



« MONO TRANSFRONTIER BIOSPHERE RESERVE »
**COMMUNITY BIODIVERSITY CONSERVATION AREA
OF BOUCHE DU ROY
(ACCB-Bouche du Roy)**

**SIMPLIFIED DEVELOPMENT
AND MANAGEMENT PLAN
(2017-2021)**





Organisation
des Nations Unies
pour l'éducation,
la science et la culture



Programme
sur l'Homme
et la biosphère

PROGRAMME SUR L'HOMME ET LA BIOSPHERE

*Le Conseil international de coordination
du Programme sur l'Homme et la biosphère
a décidé de désigner*

Réserve de biosphère transfrontière de Mono Togo et Bénin

*pour inclusion dans le Réseau mondial
de réserves de biosphère.*

*Les principaux types d'écosystèmes et de paysages de la planète
sont représentés dans ce réseau qui est consacré à la conservation
de la diversité biologique, à la recherche et à la surveillance continue,
ainsi qu'à la définition des modèles de développement durable
au service de l'humanité.*

*La participation à ce réseau mondial facilite la coopération
et les échanges aux niveaux régional et international.*

DATE D'INSCRIPTION

14 juin 2017

DIRECTRICE GENERALE DE L'UNESCO

Mira Brundage



PROGRAMME SUR L'HOMME ET LA BIOSPHERE

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SIGLES ET ACRONYMES

ABE : *Benin Environmental Agency*

ASECNA : *Agency for Aerial Navigation Safety in Africa and Madagascar*

CBD : *Convention on Biological Diversity*

AP : *Protected Area*

UNFCCC : *United Nations Framework Convention on Climate Change*

CENAGREF : *National Center for the Management of Wildlife Reserves*

CITES : *Convention on International Trade in Endangered Species of Fauna and Flora*

UNCLOS : *United Nations Convention on the Law of the Sea*

DGEFC : *Directorate General of Waters, Forests and Hunting*

EMICOV : *Integrated Modular Survey on the Living Conditions of Households*

FAO : *Food and Agriculture Organization of the United Nations*

INSAE : *National Institute of Statistics and Economic Analysis*

RGPH : *General Census of Population and Housing*

PAGS : *Simplified Development and Management Plan*

IUCN : *International Union for the Conservation of Nature*

SDAC : *Master Plan for Communal Development*

FOREWORD

The simplified development and management plan of the Community Biodiversity Conservation Area of Bouche du Roy derives from that of the Mono Transfrontier Biosphere Reserve. This reserve is the association of two national reserves in a common cross-border area (Benin and Togo) with a total area of approximately 346,285 hectares (ha) for a population of approximately 2,015,000 inhabitants having for main activities small-scale agriculture (palm trees and coconuts), grazing, forestry and fishing. It is the result of a project implemented by GIZ under the funding of the Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety of the Federal Republic of Germany (BMUB) under the Climate Initiative (IKI). The Netherlands Committee of the International Union for the Conservation of Nature (IUCN NL) also supports the process through advocacy and communication actions.

Under the supervision of local authorities, the process of creation and technical support is provided by the non-governmental organization Eco-Benin at the Bouche du Roy site.

ACCB - Bouche du Roy extends over the communes of Grand-Popo and Comè. It covers an area of 9678 hectares. In recent years, there is evidence of an advanced degradation of biodiversity due to anthropogenic pressures (overexploitation of fishery resources, cutting of mangrove trees and coconut plantations, construction of human dwellings, etc.) and natural pressures (climate change, silting of streams and water bodies). This situation has motivated the establishment of a community biodiversity conservation area with a management and protection system for this area, which contains many species of fauna and flora on the Red List of the IUCN. This management plan has identified the opportunities to be valued for the conservation of this area. To achieve this goal, a zoning was done in three parts defined in a consensual way with the local populations. It includes :

- (i) The central area whose objective is the integral conservation of natural resources and biodiversity through restoration, promotion of environmental education, ecotourism and research;
- (ii) The buffer zone meant for sustainable fishing, the sustainable use of mangroves, the promotion of environmental education and ecotourism, reforestation activities and the development of socio-economic activities compatible with the conservation of natural resources;

(iii) *The transition zone dedicated to sustainable fishing and the sustainable use of mangroves, the promotion of environmental education and ecotourism and the development of socio-economic activities compatible with conservation of natural resources.*

Thus, physical materialization of the boundaries of the central area from biological elements, restoration and enrichment with adapted local species, monitoring of the area, construction of access roads, ecotourism, income generating activities etc. are the priority activities selected in collaboration with the local residents of the area to be implemented over a period of five (5) years. The estimated cost for the implementation of the actions is estimated at five hundred and nineteen million two hundred and six thousand two hundred and forty (see annex). Indicators are defined to periodically evaluate the evolution of the activities provided in this management plan.

