total				2,100,000

Component 3: Improvement of the resilience of ecosystems and populations' livelihoods through the implementation of concrete adaptation and mitigation actions				
Outcome 3.1: Resilience of ecosystems and populations is improved through concrete adaptation actions				
Output 3.1.1: Water points are developed/rehabilitated at the Complex level involving local workforce				
Activity 3.1.1.1: Identification of sites for the establishment of water points	Survey - study	15,000	1	15,000
Activity 3.1.1.2: Identification and training of the employed workforce	Workshop	5,000	1	5,000
Activity 3.1.1.3: Development of water points through the installation of equipment	5 water Points/countries	10,000	15	150,000
Output 3.1.2: Transhumance routes and rest areas are constructed for cattle involving local workforce				
Activity 3.1.2.1: Identification of the layout of the area	Survey- study	20,000	1	20,000
Activity 3.1.2.2: Identification and training of the involved workforce	Workshop (rest areas and drinking troughs)	5,000	2	10,000
Activity 3.1.2.3: Creation of transhumance routes	Lump-sum	200,000	1	200,000
Activity 3.1.2.4: Construction of troughs and rest areas for livestock	15 troughs and 9 rest areas	10,000	24	240,000
Output 3.1.3: Firewalls are strengthened and developed involving local workforce				
Activity 3.1.3.1: Identification of locations for firewalls	Survey - study	20,000	1	20,000
Activity 3.1.3.2: Identification and training of the involved workforce	Workshop	5,000	1	5,000
Activity 3.1.3.3: Development and clearing of the identified sections	Lump-sum	200,000	1	200,000
Output 3.1.4: Agro-forestry and small-scale irrigation are applied				
Activity 3.1.4.1: Identification of the agroforestry species to be used	Survey - study	10,000	1	10,000
Activity 3.1.4.2: Identification and training on the agroforestry and irrigation activities dedicated to beneficiary farmers	Workshop (agroforestry and small-scale irrigation)	5,000	2	10,000
Activity 3.1.4.3: Creation of nurseries for the production of agroforestry plants and attribution to beneficiaries	3 nurseries /country	10,000	9	90,000
Activity 3.1.4.4: Acquisition and attribution of drip irrigation equipment to beneficiaries	3 sets/country	10,000	9	90,000
Output 3.1.5: Structures and equipment are provided for fishermen				
Activity 3.1.5.1: Identification of priority landing sites along the river and its tributaries level	Survey - study	10,000	1	10,000
Activity 3.1.5.2: Construction of docking structures for canoes	2 Structures/country	15,000	6	90,000
Activity 3.1.5.3: Identification and training of beneficiary fishermen	Workshop	5,000	1	5,000

Activity 3.1.5.4: Acquisition and attribution of fishing equipment	1 set/country	50,000	3	150,000
Outcome 3.2: Resilience of populations and ecosystems is improved through concrete mitigation measures				
Output 3.2.1: Wooded and pasture areas are improved and reforested				
Activity 3.2.1.1: Identification of sites for reforestation and pasture improvement	Survey - study	10,000	1	10,000
Activity 3.2.1.2: Training of beneficiary nursery growers	Workshop	5,000	1	5,000
Activity 3.2.1.3: Creation of forest and pasture nurseries	3 Nurseries/country	10,000	9	90,000
Activity 3.2.1.4: Training of the work force involved in reforestation	Workshop	5,000	1	5,000
Activity 3.2.1.5: Reforestation and pasture improvement	Lump-sum	1,200,000	1	1,200,000
Output 3.2.2: Improved cook stoves are allocated to women				
Activity 3.2.2.1: Identification of beneficiary women (inventory, selection and consultation)	Survey - study	5,000	1	5,000
Activity 3.2.2.2: Training of beneficiary women on the utilization of improved cook stoves	Workshop	5,000	1	5,000
Activity 3.2.2.3: Attribution of improved cook stoves to beneficiary women	Lump-sum	100,000	1	100,000
Output 3.2.3: Solar panels are installed in wells and in community infrastructures (schools, local administrations...)				
Activity 3.2.3.1: Identification of infrastructure and wells to equip	Survey - study	20,000	1	20,000
Activity 3.2.3.2: Training of beneficiaries on the utilization and maintenance of solar panels	Workshop	5,000	1	5,000
Activity 3.2.3.3: Equipment of infrastructures with solar panels	1 set/country	100,000	3	300,000
Outcome 3.3: Resilience of populations to climate change is strengthened and their livelihoods are improved through income-generating activities				
Output 3.3.1: Revolving funds are set up to diversify income sources				
Activity 3.3.1.1: Organization of information events and awareness-raising workshops for communities on revolving funds	1 Workshop/country	10,000	3	30,000
Activity 3.3.1.2: Training of beneficiaries on the use and management of revolving funds	1 Workshop/country	15,000	3	45,000
Activity 3.3.1.3: Handover and Supervision of Disbursement of the funds	Lump-sum	15,000	1	15,000
Output 3.3.2: Income-generating activities are sustained				
Activity 3.3.2.1: Selection and training of beneficiaries on income generating activities	1 workshop	30,000	3	90,000
Activity 3.3.2.2: Acquisition and distribution of beehives to the beneficiaries	600 hives/country	100	1800	180,000
Activity 3.3.2.3: Acquisition of equipment for the distillation of essential oils	1 set/country	40,000	3	120,000
Activity 3.3.2.4: Valuation of non-timber forest products (NTFP) such as shea, baobab, moringa, nereid, tamarind, gums, etc..	1 set/country	40,000	3	120,000
Activity 3.3.2.5: Construction of "Nature's Stores" to offer and sell local and artisan products	1 set/country	15,000	3	45,000
				Sub-total 3,710,000

Component 4: Awareness-raising, communication and capacity building for concerted, integrated and sustainable management of the WAP Complex				
Outcome 4.1: Concerned actors are mobilized and sensitized through adapted communication and capacity building				
Output 4.1.1: Practitioners, technicians and decision makers are sensitized and trained on environmental challenges				
Activity 4.1.1.1: Elaboration of specific training modules on the main themes addressed by the project (natural resources)	Module	5,000	10	50,000
Activity 4.1.1.2. Organization of thematic training workshops for practitioners and technicians	Workshop	10,000	10	100,000
Activity 4.1.1.3. Organization of information events and extension sessions aimed at decision-makers at country level	Workshop	10,000	5	50,000
Output 4.1.2: Populations are sensitized and informed				
Activity 4.1.2.1. Elaboration of a strategy and an action plan about communication and sensitization for users and beneficiaries	Plan	30,000	1	30,000
Activity 4.1.2.2: Design and development of communication supports for the general public (leaflets, posters, flyers, syntheses, documentaries, spots for local radios, phone application ...)	1 set/year	50,000	4	200,000
Activity 4.1.2.3: Creation/strengthening of environmental clubs at local institutions (colleges, high schools) through training and equipment	Club	20,000	3	60,000
Activity 4.1.2.4: Design of environmental education sessions for school children and women in local language	Kits	5,000	2	10,000
Activity 4.1.2.5: Organization of environmental education sessions for pupils and women	5 sessions/country	10,000	15	150,000
Activity 4.1.2.6: Organization of awareness and information days for populations (cultural and artistic activities on climate change adaptation and mitigation)	5 sessions/country	15,000	15	225,000
Activity 4.1.2.7: Set up of a radio web (studio equipment, server on a portal, and a mobile phone application)	1 studio, 1 server, 1 portal and 1 mobile application	15,000	1	15,000
Activity 4.1.2.8: Organization of training sessions to create radio programs for the riparian populations of the three countries (radio announcers and program designers)	2 sessions/country	10,000	6	60,000
Sub-total				950,000
Total components				7,200,000
Implementation costs (Implementing Unit)				702,000
Execution costs (Management Unit)				648,000
Total project				8,550,000

H. Disbursement schedule with time-bound milestones.

Component/outcome/output/activity	Budget (US\$)	Year 1	Year 2	Year 3	Year 4
Component 1: Integration of climate change aspects and contingency plan (MHMREWS) in the WAP Complex management					
Outcome 1.1: Climate dimension and its risks as well as the contingency plan are integrated into the Complex management plans					
Output 1.1.1: The Complex's development master plan integrating climate change is updated and validated					
Activity 1.1.1.1: Set up of a Geographic Information System and elaboration of mapping products (demarcation of the project area, vulnerability...)	50,000	20,000	30,000		
Activity 1.1.1.2: Implementation of three studies about land-tenure, socio-economics, strategic focus (institutional, administrative, legal ...)	90,000	45,000	45,000		
Activity 1.1.1.3: Update of forest and pastoral management and development plans	50,000	20,000	30,000		
Activity 1.1.1.4: Organization of a workshop for the validation of studies and mapping products	40,000	10,000	30,000		
Activity 1.1.1.5: Design and editing of the master plan for the Complex development	30,000		30,000		
Activity 1.1.1.6: Organization of a workshop for the validation of the master plan	20,000		20,000		
Output 1.1.2: Adaptation and mitigation action plans are elaborated					
Activity 1.1.2.1: Identification of the most vulnerable sites for implementation of adaptation and mitigation actions	30,000	20,000	10,000		
Activity 1.1.2.2: Organization of consultation workshops with populations and technicians for the validation of sites and adaptation and mitigation measures	40,000	10,000	30,000		
Activity 1.1.2.3: Elaboration of an action plan for the implementation of the identified adaptation actions	30,000	30,000			
Activity 1.1.2.4: Elaboration of an action plan for the implementation of the identified mitigation measures	30,000	10,000	20,000		
Activity 1.1.2.5: Organization of a workshop for the validation of the adaptation and mitigation action plans	30,000	10,000	20,000		
Sub- total component 1	440,000	175,000	265,000	0	0
Component 2: Design and establishment of a Multi-Hazard Early Warning System (MREWS) related to droughts, floods, and fires					
Outcome 2.1: A rapid Early Warning System is used by the project's beneficiaries to manage emergencies					
Output 2.1.1: Preparatory studies are elaborated and validated: MREWS is designed					
Activity 2.1.1.1: Implementation of six preliminary studies for the establishment of the MREWS from hazards identification and risks evaluation to the MREWS design and operation	120,000	60,000	60,000		
Activity 2.1.1.2: Organization of two regional workshops for the validation of studies	30,000	15,000	15,000		
Activity 2.1.1.3: Organization of three national consultation workshops with populations on the	45,000	30,000	15,000		