This reserve has received UNESCO MAB recognition. According to UNESCO, biosphere reserves are sustainable development learning sites designed to reconcile the conservation of biodiversity with the sustainable use of natural resources.

This summary of the simplified development and management plan of the community biodiversity conservation area of Bouche du Roy, initiated by the Mono Delta Trans-boundary Biosphere Reserve Project remains a decision tool that will help plan the set of actions to be undertaken for local development and sustainable protection of the area.

The Mayor of Grand-Popo
Mr. Anani HLONDJI



I- CONTEXT OF THE CREATION OF THE RESERVE

The large reserve is an integral part of the RAMSAR 1017 site. It is therefore located in a wetland of international importance built by the Mono River at the border of Benin and Togo. It is also a marine coastal area that has a strong ecotourism potential in terms of culture and worship very much visited by the populations of Porto-Novo, Cotonou, Ouidah and the nearby city of Lomé.

The reserve has various landscapes not taken into account by the current network of protected areas of Benin including the coasts, the wetlands (Ramsar site 1017), the Guinean savannas, and the food plains of Mono, the depression with Vertisol of Tchi, the peninsulas and islands of sacred forests. These different landscapes are characterized by typical ecosystems of the Dahomey Gap on plains, plateaus and marine and coastal environments of the Atlantic Ocean (mangroves, marshy meadows, swamp forests, riparian forests, etc.). These different ecosystems are home to a diversity of flora and fauna, some of which are endangered in Benin, Africa and internationally (mangroves, sea turtles, African manatees, hippopotami, Palearctic migratory birds, etc.); hence the need for its conservation. The process of creating the transboundary biosphere reserve funded by the Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety of the Federal Republic of Germany

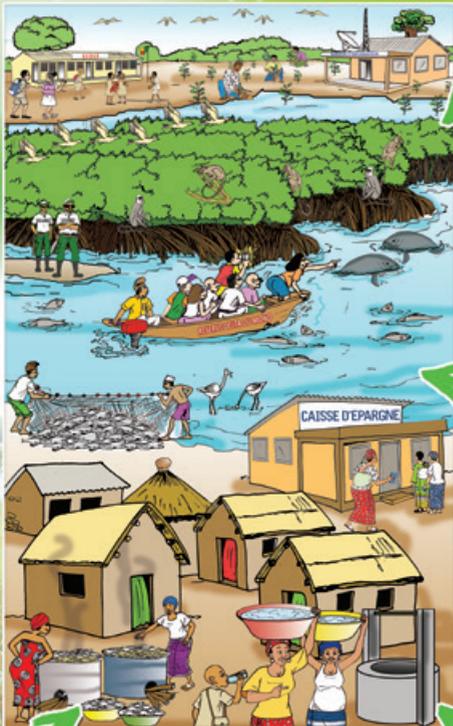
(BMUB) with technical support of GIZ and is led on the field by the NGOs ECO-BENIN, Africa Mobile Nature and Nature Tropicale with the authorities and local populations in Benin. It has been marked by several actions, the most important of which are:

- (i) The delimitation and participatory mapping and zoning of the site;
- (ii) The development of local site resource management agreements;
- (iii) The establishment of the institutional management framework;
- (iv) The establishment of a legal framework for management;
- (v) The development and implementation of the development and management plan
- (vi) The establishment of local natural resource management bodies;
- (vii) The surveillance and ecological monitoring of fauna and flora in the community area.

Thus, at the start of the project to create the transboundary biosphere reserve funded by the Federal Ministry of the Environment for the Protection of Nature, Construction and Nuclear Safety of the Federal Republic of Germany and executed by GIZ (Benin, Togo), a launching workshop held in Grand-Popo on October 30, 2014 brought together all the actors of the process. This workshop was an opportunity to inform all stakeholders about the initiative and the process of setting up the reserve. As a result, several consultations were carried out at local, national and cross-border level.

Création de la Réserve de Biosphère du Delta du Mono

Implication de la population dans la création de la Réserve Bouche du Roi



1- CARTOGRAPHIE



2- CONVENTIONS



4- ACTIVITES COMMUNAUTAIRES



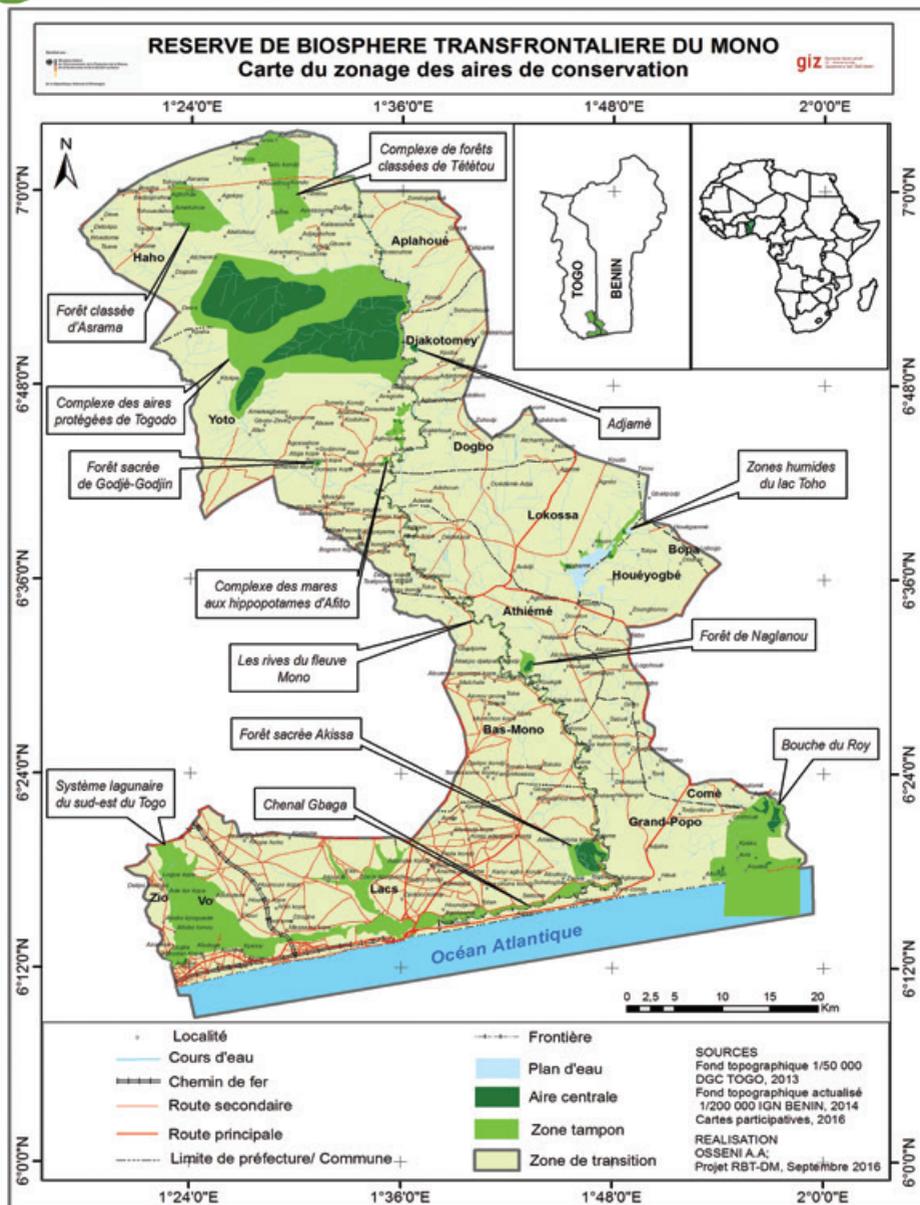
3- SURVEILLANCE



Ministère de l'Environnement et du Développement Durable
 de la République du Bénin

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH





Cette carte a été obtenue à partir d'un zonage de la réserve transfrontalière sur la base des critères et schéma de MAB-UNESCO de façon participative avec les communautés locales.



II- DESCRIPTION OF THE SITE OF BOUCHE DU ROY

2.1- Generalities

Name of the protected area:

Community Area of Conservation of the Biodiversity of Bouche du Roy (ACCB – Bouche du Roy)

Geographic location:

It lies between 6° 15' and 6° 23' north latitude and 1° 52' and 1° 59' east longitude. Picture 1 shows the situation map of the ACCB of Bouche du Roy.

Surface area :

The continental and marine area of Bouche du Roy has an area of approximately 9,678 hectares.

IUCN Management Category:

This area is prioritized in Category VI given its main management objective which is the sustainable use of ecosystems based on local management initiatives.

Mandated manager:

The management of the area is delegated to the Association of Conservation and Promotion of the Community Biodiversity Conservation Area of Bouche du Roy (ACP-Doukpo) which serves as an interface between the municipalities which are the project owners and the National Center for the Management of

Wildlife Reserves (CENAGREF) which is the state body accredited for the management of biosphere reserves.