MREWS priorities					
Output 2.1.2: The necessary MREWS equipment are acquired and put in place					
Activity 2.1.2.1: Acquisition and installation of observation equipment (weather stations, stream gauge, sensors, piezometers...)	365, 000		280, 000	50, 000	35, 000
Activity 2.1.2.2: Acquisition of IT equipment (servers, processing unit, software, GPS...)	120, 000	20, 000	60, 000	20, 000	20, 000
Activity 2.1.2.3: Acquisition of necessary data related to the MREWS (biophysical, socio-economic, mapping...)	120, 000	20, 000	80, 000	10, 000	10, 000
Activity 2.1.2.4: Acquisition of necessary tools and equipment for broadcasting warning messages to populations (beacon, flags, siren, signals, loud-speakers...)	120, 000	20, 000	80, 000	10, 000	10, 000
Activity 2.1.2.5: Constitution and organization of the Tripartite Regional Management Unit (TRMU)	20,000	5,000	5,000	5,000	5,000
Activity 2.1.2.6: Rehabilitation/construction of premises for the Tripartite Regional Management Unit (TRMU)	100, 000		50, 000	30, 000	20, 000
Output 2.1.3: The MREWS is developed and operational					
Activity 2.1.3.1: Creation of the MREWS Unit under the supervision of the Tripartite Regional Management Unit	0				
Activity 2.1.3.2: Organization of training sessions for the MREWS unit (MREWS use, data processing, elaboration of indicators...)	120, 000		40, 000	60, 000	20, 000
Activity 2.1.3. 3: Organization of workshops for the launching/presentation/monitoring of the MREWS	80, 000		30, 000	30, 000	20, 000
Activity 2.1.3.4: Organization of quarterly meetings of the Tripartite regional Management Unit	40, 000	10, 000	10, 000	10, 000	10, 000
Activity 2.1.3.5: Organization of study and exchange trips	40, 000			20, 000	20, 000
Activity 2.1.3.6: Acquisition of supplies/consumables for the Tripartite Regional Management Unit (TRMU)	60, 000	20, 000	15, 000	15, 000	10, 000
Activity 2.1.3.7: Design, validation and editing of products (MREWS letter, maps, summary reports, digital supports...)	60, 000		30, 000	15, 000	15, 000
Activity 2.1.3.8: Organization of two testing operations	140, 000		70, 000	70, 000	
Output 2.1.4: Disasters contingency plans are set up					
Activity 2.1.4.1: Elaboration of an Contingency Response Plan (ERP) against climate change related hazards at the level of the three beneficiary countries	50, 000		30, 000	20, 000	
Activity 2.1.4.2. Organization of training sessions on the ERP utilization aimed at different actors involved in the three countries	80, 000		40, 000	40, 000	
Activity 2.1.4.3. Acquisition of equipment for disasters management (three devices for combating fires, bicycles, motorcycles, canoes, dinghies...)	390, 000		300, 000	50, 000	40, 000
Sub-total component 2	2, 100,000	200, 000	1, 210,000	455, 000	235,000

Component 3: Improvement of the resilience of ecosystems and populations' livelihoods through the implementation of concrete adaptation and mitigation actions					
Outcome 3.1: Resilience of ecosystems and populations is improved through concrete adaptation actions					
Output 3.1.1: Water points are developed/rehabilitated at the Complex level involving local workforce					
Activity 3.1.1.1: Identification of sites for the establishment of water points	15, 000	10, 000	5, 000		
Activity 3.1.1.2: Identification and training of the employed workforce	5, 000	5, 000			
Activity 3.1.1.3: Development of water points through the installation of equipment	150, 000	70, 000	40, 000	40, 000	
Output 3.1.2: Transhumance routes and rest areas are constructed for cattle involving local workforce					
Activity 3.1.2.1: Identification of the layout of the area	20, 000	20, 000			
Activity 3.1.2.2: Identification and training of the involved workforce	10, 000	10, 000			
Activity 3.1.2.3: Creation of transhumance routes	200, 000	50, 000	100, 000	40,000	10,000
Activity 3.1.2.4: Construction of water troughs and rest areas for livestock	240, 000	40, 000	150, 000	40, 000	10,000
Output 3.1.3: Firewalls are strengthened and developed involving local workforce					
Activity 3.1.3.1: Identification of locations for firewalls	20, 000	20, 000			
Activity 3.1.3.2: Identification and training of the involved workforce	5, 000	5, 000			
Activity 3.1.3.3: Development and clearing of the identified sections	200, 000	50, 000	100, 000	40,000	10,000
Output 3.1.4: Agro-forestry and small-scale irrigation are applied					
Activity 3.1.4.1: Identification of the agroforestry species to be used	10, 000	10, 000			
Activity 3.1.4.2: Identification and training on the agroforestry and irrigation activities dedicated to beneficiary farmers	10, 000	5, 000	5, 000		
Activity 3.1.4.3: Creation of nurseries for the production of agroforestry plants and attribution to beneficiaries	90, 000		50, 000	20, 000	20, 000
Activity 3.1.4.4: Acquisition and attribution of drip irrigation equipment to beneficiaries	90, 000		50, 000	30, 000	10, 000
Output 3.1.5: Structures and equipment are provided for fishermen					
Activity 3.1.5.1: Identification of priority landing sites along the river and its tributaries level	10, 000	10, 000			
Activity 3.1.5.2: Construction of docking structures for canoes	90, 000		60, 000	30, 000	
Activity 3.1.5.3: Identification and training of beneficiary fishermen	5, 000		5, 000		
Activity 3.1.5.4: Acquisition and attribution of fishing equipment	150, 000		70, 000	50, 000	30,000
Outcome 3.2: Resilience of populations and ecosystems is improved through concrete mitigation measures					
Output 3.2.1: Wooded and pasture areas are improved and reforested					
Activity 3.2.1.1: Identification of sites for reforestation and pasture improvement	10, 000	10, 000			

Activity 3.2.1.2: Training of beneficiary nursery growers	5, 000	5, 000			
Activity 3.2.1.3: Creation of forest and pasture nurseries	90, 000	50, 000	20, 000	20, 000	
Activity 3.2.1.4: Training of the work force involved in reforestation	5 000	5 000			
Activity 3.2.1.5: Reforestation and pasture improvement	1, 200, 000	400, 000	350, 000	350, 000	100, 000
Output 3.2.2: Improved cook stoves are allocated to women					
Activity 3.2.2.1: Identification of beneficiary women (inventory, selection and consultation)	5 000	5 000			
Activity 3.2.2.2: Training of beneficiary women on the utilization of improved cook stoves	5 000	5 000			
Activity 3.2.2.3: Attribution of improved cook stoves to beneficiary women	100 000	20 000	30 000	30 000	20, 000
Output 3.2.3: Solar panels are installed in wells and in community infrastructures (schools, local administrations...)					
Activity 3.2.3.1: Identification of infrastructure and wells to equip	20, 000	10, 000	10, 000		
Activity 3.2.3.2: Training of beneficiaries on the utilization and maintenance of solar panels	5, 000		3, 000	2 000	
Activity 3.2.3.3: Equipment of infrastructures with solar panels	300, 000	50, 000	150, 000	50, 000	50,000
Output 3.2.3: Solar panels are installed in wells and in community infrastructures (schools, local administrations...)					
Output 3.3.1: Revolving funds are set up to diversify income sources					
Activity 3.3.1.1: Organization of information events and awareness-raising workshops for communities on revolving funds	30, 000	15, 000	15, 000		
Activity 3.3.1.2: Training of beneficiaries on the use and management of revolving funds	45, 000	30, 000	15, 000		
Activity 3.3.1.3: Handover and Supervision of Disbursement of the funds	15,000		15,000		
Output 3.3.2: Income-generating activities are sustained					
Activity 3.3.2.1: Selection and training of beneficiaries on income generating activities	90, 000	10, 000	50, 000	30, 000	
Activity 3.3.2.2: Acquisition and distribution of beehives to the beneficiaries	180, 000	20, 000	100, 000	40, 000	20,000
Activity 3.3.2.3: Acquisition of equipment for the distillation of essential oils	120, 000	10, 000	90, 000	10, 000	10,000
Activity 3.3.2.4: Valuation of non-timber forest products (NTFP) such as shea, baobab, moringa, nereid, tamarind, gums, etc..	120, 000	10, 000	80, 000	20, 000	10,000
Activity 3.3.2.5: Construction of "Nature's Stores" to offer and sell local and artisan products	45, 000	15, 000	30, 000		
Sub-total of component 3					
	3 710 000	975 000	1 593 000	842 000	300 000
Component 4: Awareness-raising, communication and capacity building for concerted, integrated and sustainable management of the WAP Complex					
Outcome 4.1: Concerned actors are mobilized and sensitized through adapted communication and capacity building					
Output 4.1.1: Practitioners, technicians and decision makers are sensitized and trained on environmental challenges					
Activity 4.1.1.1: Elaboration of specific training modules on the main themes addressed by the project (natural resources)	50, 000	30, 000	20, 000		

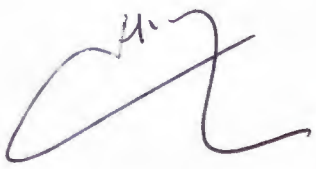
Activity 4.1.1.2. Organization of thematic training workshops for practitioners and technicians	100, 000	40, 000	30, 000	20, 000	10,000
Activity 4.1.1.3. Organization of information events and extension sessions aimed at decision-makers at country level	50, 000	10, 000	30, 000	10, 000	
Output 4.1.2: Populations are sensitized and informed					
Activity 4.1.2.1. Elaboration of a strategy and an action plan about communication and sensitization for users and beneficiaries	30, 000	20, 000	10, 000		
Activity 4.1.2.2: Design and development of communication supports for the general public (leaflets, posters, flyers, syntheses, documentaries, spots for local radios, phone application)	200, 000	20, 000	50, 000	100, 000	30, 000
Activity 4.1.2.3: Creation/strengthening of environmental clubs at local institutions (colleges, high schools) through training and equipment	60, 000	15, 000	15, 000	30, 000	
Activity 4.1.2.4: Design of environmental education sessions for school children and women in local language	10, 000	10, 000			
Activity 4.1.2.5: Organization of environmental education sessions for pupils and women	150, 000	20, 000	80, 000	30, 000	20,000
Activity 4.1.2.6: Organization of awareness and information days for populations (cultural and artistic activities on climate change adaptation and mitigation)	225, 000	20, 000	100, 000	80, 000	25, 000
Activity 4.1.2.7: Set up of a radio web (studio equipment, server on a portal, and a mobile phone application)	15, 000	10, 000	5 000		
Activity 4.1.2.8: Organization of training sessions to create radio programs for the riparian populations of the three countries (radio announcers and program designers)	60, 000	10, 000	20, 000	20, 000	10, 000
Sub-total of component 4	950, 000	205, 000	360, 000	290, 000	95, 000
Total component/year	7 200 000	1 555 000	3 428,000	1 587 000	630, 000
Component 5: Project Execution and Monitoring					
Implementation costs (Implementing Unit)	702, 000				
Execution costs (management unit)	648, 000				
Total projet	8 550 000				

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

- Record of endorsement on behalf of the government¹:

Mr. Nazaire THIOMBIANO General Director for Cooperation Ministry of Economy and Finance (BURKINA FASO)	Date: 03/31/2017
Mr. Euloge LIMA National Designated Authority - Adaptation Fund (BENIN)	Date: 03/31/2017
Dr. Kamaye MAAZOU Executive Secretary of the National Council of the Environment for Sustainable Development Ministry of Environment and Sustainable Development (NIGER)	Date: 03/30/2017

- Implementing Entity certification

I certify that this proposal has been prepared in accordance with the guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (NAPA, ECOPAS, PAPE, and PAGAP.) 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 to the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Mr. Khatim Kherraz – Executive Secretary of the Sahara and Sahel Observatory (RIE) Implementing Entity Coordinator	
Date: 04/07/2017 	Tel. and Email: (+216) 71 206 633 boc@oss.org.tn 
Project Contact Person: Nabil Ben Khatra	
Tel. and Email: (+216) 71 206 633; nabil.benkhatra@oss.org.tn	

¹Each 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

Letter of Endorsement by Government

Cotonou, le 31 mars 2017

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ADAPT-WAP project: Integration of climate change adaptation and mitigation measures in the concerted management of the WAP-transboundary complex.

In my capacity as designated authority for the Adaptation Fund in **Benin**, I confirm that the above regional project proposal is in accordance with the government's (select national or regional) priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the **country**.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by OSS and executed by **Centre National de Gestion des Réserves de Faunes (CENAGREF)**.

Sincerely,

Autorité Nationale
Désignée du Fonds d'Adaptation




Euloge LIMA

**MINISTERE DE L'ECONOMIE,
DES FINANCES ET DU
DEVELOPPEMENT**

SECRETARIAT GENERAL

**DIRECTION GENERALE
DE LA COOPERATION**

BURKINA FASO
Unité-Progress-Justice

Ouagadougou, le **31 MARS 2017**

N°2017/ 000316 /MINEFID/SG/DGCOOP/DCM/kw

Designated authority

To

**The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-
Fund.org
Fax: 202 522 3240/5**

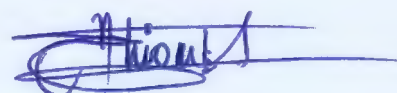
OUAGADOUGOU

Subject: Endorsement for ADAPT-WAP project:
Integration of climate change adaptation and
mitigation measures in the concerted management
of the WAP- transboundary complex.

In my capacity as designated authority for the Adaptation Fund in Burkina Faso, I confirm that the above regional project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the country.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by OSS and executed by "Direction des Forêts du Ministère de l'Environnement, de l'Economie Verte et du Changement Climatique".

Sincerely



Mr Nazaire THIOMBIANO

Chevalier de l'Ordre du Mérite Burkinabè



ADAPTATION FUND

Letter of Endorsement by Government

REPUBLIQUE DU NIGER



Fraternité – Travail – Progrès

=====
CABINET DU PREMIER MINISTRE

=====
CONSEIL NATIONAL DE L'ENVIRONNEMENT POUR UN DEVELOPPEMENT DURABLE
SECRETARIAT EXECUTIF
=====

30/03/2017

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for ADAPT-WAP project: Integration of climate change adaptation and mitigation measures in the concerted management of the WAP- transboundary complex.

In my capacity as designated authority for the Adaptation Fund in Republic of NIGER, I confirm that the above regional project proposal is in accordance with the government of NIGER priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in NIGER.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by OSS and executed by la Direction Générale des Eaux et Forêts (DGEF) et le Centre National de Suivi Environnemental et Ecologique (CNSEE) in relation with other key national institutions.

Sincerely,

Dr KAMAYE MAAZOU

Executive Secretary of the National Council
of Environment for a Sustainable Development



ANNEXES

Annex: LIST OF ABBREVIATIONS AND ACRONYMS

ACP	African, Caribbean, and Pacific Group of States
AWP	Annual Work Plan
BMZ	Federal Ministry for Economic Cooperation and Development (Germany)
CC	Climate Change
CENAGREF	National Center for the Management of Wildlife Reserves (Benin)
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel
CNSEE	National Centre for Ecological and Environmental Monitoring (Niger)
COP	Conference of Parties
DGEF	General Directorate of Water Resources and Forests (Burkina Faso)
DGEF	General Directorate of Water and Forests (Niger)
ECOPAS	Project on Protected Ecosystems in Sahelian Africa
ECOWAS	Economic Community of West African States
EEC	European Economic Community
EFC	Ethics and Finance Committee
ERP	Emergency Response Plan
ESMP	Environmental and Social Management Plan
EU	European Union
GEF	Global Environment Facility
GIS	Geographic Information System
GPS	Global Positioning System
GTZ	German Technical Cooperation
IPCC	Intergovernmental Panel on Climate Change
IPSR	Interim Poverty Reduction Strategy (Benin)
IUCN	International Union for Conservation of Nature
LPDSE	Letter for the Development of the Energy Sector (Niger)
M&E	Monitoring and Evaluation
MAB	Man and Biosphere
MDGs	Millennium Development Goals
MEHU	Ministry of Environment, Housing and Urban Development (Benin)
MHMREWS	Multi-Hazard Early Warning System
MREWS	Multi-Risk Early Warning System
NAPA	National Adaptation Programme of Action (Benin)
NBA	Niger Basin Authority
NDCs	Nationally Determined Contributions
NGO	Non-Governmental Organization
NPMU	National Project Management Unit
NTFPs	Non-Timber Forest Products
NWFP	Non-Wood Forest Products

OSS	Sahara and Sahel Observatory
PAGAP	Support Programme to the Management of Protected Areas
PAGIRE	Action Plan for Integrated Natural Resources Management (Niger)
PAN/LCD	National Action Programme for Combatting Desertification (Niger)
PANA	National Action Programme for Climate Change Adaptation (Niger)
PANEDD	National Environmental Education Action Plan for Sustainable Development (Niger)
PAPE	Support Programme to the W Park
PAPISE	Action Plan and Investment Programme for the Livestock Sector (Niger)
PBR	Pendjari Biosphere Reserve
PEDD	Environmental Plan for Sustainable Development (Niger)
PNE	National Environmental Policy (Niger)
PNEDD	National Environmental Plan for Sustainable Development (Niger)
PNF	National Forest Policy (Niger)
PNG	National Gender Policy (Niger)
PNP	National Population Policy (Niger)
ProCGRN	Programme for the Protection and Management of Natural Resources
PRS	Poverty Reduction Strategy (Niger)
QWP	Quarterly Work Plan
RIE	Regional Implementation Entity
RPMU	Regional Project Management Unit
SDGs	Sustainable Development Goals
SNDD	National Sustainable Development Strategy (Benin)
SNEE	National Environmental Education Strategy (Niger)
TBPA	Transboundary Protected Areas
TBR	Transboundary Biosphere Reserve
TFP	Technical and Financial Partners
UEMOA	West African Economic and Monetary Union
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention for Combatting Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services
USD	United States Dollar
WAP	W-Arly-Pendjari
WAPO Complex	W, Arly, Pendjari, Oti-Mondouri

Annex: REPORT ON REGIONAL CONCERTATION WORKSHOP (FEBRUARY 2017, TAPOA (NIGER))



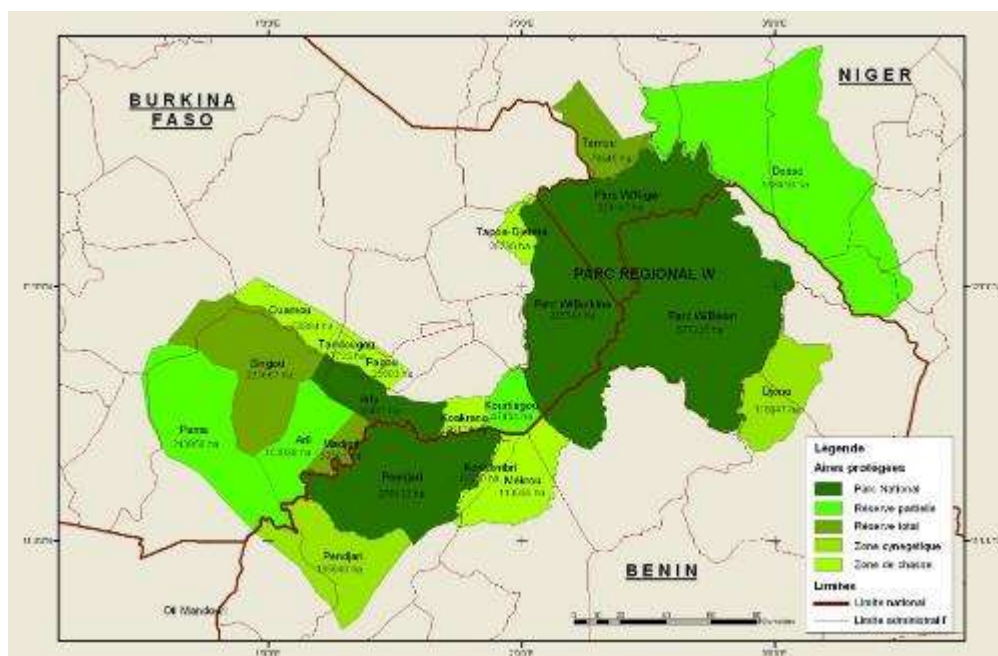
OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

ADAPT-WAP PROJECT

INTEGRATION OF CLIMATE CHANGE ADAPTATION AND MITIGATION MEASURES IN THE CONCERTED MANAGEMENT OF THE WAP TRANSBOUNDARY COMPLEX

REPORT ON REGIONAL CONCERTATION WORKSHOP

03 - 05 FEBRUARY 2017, TAPOA (NIGER)



FEBRUARY 2017

Context

The W-Arly-Pendjari (WAP) complex is one of the largest protected areas in West Africa, shared between Benin, Niger and Burkina Faso. It contains a number of protected areas, including the transboundary W Regional Park based around a w-shaped bend in the river Niger, the Pendjari National Park in Benin and Arly National Park in Burkina Faso. The WAP complex is the largest and most important continuum of terrestrial, semi-aquatic and aquatic ecosystems in the West African savannah belt. It covers about 50,000 km² including riparian areas. The complex is divided between Benin (43% of the area), Burkina Faso (36%) and Niger (21%).

The WAP complex is recognized by several international wildlife biodiversity and conservation organizations for its important biodiversity of the savannah systems in West Africa. The WAP complex shelters populations of several large mammals including elephants, giraffe, hippopotamuses, and West African savanna buffalo, feline species (large cats) and it is home to a large number of antelope species. The WAP complex also protects a profusion of bird species, as well as many species of fish, insects and other organisms, all of which are a part of the biodiversity of this unique and invaluable natural ecosystem. Since 2001, the complex has been under transboundary management through the involvement of the managers of the three parks in cooperative management strategies for biodiversity conservation. Through this cooperative approach, regional tools and management system have been established and are functioning at the complex level.