Legal status (creation decree):

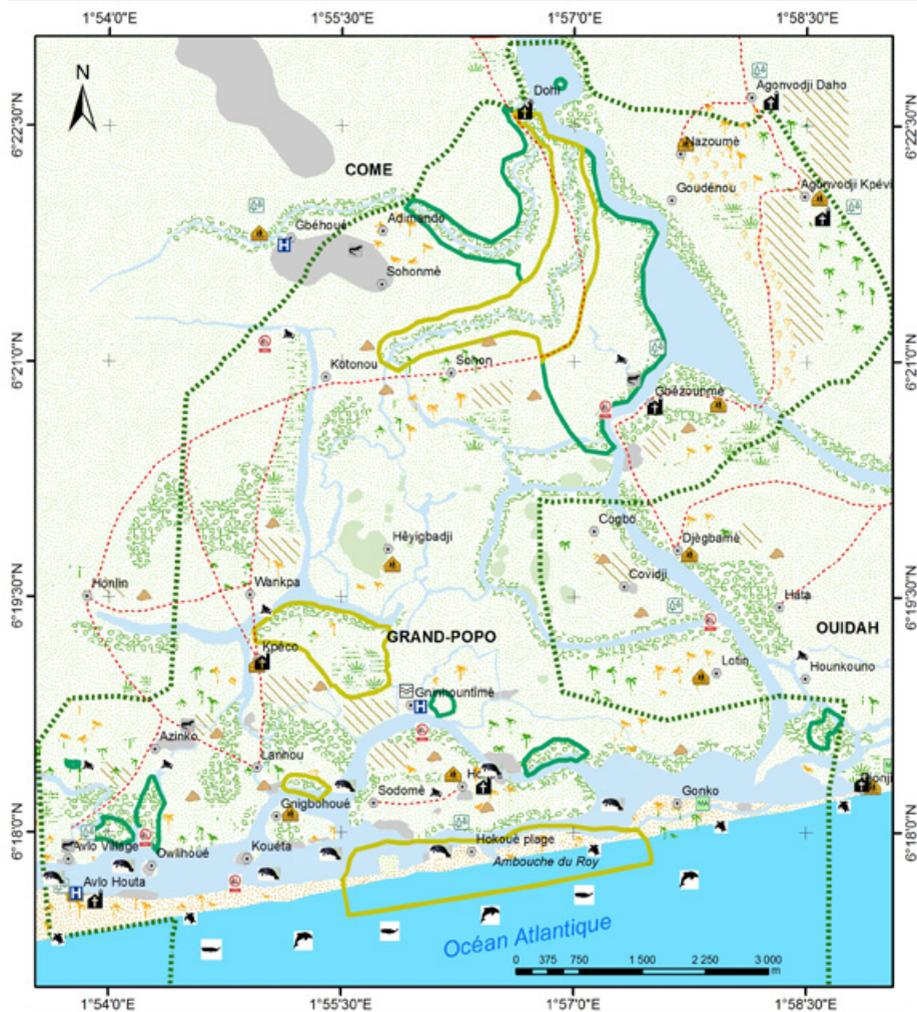
The community area for the conservation of biodiversity of Bouche du Roy is created by the decrees N°94/052/C-GP/SG/SDLP-SEHAVE of the Municipality of Grand-Popo dated September 14, 2016 and N°93/77/CC/SG-SADE of the municipality of Comè dated September 15, 2016.

Description of the central areas indicating their legal status, their scope and main conservation objectives	
Scope	394.8 ha divided into 10 central areas.
Legal status	Community area for the conservation of biodiversity, recognized by municipal decrees and a prefectural decree.
Main objectives of conservation	Full conservation of natural resources and biodiversity through restoration, promotion of environmental education, ecotourism and research.
Management rules	<p><u>Access:</u> It is subject to a written authorization addressed to the president of Doukpo association.</p> <p><u>Authorized activities:</u> Environmental education, research, education and training are permitted after authorization from the association Doukpo.</p> <p><u>Prohibited activities:</u> Hunting, the exploitation of fishery resources, the exploitation of the groove, the exploitation of mangroves, the agricultural exploitation, the exploitation of the fauna, transhumance, the breeding, aquaculture and fish farming, pruning, mutilation, lopping, searching for bark and leaves; the destruction, removal or removal of part or all of the boundaries, markings or fences used as boundaries of the central area.</p> <p><u>Sanctions and procedure:</u> Anyone caught in the act will pay a fine of 100,000 CFA francs to be paid into Doukpo association's cash register in addition to the expiatory ceremonies of the desecrated deity. The illicitly collected products and the means used will be seized.</p>
Description of the different buffer zones, their legal status and management rule	
Scope	8,305.13 ha in a buffer zone.
Legal status	Community Biodiversity Conservation Area recognized by a communal decree.