However, the area's biodiversity is facing various threats such as agricultural encroachment, intense farming, transhumance within parks, poaching, overgrazing, uncontrolled bushfires, pollution of surface waters, climate change and variability, and unsustainable harvesting of natural resources (timber, fish overexploitation). During recent decades, the pressure to feed and provide livelihoods for a rapidly growing population is one of the most challenging problems facing the complex (unstoppable waves of migration moving due to disappearance of natural resources or looking for fertile soils).

The ADAPT-WAP is a designed regional project at the stage of pre-concept endorsed by the Adaptation Fund (October 2016). It is a project aimed at helping concerned countries (Benin, Burkina Faso, Niger) to adapt to the harmful effects of Climate Change within the WAP complex.

OSS is an accredited Regional Implementing Entity for the Adaptation Fund, has proposed this project and is currently working on the elaboration of the project concept in concertation with beneficiary countries.

The overall objective of this proposed project is to enhance the resilience to climate change of ecosystems and improve the livelihoods of local populations in the complex through the establishment of a Multi Risk Early Warning System (MREWS) and the integration of adaptation measures into sustainable management of the WAP Transboundary Complex.

See project sheet in Annex 2.

Workshop Contents

The workshop, which took place in 3 days, was attended by the first managers of the Park at the national and local levels, representative of the riparian populations, the customary authorities and producers' associations of the three countries. It aimed to:

- Inform partners and beneficiary populations about the justification, scope and objectives of the project;
- Present the concept note of the project, its component and the main planned activities;
- Discuss with the different stakeholders about their vision, expectations and needs in order to integrate them in the project concept-note.

The workshop was carried out in a plenary session and group work.

The plenary session was introduced by an overview presentation, made by OSS experts, followed by discussions related to different aspects of the project (Technical, institutional, financial, etc.) The group work gave the opportunity to each country to detail the main themes related to the Complex WAP, in terms of pressures, threats and constraints.

*The detailed Program of the workshop is presented in **Annex 1**.*

Workshop Process

3.1. The first day | 03 February 2017

3.1.1. Debriefing meeting between OSS and national institutions

The purpose of this meeting was to inform the first managers of the complex about the objectives of the workshop, the relevance of the Concept Note and the approach adopted for its finalization.

At the end of the meeting, the program for the next two working days was approved by all parties.



Debriefing meeting with the first managers of the WAP Complex



3.1.2. Park W and WAP transboundary complex

The 'W' region takes its name from a double bend in the Niger River where its course takes the shape of a 'W'. Today the W region covers parts of three West African countries: Benin, Burkina Faso and Niger. The area is an exceptional reservoir of biodiversity in West Africa. In the heart of the W region lies the W Regional Park, which straddles the three countries. The area is part of the W-Arly-Pendjari (WAP) ecological complex, an extended regional system of protected areas covering nearly 5 million hectares.

The WAP ecological complex consists of a number of areas with differing protection status and regimes at the national level. In addition to the W TBR, the WAP complex covers the Arly National Park in Burkina Faso and the Pendjari National Park in Benin. The WAP complex has also received significant international recognition. It is representative of the Sudano-Sahelian biogeographic region and hosts unique examples of biological and ecological processes that reflect the interaction between man and nature.

Several studies conducted during the 1980s and 1990s with a view to the designation of the W Regional Park as a world heritage natural site, nominated by Benin and Niger, led to a precise ecological description of the W Regional Park itself, but not of all the areas that make up the W TBR.

The W Regional Park not only hosts unique examples of biological and geological processes, but also includes natural areas that are critically important in terms of biodiversity and natural habitats. The rivers of the W region (the Niger, Alibori and Mekrou) enhance landscape diversity and contribute to maintaining the habitats of threatened species of fauna and flora. The W Park wetland has been recognized as a wetland of international importance and listed as a Ramsar site. The region also provides some species with the vast areas they require for seasonal migration.



Group of elephants approaching the river in Park W (Niger), February 2017 © OSS

As a whole, however, the population density of large mammals remains low as a result of strong anthropogenic pressure. Bird species richness is high. Recorded reptiles and fish are typical of the Niger River region. Alluvial processes following seasonal floods play a key role in environmental restoration.

The diversity of natural landscapes includes permanent and seasonal bodies of water, cuirasses plateaus, sandstone, lateritic soils, active rain erosion areas, rock outcrops and gorges. Landscape diversity is matched by ecosystem diversity that includes terrestrial and aquatic systems. The landscape has been shaped by interaction with human communities and the traditional use of resources.

3.1.3. Visit to the Park W in Niger

As part of the field mission, participants visited the Niger part of W Park. The visit to the park was facilitated by the managers of the park from the three countries who provided information about the area and its specificities. The participants to the field visit included forest managers, representatives from riparian population and women.

The visit purpose was to meet with local actors and authorities to discuss the opportunity to develop the project and to identify their expectations toward the ADAPT-WAP project.

The main objectives of the field visit are the following:

- *Discuss general observations of the WAP context and the national and local stakeholders,*
- *Identify and evaluate the achievements of implemented projects*
- *Identify the different ecological entities of the park*
- *Evaluate the potential of the area in developing IGAs*
- *Assess the ecological/natural status of the different components of the area (forest, savannah, river)*
- *Evaluate the impact of the protected areas on fauna and flora (various species of mammals presents*



Photos during visit to Park W (Niger), February 2017 © OSS

3.2. The second day | 04 February 2017

3.2.1. Opening session

The opening session was marked by the introductory and welcoming speeches given by the OSS and the representatives of the three countries. **Mr. Abdou Malam Issa**, General Director of Forests and Water, Ministry of Environment and Sustainable Development of Niger gave the opening speech.

Opening Ceremony of the Concertation Workshop



In his speech, the General Director thanked OSS for supporting the holding of this meeting. He then highlighted the importance of the WAP Complex in terms of resources and economic benefits for the riparian populations.

Furthermore, he cited the pressures exerted and that could threaten the survival of this invaluable natural ecosystem. Finally, the General Director highlighted the importance of the populations' participation in the finalization of the Concept Note which, once approved, will bring and promote activities for the WAP Complex natural resources restoration and preservation.



Overview of participants in the concertation workshop on the WAP complex

The representatives of Benin and Burkina Faso underlined the importance of the transboundary cooperation between the three countries and the importance about the conservation and management of the Complex, and in particular his value for the populations' livelihood and future. Furthermore, they focused their speech on the substantial importance of the mobilization of funds, especially dedicated to developing countries, by the Adaptation Fund.

Burkina Faso and Benin thanked OSS for the initiative and organization of this Regional Concertation Workshop and Niger for the overall warm welcome to Tapoa.

The three concerned countries, i.e. Benin, Burkina Faso and Niger, reaffirmed by relative statements their strong interest on the ADAPT-WAP Project.

3.2.2. PowerPoint presentations

During this session, two presentations were made by the OSS concerning objectives and agenda of the workshop followed by the presentation of the project according to the content of the pre-concept-note.

Presentation of the Adapt WAP project concept note:

The presentation focused on:

- An overview on OSS, its action areas, missions and action strategies;
- The project justifications in terms of pressures on the WAP complex natural resources;
- The overall and specific objectives of the project;
- The project components and the expected results;
- The progress and maturity of the project;
- The actors and beneficiaries of the project;
- The proposed planned activities that the participants were called to enrich.

Discussion - Questions

At the end of this presentation, the main points of discussion were as follows:

- **The exact project area:** all participants insisted on the importance of targeting the entire WAP Complex and not restricting it only to the W Park. Indeed, the WAP acts as a continuum of ecosystems where the interactions and the problems are intimately connected and interconnected and are not limited to the exclusive zone of the W Park;
- The Project management, duration and coordination: The discussions resulted in the interest of setting up a regional project management entity, hosted by OSS, which will work closely with the national executing entities. The total duration of the project was estimated to four (4) years;
- The registration process of the WAP Complex in the World Heritage List is already engaged and does not require any other actions. The project will take into account this future status and will value it for the perpetuation of the targeted achievements;
- The proposed strategy for the execution of the project must be updated to take into account existing projects. The proposed project should look for synergies to be improved or strengthened;
- The organization and the milestones of the project development process until its final submission to the Adaptation Fund;
- The budget of the project, its different component and the rules and requirements of the Adaptation Fund regarding grant management;

- The importance of a substantial consideration of riparian populations in order to reduce the pressure on the Complex ecosystems. This pressure will considerably decrease by raising the riparian populations' awareness and improving their livelihoods;
- The national coordination of the project will be managed by the institutions in charge of Forest and Water, while the execution of the activities at local level will be monitored by the parks conservators.



Presentation of the WAP complex project concept note

3.2.3. Group work

An introductory presentation was provided by OSS in order to present the work group objectives and the expected results. The adopted approach aimed to help participant to express their visions and needs according to the realities and specificities of the different groups.

Working Groups were proposed to develop and to deepen further the proposals made in the Pre-Concept Note. Two types of working groups were formed: country groups and thematic ones.



Each country group worked on the following key elements:

- Weaknesses, Strengths and challenges of WAP Complex;
- Proposed adaptation and mitigation measures.

At the end of the group work by country, three thematic groups were formed to synthesize and prioritize the activities already proposed as follows:

- **Group 1:** Institutional aspects and Early Warning System;
- **Group 2:** Forest ecosystems and Natural Resource Management;
- **Group 3:** Agriculture, including livestock farming, fisheries and Income-generating activities.

During this group work, the GDWF of Niger shared information about the main threats and priorities of the WAP Complex which had been identified during a Ministers meeting on the WAP Complex held in Cotonou, January 24, 2017.

3.3. The third day | 05 February 2017: Restitution of the workshop results:

3.3.1. Group Work with countries:

For each thematic group, the results were structured around the following five issues:

- Main themes
- Assets and achievements
- Constraints and weaknesses
- Needs and proposals
- Responsible

*The results of the above-mentioned group work are presented in the tables provided in **annex 3**.*

3.3.2. Group work by themes

On the base of the national working groups findings, the thematic groups work aimed to validate and synthesize the results. The main **highlighted points and ideas** outlined are presented below and structured around the project components.

*The detailed tables by theme are shown in **annex 4**.*

1. Institutional issues

- Strengthening the materialistic, financial and human capacities of all stakeholders
- Set up a framework for dialogue between actors at the regional level

2. Early Warning System

- Promotion of new information and communication technologies on Climate and Environment for an adapted EWS;
- Guarantee the set-up of a mechanism to monitor the dynamics of land use and biodiversity for better contingency measures

3. Adaptation and mitigation actions (Socio-economic activities)

a. Forest ecosystems:

- Sensitization of stakeholders on the management and conservation of the natural resources of the WAP Complex;
- Realization, rehabilitation and development of infrastructures (offices, paths, miradors, etc ...);

b. Agriculture, Livestock, Fisheries and IGAs

- Development and creation of water points and reservoirs;
- Development of transhumance corridors;
- Promotion of organic farming;
- Set up a warranty system;
- Restoration of pasture lands;
- Organization and training of fishermen and acquisition of their equipment;
- Promotion of market gardening;

- Promotion of beekeeping;
- Valorization of NWFPs (baobab, moringa, néré, shea, tamarin, balanites, gums, etc

4. Communication, Training and Capacity Building

- Organize study tours for the benefit of farmers' and breeders' groups;
- Training in the different techniques of valorization of NWFP;
- Training in fundamental technical subjects (Monitoring and evaluation activities, ecological monitoring, LAB ...);
- Development of environmental education activities;
- Elaboration of a communication and sensitization action plan that integrates local knowledge;

3.3.3. Closing session

OSS thanked the representatives and participants of the three countries for their strong interest, the exchanges and productive contributions during the three days' Workshop.

The representatives of Benin, Burkina Faso and Niger reconfirmed that OSS is in charge to elaborate the Concept Note, based on the results of this Regional Concertation Workshop. The final version of the Concept Note has to be presented and validated by the three countries before submission to the Adaptation Fund.

ANNEXES

ANNEX 1: Regional consultation workshop Agenda

▪ DAY 1: 03 February, 2017

Time	Activities	Speakers
12h00 – 14h00	Participants arrival and registration	DGF Niger -CNSEE - OSS
14h00 – 17h00	Debriefing meeting	OSS and national Institutions

▪ Day 2: 04 February 2017

Time	Activities	Speakers
08h30 – 09h00	Opening session <ul style="list-style-type: none"> ▪ Welcome addresses ▪ Presentation of participants ▪ Adoption of workshop objectives and agenda 	DGF Niger - OSS
09h00 – 09h30	Plenary session : project presentation <ul style="list-style-type: none"> ▪ Generalities, Objectives ▪ Scope of the proposed project ▪ Activities details 	OSS
09h30 – 10h30	Discussions	OSS and participants
10h30 – 11h00	Coffee break	
11h00 – 13h00	Group work with countries <ul style="list-style-type: none"> ▪ Introduction of works ▪ Strengths and challenges of parks ▪ Proposed adaptation and mitigation measures 	OSS and participants
13H00 – 14h00	Lunch	
14h00 – 16h00	Group work (continue)	OSS and participants
16h00 – 16h30	Coffee break	
16h30 – 17h30	Group work restitution	OSS and rapporteurs

▪ Day 3: 05 February 2017

Time	Activities	Speakers
08h30 – 10h00	Work groups by themes : <ul style="list-style-type: none"> ▪ Harmonization and prioritization of proposed activities ▪ Taking into account national specificities ▪ Identification of Income Generating Activities 	OSS and participants
10h00 – 11h00	Work groups restitution	OSS and rapporteurs
11h00 – 11h30	Coffee break	
11h30 – 13h30	Synthesis and closure <ul style="list-style-type: none"> ▪ Restitution of the workshop results ▪ Development of the roadmap ▪ Closure 	OSS
13H30 – 14h30	Lunch	

ANNEX 2: ADAPT-WAP project sheet:**PROJECT SHEET 01/OSS/ENV****Integrating climate change adaptation and mitigation measures into the concerted management of the WAP Complex****ADAPT – WAP Project**

CHALLENGES	Adaptation and Climate Change
THEME	Integrated Natural Resources Management
COUNTRY / REGION	Benin, Burkina Faso and Niger
ADEQUACY WITH SDGs	SDG1 – SDG2 - SDG13 – SDG 15 - SDG 17
PROJECT DURATION	48 months

CONTEXT

The W-Arly-Pendjari (WAP) Complex is one of Africa's most important compositions of terrestrial transboundary ecosystems. It is considered as the largest and most important continuum of unharmed ecosystems in the West African savannah belt. Shared by Benin, Burkina and Niger, this network of protected areas consists of a number of areas with different status and protection regimes. In addition to the W Transboundary Biosphere Reserve (WTBR), shared by the three countries, the WAP complex covers the Arly National Park in Burkina Faso and the Pendjari National Park in Benin. It is located in the vicinity of the West African savannahs belt and displays a considerable biological diversity which contributes to the economic development of the region. However, the WAP Complex is subject to multiple threats and conflicts, such as poaching, overgrazing, and extension of agricultural lands, further aggravated by the adverse effects of climate change. Covered by a joint management agreement between the three countries, the complex is currently managed by common management structures that are responsible for implementing the development and management plans (DMP) and ensuring the preservation and conservation of natural resources in protected areas.

The natural resources of the WAP complex represent a major asset for the local populations. The economy of the Complex is based mainly on agriculture, livestock breeding, fishery and forest resources (timber and non-timber products). However, the complex is under heavy pressures and threats such as conflicts of use, poaching, overgrazing, agricultural encroachment, uncontrolled transhumance, uncontrolled bush fires, siltation and pollution of surface waters, climate change and variability, unsustainable harvesting of NTFPs, timber and fish.

The WAP Complex is part of a pastoral zone high inter-annual climatic variability exacerbated by climate change. This variability results in successive migrations of populations to more favorable areas in and around the complex. Local pastors gradually lose resource-spaces and are pushed to the WAP Complex. Faced with these pressures on ecosystems and the WAP Complex combined with the effects of climate change, the vulnerability of ecosystems and populations will be emphasized, and adaptation and resilience building measures become necessary.

OVERALL OBJECTIVE

The ADAPT-WAP project aims to strengthen the resilience of ecosystems and improve populations' livelihoods within the WAP Complex facing climate change through the establishment of a multi-hazard early warning system and the implementation of concrete adaptation measures.

	<p>This project will allow to consolidate synergies between the three beneficiary countries by strengthening the sustainable and participatory management of the Complex and its natural resources while contributing to resolving conflicts between the different users.</p>
SPECIFIC OBJECTIVES	<p>The specific objectives of the project include:</p> <p>Improving Strategic reference documents, i.e. development and management plans, by integrating the climate change issues.</p> <p>Improving populations' resilience through an Early Warning System and providing relevant and timely information on the occurrence of extreme weather events in the WAP Complex and its adjacent areas.</p> <p>Improving ecosystems' resilience (fauna and flora) and populations' livelihoods through the consolidation of infrastructure, for example transhumance corridors, drinking troughs, and anti-flood structures.</p> <p>Ensuring the sustainability of adaptation measures through the mobilization and awareness-raising of beneficiaries and partners to master the tools developed and to execute the planned activities.</p>
IMPACTS/RESULTS	<p>The common management structures of the complex and the populations concerned are able to use the early warning tools developed by the project for the implementation of adaptation actions. The resilience of ecosystems and the local populations' livelihoods at the level of the WAP Complex are improved. The consultation mechanism is strengthened to improve the sustainable and participatory management of the WAP Complex natural resources, and conflict management among the different users is consolidated (field officers, pastoralists, and farmers).</p>
COMPONENTS	<p>Component 1: Integration of climate change aspects and an emergency plan in the management of the WAP Complex;</p> <p>Component 2: Design and establishment of a Multi-Hazard Early Warning System (MHMREWS), related to droughts, floods, and fires;</p> <p>Component 3: Enhancement of the resilience of ecosystems and populations through the implementation of concrete adaptation and mitigation actions,</p> <p>Component 4: Awareness-raising and capacity building for the concerted and integrated sustainable management of the WAP Complex.</p>
BUDGET	<p>8.6 MK\$ / Financial support requested from the Adaptation Fund (Budget to be detailed in the concept note)</p>
BENEFICIARIES	<p>Project Executing Entity: Common management structures of the parks organized in regional committee.</p> <p>National Executing Entities: Benin : <i>Le Centre National de Gestion des Réserves de Faune (CENAGREF)</i> Burkina Faso : <i>La Direction de la Faune et de la Chasse (DFC)</i> Niger : <i>La Direction Générale de l'Environnement et des Eaux et Forêts (DGEEF)</i></p> <p>Local communities: Farmers, pastoralists, and the civil society</p>
INSTITUTIONAL ARRANGEMENT	<p>The project will support the countries efforts and integrate the results of the ECOPAS, PAPE, PAGAP projects and other projects.</p> <p>OSS will coordinate the project activities in close collaboration with the main existing national and regional entities. A steering committee will be established to ensure the project monitoring. It will be composed of: Regional Organizations such as CILSS, ECOWAS, ...</p> <p>National institutions : Universities, CENAGREF, DFC, DGEEF, ...</p>

ANNEX 3: The following tables represent restitution of the results of the group works with countries:

▪ BENIN

N°	Main Theme	Assets and achievements	Constraints and weaknesses	Needs and proposals	Responsible
1	Institutional component				
	Organization, Management Structure, Community Associations and Rural Communities and Management Tools	<ul style="list-style-type: none"> ▪ Existence of a specialized Wildlife Reserve Management Center (CENAGREF); ▪ Organization of populations (Village Associations for the Management of Fauna Reserves (AVIGREF); ▪ Existence of co-management structures (Association of local communities and APIDA; ▪ Existence of management tools: tripartite convention (Municipalities-CENAGREF and AVIGREF, PAG; PA). 	<ul style="list-style-type: none"> ▪ Lack of resources: human, materialistic, financial and infrastructural; ▪ Few communications between partners; ▪ Organization problems of co-management structures. 	<ul style="list-style-type: none"> ▪ Support CENAGREF in human, materialistic and financial resources; ▪ Strengthening the communication between partners; ▪ Strengthening the capacities of the co-management structures (AVIGREF) and the professional organizations: Farmers, breeders, fishermen. 	WAP Project and Countries
2	Socio-economic activities				
a	Forest ecosystems	<ul style="list-style-type: none"> ▪ Use of auxiliaries as trackers and local professional hunters; ▪ Existence of a contract for the exploitation of Non-Wood Forest Products (NWFPs); ▪ Meat derived from sport hunting by the population; ▪ 30% of the Park's revenues are refunded to local residents; ▪ Use of local work force 	<ul style="list-style-type: none"> ▪ Attachment of populations to the Park's Ecosystem Services; ▪ Agricultural encroachment; ▪ Low agricultural management; ▪ Insufficient cultivable land; ▪ Low level of soil fertility. 	<ul style="list-style-type: none"> ▪ Awareness raising and development of alternative activities; ▪ Development of techniques to improve soil fertility. 	CENAGREF, local elected officials, AVIGREF and OSS
b	Agriculture and livestock	<ul style="list-style-type: none"> ▪ Existence of the buffer zone (area reserved for agriculture, livestock and NWFP); ▪ Transhumance and passage corridors. 	<ul style="list-style-type: none"> ▪ Insufficient water reservoirs outside the park; ▪ Lack of development of passage corridors; ▪ Problem of management of the buffer zone (conflicts between farmers and breeders); ▪ Conflicts between people and fauna. 	<ul style="list-style-type: none"> ▪ Development or creation of water points and reservoirs; ▪ Materialization of the different forest species; ▪ Awareness raising; ▪ Set up a system at village level for managing wildlife conflicts. 	CENAGREF and OSS
c	Fisheries	<ul style="list-style-type: none"> ▪ Existence of fisheries; ▪ Organization of fishermen; ▪ Authorization of fishing. 	<ul style="list-style-type: none"> ▪ Lack of accountability of fishers in carrying out their activities; ▪ Inadequacy of fishing gear. 	<ul style="list-style-type: none"> ▪ Training of fishermen; ▪ Support for the acquisition of adequate gear of fishing. 	CENAGREF and OSS