Main objectives of conservation	<ul style="list-style-type: none"> • Sustainable use of mangroves; • Promotion of environmental education and ecotourism; • Reforestation; • Development of socio-economic activities compatible with the conservation of natural resources.
Management rules	<p><u>Authorized activities:</u> controlled hunting, breeding and fishing, controlled transhumance, controlled tourism, controlled exploitation of wildlife and NTFPs, environmental education; conservation agriculture;</p> <p><u>Prohibited activities:</u> capturing of any protected animal species, cutting and collection of mangrove wood without authorization from Doukpo association, use of synthetic chemicals in agriculture on the site and along the banks of Bouche du Roy, non-controlled transhumance, clearing of wood and undergrowth within 25 m of both sides along the banks, rivers and water bodies; slaughtering, pruning, limbing, mutilation, incineration, bleeding of protected species.</p> <p><u>Sanctions and procedure:</u> Sanctions and penalties incurred by any offender are stipulated in Articles 51 to 55 of the local management agreement.</p>
Description of the different buffer zones, their legal status and management rule	
Management objective	Promotion of responsible fishing and sustainable use of mangroves, promotion of environmental education and ecotourism and development of socio-economic activities compatible with the conservation of natural resources.
Management rules	No specific management rules are defined in the local convention. The management rules of the zone are those defined by the regulatory texts of the Republic and in particular the forestry sector and the fishing sector.

PROJET RESERVE DE BIOSPHERE TRANSFRONTALIERE DU DELTA DU MONO

Carte Participative des vocations du site de la Bouche du Roy



Interdiction de pêche	Centre de santé	Zone culture	Zone Centrale
Tortue	Eglise	Palmeraie	Zone tampon 1
Crocodile	Ecole	Cocoteraie	Zone Tampon 2
Lamantin	Grand-Couvert	Plantation d'Anacarde	Plan d'eau
Village et Hameau	Collège	Mangrove	Plage
Forêt Sacrée	Marché	Culture de Jonc	Océan Atlantique
Production de sel	Dauphin	Savane marécageuse	Prairie marécageuse
Présence de singe	Baleine	Route principale	Zone d'habitation
		Piste	

REALISATION
Communes villageennes
riveraines du site de la Bouche
du Roy OND Eco-Bios
NUMERISATION
OSSENI A.A.
Avril 2016

2.2- Socio-demographic characteristics

Population, composition, growth

Two municipalities share the authority of the ACCB-Bouche du Roy. These are the municipalities of Grand Popo represented by the districts of Avlo and Gbéhoué and the municipalities of Comé represented by the district of Agatogbo. Table 1 provides information on the demographics of the two municipalities and districts bordering Bouche du Roy's community biodiversity conservation area.

Table 1: Population of municipalities and districts typically bordering the ACCB-Bouche du Roy

	Total population	Males	Females	Growth rate
Municipality : Grand-Popo	57 636	28 237	29 399	3,19%
District : Avloh	4 741	2 319	2 422	
District : Gbéhoué	5 977	2 946	3 031	
Municipality : Comè	79 989	38 507	41 482	2,79%
District : Agatogbo	13 126	6 347	6 779	

Source : RGPH4 - 2013

- **Vulnerable groups, level of poverty and dependence on the protected area**

Vulnerable groups include the youths, women and the elderly people. This is a social vulnerability that covers aspects related to health and purchasing power.

Table 2: Monetary poverty index and non-monetary poverty index

Municipality	Incidence of income poverty 2011 (%)	Incidence of income poverty 2015 (%)
Comè	45,18	41,31
Grand-popo	47,67	48,80

Source : INSAE-EMICoV, 2015

On the basis of the data in Table 2, it is understood that in view of this local poverty, the local populations will depend more and more on natural resources through the degree of pressure of direct withdrawal of resources (fauna, flora) for self-consumption and for marketing, the demand for housing land and agricultural production. Hence the need to initiate income-generating activities (IGAs) and planning activities that can improve the socio-economic life of residents in general and especially vulnerable groups in particular.

2.3- Ecosystem services

The ecosystem services enjoyed by the communities bordering Bouche du Roy site are of several types. These are supply, regulation, support and socio-cultural services.

Supply Services :

Bouche du Roy site provides populations with different ecosystems:

- **Medicinal species :** Several species, both plant and animal, are used by populations in traditional medicine to treat several diseases. These include, for example, the plants of *Zanthoxylum zanthoxyloides*, *Remiremaritima*, *Rhizophoraracemosa*, *Raulvolfiavomitorea* and, for animals, organs of the species of sea turtles (*Lepidochelys olivacea*, *Dermochelys scoriacea*, *Cheloniemydas* and *Eretmochelys imbricata*) and marshbuck (*Tragelaphus spekeii*), etc are used.
- **Food species :** They provide food of animal and plant origin to local populations for self-consumption and sale. Important food plants are: *Cocos nucifera*, *Chrysobalanus icaco*, etc., and animal species are almost all consumed (game birds, sea turtles, African manatee, *Cardiosoma armatum*, fish, oysters, *Arvicanthisn iloticus*, etc.). We should note that its ecosystems also provide other products no less negligible to the population such as salt, timber (timber, lumber and wood energy), straw for construction (*Cocos nucifera* straw), stubble from several species of cyperaceae or poaceae for the fabrication of mats and roofs (*Imperata cylindrica*, *Cyperus articularis*, *Typha australis*, etc.) and grazing for livestock.
- **Regulation Services :** The local populations of Bouche du Roy site benefit from many regulatory services provided by the functioning of ecosystems through the purification of air by plants through photosynthesis, climate regulation at the local level through trapping atmospheric carbon within ecosystems. For example, mangrove ecosystems contribute to water puri-