d	Other Income-Generating Activities (IGA)	<ul style="list-style-type: none"> Existence of economic interest groups; Existence of IGA micro projects; IGA awaiting funding; Beneficiaries already trained; Existence of framing structures of IGA promoters. 	<ul style="list-style-type: none"> Lack of fundings for IGA. 	<ul style="list-style-type: none"> Mobilization of the financial resources for a IGA; Targeting IGA promoters. 	CENAGREF and OSS
3 Early Warning System (EWS)					
		<i>How the information on the scourges currently circulates?</i>	<i>Difficulties and obstacles concerning the flow of information</i>	<i>Types of communication channels, message type and communication tools</i>	
		<ul style="list-style-type: none"> Existence of community radios; Existence of a contract for the information dissemination; Existence of a strategy or communication plan; Existence of a framework about joint consultation of risks and natural disasters. 	<ul style="list-style-type: none"> Insufficiency of meteorological instruments; No control of early warning techniques. 	<ul style="list-style-type: none"> Equipment and training for early warning needs. 	OSS and CENAGREF and Meteorological Services
N°	Main Theme	Assets and achievements	Constraints and weaknesses	Needs and proposals	Responsible
4 Training and Capacity Building					
		<ul style="list-style-type: none"> Availability of staff; The staff had various trainings; The current political will of the authorities to accompany conservation measures; Existence of limited permanent jobs and basic needs Training of populations in the context of IGAs. 	<ul style="list-style-type: none"> Formations already obsolete; Targeted training; An obsolete equipment; A low level of education or illiteracy; Job creation and fulfillment of basic needs; Lower membership of CSOs (religious and traditional authorities). 	<ul style="list-style-type: none"> Equipment for watchtowers; Maintenance of the paths, ponds, watchtowers; Construction of patrol paths; Strengthening the capacity of the personnel (foresters, eco-guarders, trackers, tourist guides ...); Recruitment; Rolling stock and communication equipment (radios). 	OSS and CENAGREF
5 Sensitization and Communication					
		<ul style="list-style-type: none"> Existence of a communication plan; Existence of a framework about awareness-raising at district and village level (AGAR: General Assembly of the District); Existence of a radio communication system. 	<ul style="list-style-type: none"> Limited means for the implementation of the Communication Plan (Information, education and communication (IEC)); Radio communication system failing; Insufficient resources for general assemblies. 	<ul style="list-style-type: none"> Mobilization of financial resources for the implementation of the communication plan; Rehabilitation and strengthening of radio communication systems. 	Municipalities, CENAGREF and AVIGREF

▪ BURKINA FASO

N°	Main Theme	Assets & achievements	Constraints & weaknesses	Needs & proposals	Responsible
1	Institutional component				
	Organization, Management Structure, Community Associations and Rural Communities and Management Tools	<ul style="list-style-type: none"> ▪ Existence of management structures (DGEF, DR, conservators); ▪ Asserted will of managers; ▪ Existence of a regulatory framework; ▪ Signatory of several biodiversity conventions; ▪ MAB UNESCO, Ramsar; ▪ Existence of groups in charge of wildlife management. 	<ul style="list-style-type: none"> ▪ Institutional anchor not clearly defined; ▪ Cyclical financing; ▪ Weak organization of groups and associations; ▪ Weak operation of groups and associations; ▪ High illiteracy rate; ▪ No framework for consultation around the Park. 	<ul style="list-style-type: none"> ▪ Clearly define the park's membership structure; ▪ Sustainable financing mechanism; ▪ Establishment of umbrella structures; ▪ Monitoring and supervision of groups and associations; ▪ Creation of literacy centers; ▪ Implementation of a consultation framework. 	Ministries, DGEF Country, Partners Park Responsible, groups Park Responsible Country, Partners
2 - Socio-economic activities					
a	Forest ecosystems	<ul style="list-style-type: none"> ▪ High biodiversity; ▪ Abundance of wildlife. 	<ul style="list-style-type: none"> ▪ Agricultural land; ▪ Poaching; ▪ Uncontrolled fires; ▪ Illegal farming; ▪ Difficulties in planning; ▪ Irregular ecological monitoring; ▪ Water stress; ▪ Lack of information network. 	<ul style="list-style-type: none"> ▪ Awareness and monitoring; ▪ Maintenance of the lowlands for the production of the fodder; ▪ Creation of water reservoirs; ▪ Establishment of permanent Monitoring and Evaluation mechanisms. 	Park Managers Park Managers and partners Park Managers and partners
b	Agriculture and livestock	<ul style="list-style-type: none"> ▪ Existence of transhumance paths; ▪ High importance of livestock; ▪ Cropland is relatively rich. 	<ul style="list-style-type: none"> ▪ Low availability of water for animals; ▪ Adjoining transhumance paths; ▪ Insufficient vaccination facilities; ▪ Erratic rainfall; ▪ Unsuitable techniques and cropping means; ▪ Pollution of water and soil. 	<ul style="list-style-type: none"> ▪ Creation of water retention for animals; ▪ Availability of meals; ▪ Creation of transhumance corridors; ▪ Implementation of vaccination facilities; ▪ Availability of tools for agriculture; ▪ Promotion of the practice about ANR (Assisted Natural Regeneration); ▪ Support the practice of organic farming. 	Country, partners
c	Fisheries	<ul style="list-style-type: none"> ▪ Availability of resources. 	<ul style="list-style-type: none"> ▪ Weak fishermen's organization; ▪ Use of inadequate equipment; ▪ Pollution of water. 	<ul style="list-style-type: none"> ▪ Organization of fishermen in groups; ▪ Procurement of fishing equipment; ▪ Development of fish farming actions. 	Managers Country, partners

d	Other Income Generating Activities (IGA)	<ul style="list-style-type: none"> ▪ Availability of raw material; ▪ Importance of work force. 	<ul style="list-style-type: none"> ▪ Lack of water reservoirs; ▪ Insufficiency of multifunctional platforms. 	<ul style="list-style-type: none"> ▪ Establishment of water reservoirs for market gardening; ▪ Value creation of NWFPs through women's groups. 	Country, partners
3	Early Warning System (EWS)				
		<i>How the information on the scourges currently circulates?</i>	<i>Difficulties and obstacles concerning the flow of information</i>	<i>Types of communication channels, message type and communication tools</i>	
		<ul style="list-style-type: none"> ▪ Sensitization; ▪ Radio program; ▪ Telephone network; ▪ Television. 	<ul style="list-style-type: none"> ▪ High illiteracy; ▪ Low coverage of communication networks; ▪ Low radius coverage of local radio. 	<ul style="list-style-type: none"> ▪ Increase sensitization sessions; ▪ Expand the radius of telephone and radio communication; ▪ Reinforce the Park's communication system; ▪ Assist warning systems with all necessary equipment and training. 	Managers Country, partners Country, partners
N°	Main Theme	Assets & achievements	Constraints & weaknesses	Needs & proposals	Responsible
4	Training and Capacity Building				
		<ul style="list-style-type: none"> ▪ Competence of stakeholders for training. 	<ul style="list-style-type: none"> ▪ Insufficient financial resources; ▪ Insufficient technical support; ▪ Insufficient training plan. 	<ul style="list-style-type: none"> ▪ Training: adaptation to Climate Change; Project development; GIS, ecological monitoring; Human-Fauna conflict management; Fighting bush fires; cook stoves; NWFP valuation. 	Managers, partners
5	Sensitization and Communication				
		<ul style="list-style-type: none"> ▪ Competence of stakeholders. 	<ul style="list-style-type: none"> ▪ Illiteracy; ▪ Lack of sensitivity of riverside populations; ▪ Lack of tools and communication mechanism. 	<ul style="list-style-type: none"> ▪ Develop awareness and communication themes; ▪ Increase communication and awareness channels and media; ▪ Ensure a communication and awareness-raising action plan. 	Managers, partners

▪ **NIGER**

N°	Main Theme	Assets & achievements	Constraints & weaknesses	Needs & proposals	Responsible
1	Institutional Component				
	Organization, Management Structure, Community Associations and Rural Communities	<ul style="list-style-type: none"> DGEF and its divisions. 	<ul style="list-style-type: none"> Building capacity; Insufficient human resources; Insufficient rolling and floating logistics; Insufficient infrastructure. 	<ul style="list-style-type: none"> Strengthening human capacities and materialistic support 	The services concerned and the local Project Management Unit.
		<ul style="list-style-type: none"> The Conservator of the Tamou Wildlife Reserve (RTFT). 	<ul style="list-style-type: none"> building capacity; Insufficient human resources; Insufficient rolling and floating logistics; Insufficient infrastructure. 		The services concerned and the local Project Management Unit.
		<ul style="list-style-type: none"> The Conservator of the Dosso Partial Wildlife Reserve (RPFV). 	<ul style="list-style-type: none"> Building capacity; Insufficient human resources; Insufficient rolling and floating logistics; Insufficient infrastructure. 		The services concerned and the local Project Management Unit.
		<ul style="list-style-type: none"> The Regional Park of W of Niger. 	<ul style="list-style-type: none"> Building capacity; Insufficient human resources; Insufficient rolling and floating logistics; Insufficient infrastructure. 		
		<ul style="list-style-type: none"> The Giraffe Zone (Kouré). 	<ul style="list-style-type: none"> Building capacity; Insufficient human resources; Insufficient rolling and floating logistics; Insufficient infrastructure. 		
		<ul style="list-style-type: none"> Community Services for the Environment and Sustainable Development (SCE / DD). 	<ul style="list-style-type: none"> Building capacity; Insufficient human resources; Insufficient rolling and floating logistics; Insufficient infrastructure. 		The services concerned and the local Project Management Unit.
		<ul style="list-style-type: none"> The CNSEE. 	<ul style="list-style-type: none"> Data gathering. 	<ul style="list-style-type: none"> Carry out reference situations at the level of all the communes bordering the W; Installation of the synoptic meteorological stations and collection of climatic data; Producing climate services to anticipate and respond to climate shocks; Installation of an ecological monitoring device. 	CNSEE and the services concerned and the local Project Management Unit.