fication and coastal fixation against coastal erosion; they also serve as a windbreak and buffer effect to floods. There are also many species of birds and insects that play an important role in pollination within these ecosystems. However, the high anthropization of these ecosystems affects the quality of the regulatory services provided at this site.



- **Socio-cultural services** : The ecosystems of the site of Bouche du Roy provide non-material benefits through spiritual and worshipping satisfaction (cultural and worshipping ceremonies in the sacred forests), recreational activities, leisure and environmental education (educational outing of pupils in these ecosystems, etc.), the awakening to the artistic creation (drawings of bas-reliefs on temples, folklore), well-being and human moral satisfaction (see spray, etc.).
- **Support services** : Support services at the ecosystems of Bouche du Roy are those that allow the provision of all the other aforementioned services. They include:
 - Providing habitat for wildlife species;
 - Soil retention and erosion control by vegetation cover;
 - Supply of deltas in nutrients and the bio-geochemical cycle;

As an interface ecosystem between two types of environments, the mangrove serves for example of reproduction support for the fauna of the marine and land environments.

2.4- Pressions et menaces

The forms of pressure at the Site of Bouche du Roy are of two kinds: pressures of anthropogenic origin and natural pressures. Anthropogenic pressures include:

- The pressure related to human settlements due to the fast growth in the population has encroached on the formerly abandoned land left fallow ;
- Land clearing for agricultural purposes has resulted in the secondarization of most ecosystems in the region. There is almost no primary ecosystem except the sacred areas that have still partly preserved their ecological integrity ;
- The fishing pressure has led to a depletion of fishery products and some fishermen who have lost their activities have converted to agriculture; which in turn generates pressure on previously unused farmland ;
- The cutting pressure of woody mangrove species and coconut plantations for construction purposes, wood energy, etc ;
- Harvesting pressures on animal resources. They include poaching of various species already vulnerable such as the manatee, sea turtles, etc.
- Snail collection and oyster harvesting are traditional forms of collection that could also pose a threat to the survival of the populations of these species. Table 5 provides information on the level of importance of each type of anthropogenic pressure in the different zones.

Table 5 : Forms and Level of Pressure on the Resources of Bouche du Roy site

Bouche du Roy site	Types of anthropogenic pressures				
	Agricultural pressure	Wood cutting	Hunting	Fishing	Poaching
Zone East	+	++	+	+++	++
Zone South	+	++	+	+++	+++
Zone North	++	+	++	++	+

Source : Field data by Eco-Benin NGO, 2016

Legend : + = little, ++ = alarming, +++ = very alarming

In terms of natural pressures, there is cyclical flooding and coastal erosion. But the mangroves at Bouche du Roy site constitute an ecosystem that is resilient to these climatic risks.

2.5- Opportunities and constraints

- **Opportunities**

The conservation of Bouche du Roy site offers many opportunities for local communities through a local dynamic focused on seeking funding for the conservation and improvement of the standard of living of local populations through the construction of various socio- community infrastructures. (Health centers, schools, boreholes, etc.) and the development of economic activities. All of these activities create jobs for the youths and women and, as a result, initiate sustainable development in local communities.

The erection of this site as a conservation area is also an experimental field for research and is an opportunity for Benin to honor various international commitments and conventions (the convention on biological diversity, the RAMSAR convention, the convention on the species migratory wildlife, etc.)

- **Constraints**

One of the major constraints to the preservation of the site is the anthropic pressure. Lands granted by communities need to be secured by a naming act to avoid any land dispute on conservation areas.

Création de la Réserve de Biosphère du Delta du Mono

CONVENTION CADRE DE LA BOUCHE DU ROY

1 Ne pas chasser/capturer les animaux tels que les varans, les pangolins, les lamantins...



2 Ne pas utiliser des acadjas, barrages et des filets à petites mailles dans les zones à protéger



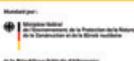
3 - Ne pas mettre le feu pour attraper les crabes.
- Ne pas utiliser les pesticides et engrais chimiques pour l'agriculture et le maraîchage sur les berges du fleuve.



4 Ne pas pêcher /capturer les baleines, les dauphins, les tortues



5 Ne pas couper la mangrove dans les zones strictement protégées





III- CONSERVATION CHALLENGES

- ***On the national level:***

The site is located in a marine ecosystem with specificities that cannot be found anywhere else in Benin. Ranging from mangrove ecosystems, rupicolous forests, vast swampy meadows to coastal plantations and mouths, the site is made up of landscapes unique to Benin but unfortunately not protected by the country's system of protected areas. The existence of Bouche du Roy site not only makes it possible to fill the conservation gap of these ecosystems but also to maintain the diversity of landscapes in Benin. It should be noted that the creation of Bouche du Roy site is part of an approach to the creation of a marine reserve in Benin to preserve endangered species of flora and fauna.

Table 6 presents an overview of threatened species on Bouche du Roy site.

Table 6 : Species of threatened flora and fauna on the site of the Bouche du Roy

Taxonomic group	French common name	Specie	Status Preservation Red List IUCN Benin	Status Preservation Red List IUCN International
Faune	African manatee	<i>Trichechus senegalensis</i>	CR	VU
	Genette tigrine	<i>Genetta tigrina</i>	NE	LC
	Otter with white cheek	<i>Aonyx capensis</i>	EN	NT
	Green turtle	<i>Cheloniemydas</i>	EN	EN
	Tortoise with scales	<i>Eretmochelys imbricata</i>	CR	CR
	Olive Ridley Turtle	<i>Lepidochelys olivacea</i>	EN	VU
	Leatherback turtle	<i>Dermochelys coriacea</i>	CR	VU
	Royal tern	<i>Thalasseus maximus</i>	NE	LC
	Marshbuck	<i>Tragelaphus spekeii</i>	EN	LC
Flore	Grey mangrove	<i>Conocarpus erectus</i>	EN	LC
	Visquous Dodona	<i>Dodonaea viscosa</i>	NE	LC
	Gnarled Verbena	<i>Phyllanodiflora</i>	NE	LC
	Red mangrove	<i>Rhizophora racemosa</i>	VU	LC
	White mangrove	<i>Avicennia germinans</i>	VU	LC
	Yellow Fagara	<i>Zanthoxylum zanthoxyloides</i>	VU	–
	<i>Rauvolfia vomitoria</i>	NT	–	

Legend: CR: Critically endangered; VU: Vulnerable; EN: Endangered; LC: Minor concern; NT: Almost threatened; NE: Not evaluated

In fact, the area has been used for decades as a nesting site for some migratory species that are emblematic for their reproduction. Today embryonic techniques are put in place by the local populations to hatch eggs of sea turtles; tourist activities are organized around the release of small sea turtles at sea. There are sacred sites dedicated to various initiatory rites such as Mami, Dan, Yehoué, Zangbéto which are secret societies of the region and whose ceremonies are held in the relics of sacred forests at Bouche du Roy.

Benin in the forestry sector has a vision that considers forest resources as essential supports for maintaining a better quality of life from which social needs and wealth can be met to reduce poverty. Thus, the vision of Benin's new forest policy by 2025 is articulated as follows: «A green Benin where forest, wildlife and natural resources are managed in a sustainable way to meet the ecological, economic and socio-cultural needs of the populations and contribute to poverty reduction, food security and the fight against climate change «.

Regarding the conservation of biodiversity, through the 2011-2020 Strategy and Action Plan for Biodiversity, Benin has formulated its vision as follows: «By 2020, the decentralized territorial communities, the State and the civil society are more involved in the concrete and concerted actions of knowledge, valorization, conservation and restoration of the biological diversity for the socio-economic development and the well-being of the populations of Benin».

At regional and international level

Bouche du Roy site is one of the largest Palearctic bird migration areas in Benin. There is therefore a need to preserve these ecosystems to ensure this trophic migration and a significant contribution to the maintenance of the global migratory range network.

In addition, the geographical environment of the reserve is the mouth of two large rivers in Benin (the Mono River and Lake Ahémé), so it is a sensitive ecological zone that serves as an interface between the saline marine environment and the freshwater environment. The preservation of this type of environment makes it possible to save species of fish, amphibians, and marine turtles that migrate into this area to ensure their reproduction.

At the international level, Benin is a signatory to the Convention on Biological Diversity whose vision stipulates «By 2050, biological diversity is valued, conserved, restored and used wisely, ensuring the maintenance of ecosystem services, by keeping the planet healthy and providing essential benefits to all people». The need to protect the site of Bouche du Roy is in line with this international ambition.