	<ul style="list-style-type: none"> ▪ Tamou observatory. 	<ul style="list-style-type: none"> ▪ Difficulties to collect data. 	<ul style="list-style-type: none"> ▪ Carry out reference situations at the level of all the communes bordering the W; ▪ Installation of synoptic meteorological stations and collection of climate data; ▪ Producing climate services to anticipate and respond to climate shocks; ▪ Installation of an ecological monitoring device. 	CNSEE and the services concerned and the local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Farmers associations. 	<ul style="list-style-type: none"> ▪ Farming inputs inaccessible and unavailable on the spot; ▪ Degraded lands. 	<ul style="list-style-type: none"> ▪ Make farming inputs available for the association. 	Local structure of the Project; The Farmers Association; Technical Services of Agriculture (DRA, DDA, CDA ...).
	<ul style="list-style-type: none"> ▪ Breeders associations. 	<ul style="list-style-type: none"> ▪ Lack of grazing and zoo technical inputs. 	<ul style="list-style-type: none"> ▪ Restoration of pasture; ▪ Creation of Banks for zoo technical inputs. 	Technical services for animal resources; Breeders Association and Project Management Unit.
	<ul style="list-style-type: none"> ▪ Fishermen associations. 	<ul style="list-style-type: none"> ▪ Structuration and capacity building. 	<ul style="list-style-type: none"> ▪ Organization of structures. 	Technical services for water and forests in charge of fishing; Fishermen's association; Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Associations and Beekeepers Union. 	<ul style="list-style-type: none"> ▪ Inadequate production and protection equipment; ▪ Inadequate knowledge about the processing of honey products; ▪ Bee drinking place. 	<ul style="list-style-type: none"> ▪ Study trip and exchange of experience in the WAP Complex; ▪ Introduction of honey-producing species; 	Technical Services of Water and Forests in charge of beekeeping (DFC / AP in Niger);

				<ul style="list-style-type: none"> ▪ Expansion of producers and production area. 	Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Women Federation. 	<ul style="list-style-type: none"> ▪ Operationalization of the farming Inputs Store for market gardening; ▪ Lack of training in production of Moringa olifera; ▪ Protective equipment for market gardening sites; ▪ Problem of conservation for market gardening products; ▪ Process of mechanization of products derived from honey; ▪ Inadequate Income-Generating Activities (IGA); ▪ Capacity building on community life; ▪ Study tour for exchange. 		<ul style="list-style-type: none"> ▪ Poor sales of gardening products. 	<p>Women Associations;</p> <p>Technical services in charge of the promotion of women;</p> <p>Local Project Management Unit.</p>
	<ul style="list-style-type: none"> ▪ The National Association of Wood Operators (ANEB). 	<ul style="list-style-type: none"> ▪ Rarity of the resource; ▪ Non-compliance with the law. 		<ul style="list-style-type: none"> ▪ Promotion of other sources of energy as alternative energy. 	<ul style="list-style-type: none"> ▪ ANEB; ▪ Technical Services of Water and Forests; ▪ Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Butchers Associations. 	<ul style="list-style-type: none"> ▪ Quality control of meat; ▪ Exploitation into the artisanal sector. 		<ul style="list-style-type: none"> ▪ Capacity building and the modernization of the sector. 	<ul style="list-style-type: none"> ▪ The technical services concerned; ▪ Association; ▪ Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Association of Sellers of leather. 	<ul style="list-style-type: none"> ▪ Difficulties in supplying raw material. 		<ul style="list-style-type: none"> ▪ Capacity building of the sector. 	<ul style="list-style-type: none"> ▪ The technical services concerned; ▪ Association; ▪ Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Infrastructure. 	<ul style="list-style-type: none"> ▪ Insufficient and worn out housing for protection and surveillance officers; ▪ Degradation of paths; ▪ Obsolescence of the infrastructure (watchtowers, etc.); ▪ Inadequate supply of drinking water; ▪ Infrastructure development with solar energy equipment; ▪ Insufficient and obsolescence offices. 		<ul style="list-style-type: none"> ▪ Rehabilitation and construction of certain infrastructure. 	<ul style="list-style-type: none"> ▪ Park W/Niger.

	<ul style="list-style-type: none"> ▪ Rolling and floating logistics equipment. 	<ul style="list-style-type: none"> ▪ Lack of canoes ▪ Obsolescence and lack of vehicles; ▪ Computer equipment (computers, printers, data show, photocopier and scanner; ▪ Maintenance and renewal; ▪ Bicycles and motorcycles; ▪ Internet connection device (satellite dish, etc.) ; ▪ Navigation equipment (GPS, compass, Clinometer ...); ▪ Camera trap, camera, binoculars, etc. 	<ul style="list-style-type: none"> ▪ Equipment, maintenance. 	<ul style="list-style-type: none"> ▪ The technical services concerned; ▪ Other Structures; ▪ Associations and Project Management Unit (local).
	<ul style="list-style-type: none"> ▪ Honey storage equipment. 	<ul style="list-style-type: none"> ▪ Packaging equipment; ▪ Store for beekeeping products. 	<ul style="list-style-type: none"> ▪ Construction of infrastructure. 	<ul style="list-style-type: none"> ▪ Association of Beekeepers; ▪ The technical services concerned; ▪ Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Fishing gear. 	<ul style="list-style-type: none"> ▪ Unavailability and inaccessibility of fishing gear; ▪ Conservation of fishery products. 	<ul style="list-style-type: none"> ▪ Strengthening of the capacities and equipment of the structures concerned. 	<ul style="list-style-type: none"> ▪ The technical services of Waters and Forests, responsible for fisheries; ▪ The Association; ▪ Local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Hives. 	<ul style="list-style-type: none"> ▪ Support for the installation of hives; ▪ Insufficient apiaries. 	<ul style="list-style-type: none"> ▪ Increase of apiaries; ▪ Use of modern hives. 	<ul style="list-style-type: none"> ▪ Union of Beekeepers.
	<ul style="list-style-type: none"> ▪ Availability of bees. 	<ul style="list-style-type: none"> ▪ Lack of watering point for bees; ▪ Use of pesticides. 	<ul style="list-style-type: none"> ▪ Build or develop ponds, water points or basins. 	<ul style="list-style-type: none"> ▪ Union of Beekeepers. ▪ The technical services concerned (DFC / AP, Agro-Technician).
	<ul style="list-style-type: none"> ▪ Availability of agricultural land. 	<ul style="list-style-type: none"> ▪ Land degradation; ▪ Progress of the agricultural front; ▪ Demographic pressure; ▪ Obsolescence of production techniques and systems. 	<ul style="list-style-type: none"> ▪ Land restoration; ▪ Intensification of agriculture; ▪ Agroforestry. 	<ul style="list-style-type: none"> ▪ Association for Agricultural Production; ▪ The agricultural services concerned and the local Project Management Unit.
	<ul style="list-style-type: none"> ▪ Livestock availability. 	<ul style="list-style-type: none"> ▪ Diseases, epizootic diseases; ▪ Lack of Food Banks for Livestock; ▪ Lack of Bank for Zoo Technical Inputs; ▪ Siltation of ponds and other water points; 	<ul style="list-style-type: none"> ▪ Development of pastoral lands; ▪ Intensification of livestock. 	<ul style="list-style-type: none"> ▪ Technical Department in charge of Forest, Waters and Livestock.

			<ul style="list-style-type: none"> ▪ Proliferation of invasive species; ▪ Lack of training, information and awareness of breeders; ▪ Occupation of corridors. 		
		<ul style="list-style-type: none"> ▪ Human resources. 	<ul style="list-style-type: none"> ▪ Capacity building. 	<ul style="list-style-type: none"> ▪ Training and support for equipment for stakeholders. 	<ul style="list-style-type: none"> ▪ All the stakeholders concerned.
		<ul style="list-style-type: none"> ▪ Wealth of Biodiversity. 	<ul style="list-style-type: none"> ▪ Reduction of biodiversity; ▪ Poaching; ▪ Illegal Pasture; ▪ Progress of the agricultural front; ▪ Bush fires; ▪ Illegal fishing. 	<ul style="list-style-type: none"> ▪ Organization of anti-poaching campaigns (APC); ▪ Sensitization of the stakeholders concerned; ▪ Implementation of firewalls.; 	<ul style="list-style-type: none"> ▪ Protected Area Management Units ▪ Local Project Management Unit.
		<ul style="list-style-type: none"> ▪ Availability of water resources. 	<ul style="list-style-type: none"> ▪ Drying of water points; ▪ Changes in water regimes. 	<ul style="list-style-type: none"> ▪ Development of water points. 	
		<ul style="list-style-type: none"> ▪ Corridors. 	<ul style="list-style-type: none"> ▪ Insufficient corridors; ▪ Marking of corridors; ▪ Development of corridors; ▪ Inadequate vaccination parks; ▪ Insufficient water points. 	<ul style="list-style-type: none"> ▪ Improvement of corridors and accompanying infrastructure; ▪ Rehabilitation of pasture lands. 	<ul style="list-style-type: none"> ▪ Technical services concerned (livestock farming, rural engineering, water and forestry, farmers and breeders' associations); ▪ Local Project Management Unit.
		<ul style="list-style-type: none"> ▪ Association of Accompanying Guides of the W. 	<ul style="list-style-type: none"> ▪ Capacity building. 	<ul style="list-style-type: none"> ▪ Training about associative life; ▪ Training in visitor reception and guidance techniques; ▪ Training in basic technical subjects. 	<ul style="list-style-type: none"> ▪ The Technical Services of Forestry in charge of the Management of Protected Areas; ▪ Local Project Management Unit.
		<ul style="list-style-type: none"> ▪ Association for the Valorization of Ecotourism 	<ul style="list-style-type: none"> ▪ Capacity building. 	<ul style="list-style-type: none"> ▪ Training about associative life; ▪ Training in visitor reception and guidance techniques; ▪ Training in basic technical subjects. 	<ul style="list-style-type: none"> ▪ The Technical Services of Forestry, in charge of the Management of Protected Areas; ▪ Local Project Management Unit.
2	Socio-economic activities				
a	Forest ecosystems	Presence of forest galleries, but only in the Park and in the Partial Wildlife Reserve of Dosso.	<ul style="list-style-type: none"> ▪ Climate Change 		
b	Agriculture and livestock	See the aspects developed above concerning these subjects.			

c	Fisheries	See the aspects developed above concerning these subjects.			
d	Other Income Generating Activities (IGA)	<ul style="list-style-type: none"> ▪ Exploitation of the Doum leaves; Exploitation of wood – energy by the rural markets; ▪ Extraction of Shea butter. 			
3	Early Warning Systems (EWS)				
		<i>How the information on the scourges currently circulates?</i>	<i>Difficulties and obstacles concerning the flow of information</i>	<i>Types of communication channels, message type and communication tools</i>	
		<ul style="list-style-type: none"> ▪ Existence of a national structure of the Early Warning System attached to primacy structure; ▪ Existence of a Ministry in charge for the Management of Disasters and Early Warnings. 	<ul style="list-style-type: none"> ▪ Lack of communication tools. 	<ul style="list-style-type: none"> ▪ Capacity building. 	<ul style="list-style-type: none"> ▪ MR EWS; ▪ Stakeholders concerned; ▪ The Ministry in charge of Disaster Management.
N°	Main Theme	Assets & achievements	Constraints & weaknesses	Needs & proposals	Responsible
4	Training and Capacity Building				
		<ul style="list-style-type: none"> ▪ See the chapters developed on this. 			
5	Sensitization and Communication				
		<ul style="list-style-type: none"> ▪ Existence of several communication strategies in the areas of Biodiversity Management, Natural Resources Management, Adaptation and Mitigation of Climate Change. 	<ul style="list-style-type: none"> ▪ The lack of consequent means. 	<ul style="list-style-type: none"> ▪ Strengthening of operational capacities for sensitization. 	<ul style="list-style-type: none"> ▪ The various structures concerned; ▪ The local Project Management Unit.

ANNEX 4: The following tables represent restitution of the results of the group work by themes

Institutional Component and Early Warning System

	Main Theme	Needs & Proposals			Synthesis
		Benin	Burkina Faso	Niger	
1	Institutional Component				
	Organization, Management Structure, Community Associations and Rural Communities	<ul style="list-style-type: none"> ▪ Support CENAGREF with human, materialistic and financial resources; ▪ Strengthening the communication between partners; ▪ Strengthening the capacity of co-management structures (AVIGREF) and professional organizations: Farmers, fishermen. 	<ul style="list-style-type: none"> ▪ Clearly define the structure about the Park's ownership; ▪ Sustainable financing mechanisms; ▪ Establishment of ridge structures; ▪ Monitoring and supervision of groups and associations; ▪ Creating Literacy Centers; ▪ Establishing a consultative framework. 	<ul style="list-style-type: none"> ▪ Strengthening human capacities and materialistic support. 	<ul style="list-style-type: none"> ▪ Strengthening the materialistic, financial and human capacities of all stakeholders; ▪ Set up a framework for dialogue between actors at the regional level; ▪ Establishment of umbrella co-management structures at the country level and a federation of umbrella structures at the regional level; ▪ As in Benin and Niger, it is desirable that the Park Management in Burkina Faso will be entrusted with a single structure.
2	Early Warning System (EWS)				
		<ul style="list-style-type: none"> ▪ Equipment and training for Early Warning Needs. 	<ul style="list-style-type: none"> ▪ Increase of awareness sessions; ▪ Expansion of the range of telephone and radio communication; ▪ Strengthening the Park's communication system; ▪ Assistance to the Warning Systems with all necessary equipments and trainings. 	<ul style="list-style-type: none"> ▪ Ensure Capacity Building; ▪ The need of an Early Warning and Disaster Management System in Niger 	<ul style="list-style-type: none"> ▪ Promotion of new information and communication technologies on Climate and Environment for an adapted EWS; ▪ Installation of synoptic stations, allowing the collection of real time climate data in the Complex; ▪ Realization of diachronic analyses of the surface in the Complex and of its pre-project reference status; ▪ Guarantee the set-up of a mechanism to monitor the dynamics of land use and biodiversity for better contingency measures; ▪ Equipment and training for the competent structures in charge of the Management of the EWS.

Adaptation and mitigation actions (Socio-economic activities)

N°	Main theme	Benin	Burkina Faso	Niger	Synthesis
3 - Socio-economic activities					
a	Forest ecosystems	<ul style="list-style-type: none"> ▪ Awareness raising and development of alternative activities; ▪ Development of techniques to improve soil fertility. 	<ul style="list-style-type: none"> ▪ Awareness raising and monitoring; ▪ Set up lowlands for fodder production; ▪ Creation of water reservoirs; ▪ Establishment of a M&E System with permanent mechanisms. 	<ul style="list-style-type: none"> ▪ Carrying out reference situations at the level of all the communes bordering the W; ▪ Installation of Synoptic Meteorological Stations and collection of climate data; ▪ Establishment of climate services in anticipation of and to respond to climate catastrophes; ▪ Installation of an Ecological Monitoring System; ▪ Promotion of alternative sources of energy; ▪ Organization of anti-poaching campaigns (LAB); ▪ Awareness-raising among stakeholders; ▪ Construction of firewalls; ▪ Construction or rehabilitation of houses for protection and surveillance officers; ▪ Rehabilitation of degraded paths; ▪ Construction of infrastructure such as watchtowers, water supply systems solar energy equipment; ▪ Procurement of canoes, vehicles, computer hardware, bicycles and motorcycles, internet connection device, navigation and camera equipment, ▪ , etc.. 	<ul style="list-style-type: none"> ▪ Anti-poaching; ▪ Ecological Monitoring; ▪ Sensitization of stakeholders on the management and conservation of the natural resources of the WAP Complex; ▪ Creation and development of ponds; ▪ Realization, rehabilitation and development of infrastructures (offices, paths, miradors, etc ...); ▪ Implementation of sustainable land and water management measures in the peripheral areas of the WAP Complex.
b	Agriculture & Livestock	<ul style="list-style-type: none"> ▪ Development or creation of water points and reservoirs; ▪ Materialization of the different forest species; ▪ Sensitization; ▪ Set up a system for managing wildlife conflicts at village level. 	<ul style="list-style-type: none"> ▪ Creation of tax deductions for animals; ▪ Availability of meals; ▪ Creation of transhumance corridors; ▪ Implementation of vaccination facilities; ▪ Availability of tools for agriculture; ▪ Promotion of practical methods for Assisted Natural 	<ul style="list-style-type: none"> ▪ Availability of farming inputs for the Farmers' Association; ▪ Restoration of pasture; ▪ Creation of Banks for Zoo Technical Inputs; ▪ Support of Associations of Women in selling their garden products on the market; ▪ Development of Pastures; ▪ Intensification of livestock production; ▪ Land restoration; ▪ Intensification of agriculture; ▪ Agroforestry; ▪ Build or improve water points or basins; ▪ Development of corridors and associated infrastructure; 	<ul style="list-style-type: none"> ▪ Development and creation of water points and reservoirs; ▪ Development of transhumance corridors; ▪ Make inputs available to farmers; ▪ Intensification of agriculture; ▪ Promotion of organic farming; ▪ Set up a warranty system; ▪ Capacity building for farmers and breeders; ▪ Restoration of pasture lands; ▪ Creation of Banks for Zoo Technical Inputs;

			<p>Regeneration (ANR);</p> <ul style="list-style-type: none"> ▪ Support for Organic Farming. 	<ul style="list-style-type: none"> ▪ Rehabilitation of pasture lands. 	<ul style="list-style-type: none"> ▪ Materialization of the different forest species (Benin); ▪ Set up a system for the management of human-wildlife conflicts at village level (Benin); ▪ Promotion of garden products of Associations of Women for markets (Niger); ▪ Intensification of livestock (Niger); ▪ Land restoration (Niger).
c	Fisheries	<ul style="list-style-type: none"> ▪ Training of fishermen; ▪ Support for the acquisition of adequate fishing resources. 	<ul style="list-style-type: none"> ▪ Organization of the fishermen (formation of a group of interests); ▪ Availability of fishing gear; ▪ Development of aquaculture operations. 	<ul style="list-style-type: none"> ▪ Organization of fishermen's structures; ▪ Strengthening of capacities of the fishermen and acquisition of fishing gear; Equipment for the conservation of fishery products. 	<ul style="list-style-type: none"> ▪ Organization and training of fishermen and acquisition of their equipment; ▪ Development of aquaculture operations.
d	Other Income-Generating Activities (DIGAs)	<ul style="list-style-type: none"> ▪ Mobilization of the financial resources for IGAs; ▪ Identification of IGA promoters. 	<ul style="list-style-type: none"> ▪ Construction of water reservoirs for market oriented gardening; ▪ Valorization of NWFPs through groups of women. 	<ul style="list-style-type: none"> ▪ Study tours and exchange of experiences in the WAP Complex; ▪ Introduction of honey-producing species; ▪ Enlargement of producers and production area; ▪ Honey packaging materials; ▪ Storage of beekeeping products; ▪ Increase in apiaries; ▪ Use of modern hives; ▪ Capacity building and promotion of the Leather and Skin Sector; ▪ Capacity building for Butchers and modernization of the sector. 	<ul style="list-style-type: none"> ▪ Promotion of market gardening; ▪ Promotion of beekeeping; ▪ Promotion of the production of shea butter; ▪ Encouragement of the creation of workshops; ▪ Promotion of small-scale breeding; ▪ Valorization of NWFPs (baobab, moringa, néré, shea, tamarin, balanites, gums, etc.).

Communication, Training and Capacity Building

N°	Main theme	Benin	Burkina Faso	Niger	Synthesis
4	Training and Capacity Building				
		<ul style="list-style-type: none"> ▪ Acquisition of equipment for watchtowers; ▪ Development of paths, ponds, and watchtowers; ▪ Realization of patrol paths; ▪ Capacity building of the personnel (foresters, eco-guards, trackers, tourist guides ...); ▪ Recruitment of qualified staff; ▪ Equipment for rolling, media and communication (radios). 	<ul style="list-style-type: none"> ▪ Training: Adaptation to Climate Change; ▪ Project development; ▪ GIS, Ecological Monitoring; Men-Fauna conflict management; ▪ Fight against bush fires; LAB; cooking stoves; NWFP valuation. 	<ul style="list-style-type: none"> ▪ Training about associative life; ▪ Training in visitor reception and guidance techniques; ▪ Training in basic technical subjects. 	<ul style="list-style-type: none"> ▪ Co-operative management training; ▪ Organize study tours for the benefit of farmers' and breeders' groups; ▪ Training about Ecotourism; ▪ Training in the different techniques of valorization of NWFP; ▪ Training in fundamental technical subjects (Monitoring and evaluation activities, ecological monitoring, LAB ...); ▪ Acquisition of logistical and technical equipment; ▪ Recruitment of qualified personnel.
5	Awareness and Communication				
		<ul style="list-style-type: none"> ▪ Mobilization of financial resources for the implementation of the communication plan; ▪ Rehabilitation and strengthening of radio communication systems. 	<ul style="list-style-type: none"> ▪ Development of sensitization and communication themes; ▪ Increase the communication and sensitization channels and media; ▪ Backup of a communication and sensitization action plan. 	<ul style="list-style-type: none"> ▪ Strengthening of operational capacities for sensitization. 	<ul style="list-style-type: none"> ▪ Development of environmental education activities; ▪ Reproduction of communication channels and media, especially in local languages; ▪ Elaboration of a communication and sensitization action plan that integrates local knowledge; ▪ Creation and operationalization of a communication and sensitization action plan; ▪ Increase of communication and sensitization channels and media.

ANNEX 5: Participants List


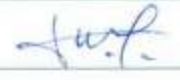






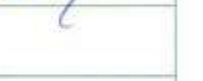


Atelier régional de concertation et d'échange sur le projet ADAPT-WAP

DU 03 AU 05 FEVRIER 2017 | TAPOA (NIGER)

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