IV- MAJOR CHALLENGES TO BE TAKEN

Looking at the diagnosis established both in terms of natural resource management of the community conservation area of the Biodiversity of Bouche du Roy, and the socio-economic conditions, several challenges remain. These challenges include:

- Knowing well and implementing the rules for the conservation of natural resources locally established with, for and by local people;
- Mobilizing resources for the reinforcement of the governance around the community area of conservation of the biodiversity of Bouche du Roy ;
- Improving the livelihoods of communities through the promotion of income generating activities in connection with the protection of the resources of the Community Biodiversity Conservation Area of Bouche du Roy.



V- VISION OF THE SIMPLIFIED DEVELOPMENT AND MANAGEMENT PLAN

Based on Benin's vision in the forest sector, the conservation of biodiversity, and based on the visions and objectives of the communal development plans of neighboring municipalities, the vision of the community biodiversity conservation area of Bouche du Roy is as follows:

By 2021, the Community Biodiversity Conservation Area of Bouche du Roy is a protected area federating the conservation efforts of several actors for the preservation of species of fauna and flora and for the sustainable and equitable development of grassroots communities.



VI- STRATEGIC ORIENTATION

Based on the opportunities, constraints in this community area, three major strategic orientations have been formulated. They are:

- Implementing an aggressive advocacy and partnership policy to mobilize resources for the conservation of species and their habitats ;
- Strengthening the managerial capacities of the actors at the grassroots level for a better appropriation of the objectives and strategies of management ;
- Developing a monitoring and evaluation mechanism for the actions undertaken.



VII- GENERAL OBJECTIVE

The Management Plan of the ACCB-Bouche du Roy aims at preserving natural resources and biodiversity (including fish, mangroves, manatees and turtles) with a view to promoting sustainable fishing, sustainable tourism and environmental education.

Specifically, the priorities to be taken into account in the implementation of the management plan are:

- protect and restore natural ecosystems ;
- develop existing, economically viable and conservation-compatible activities for the local population ;
- contribute to the self-management of the local management structures put in place.



VIII- DEVELOPMENT UNITS AND ACTIVITIES RELATING THERETO

Development zones	Development Units	Defined activities
CENTRAL AREA	Restoration and enrichment	<p>Physical materialization of the boundaries of the central area from biological elements</p> <p>Restoration and enrichment with adapted local species</p> <p>Establishment of infrastructures to promote the ecotourism potential</p> <p>Surveillance of the protected area (Establishment of the monitoring committees, Development of a surveillance strategy, Training and logistical reinforcement of the surveillance agents, Regular organization of the surveillance patrol, etc.)</p> <p>Biomonitoring (Monitoring migratory species of birds and sea turtles; Periodic monitoring of populations of fauna and flora species indicative of the quality of the habitat, monitoring water quality, etc.)</p>

BUFFER ZONE		Research (inventory of avian species for ornithological tourism, definition of areas of concentration for ornithological tourism, development of breeding guide for fish species, development of technical itinerary of production of some local forest species, etc.)
	Sacralisation	<p>Sacralization of forest flaps and physical materialization of sacred places by symbols</p> <p>Research (Dynamics of natural habitat regeneration)</p>
	Fishing	Support for the development of fish farming areas for shrimp, oyster and fish production
		Fishing Regulatory Activity (Delimitation of Prohibited Areas, definition and implementation of local fishery management rules, establishment of the fishing police, organization of markets for the sale of fishery products)
		Capacity building of the actors of the marine artisanal fishing and equipments (Training on the rules and techniques of management of the fisheries, purchase of equipments and motorized boats, Training on preservation techniques of fishing products, etc.)
		Preservation and development of spawning sites
		Establishment of sea turtle egg hatchery units
		Regular releases of baby turtles
	Reforestation and ranching	Establishment of specific conservation program, focused on the manatee and sea turtles
		Planting coconut trees and fast-growing species of service wood and energy
<p>Realization of arboretum and/or garden of medicinal plants</p> <p>Realization of small game ranches</p>		

Development zones	Development Units	Defined activities
BUFFER ZONE	Preservation and Restoration of Mangroves	Delimitation of degraded mangrove areas and assisted regeneration in mangroves
		Regulation of the use of mangroves (implementation of endogenous measurement)
		Women's capacity building for the development of salt production activities
	Preservation Agriculture	Realization of nursery of local plant species
		Development of agroforestry in association with cereals and pulses
	Development of organic farming around market gardening	
Ecotourism and education	Establishment of tools and infrastructures to enhance the ecotourism potential of the community biodiversity conservation area (construction of a watchtower, construction of an Eco-lodge, acquisition of a boat, lifejacket, long-sighted binoculars, etc.)	
		Realization of ecotourism communication tools (poster, leaflet, documentary film, sticker, Tee-Shirt, etc.)
	Training of ecotourism guides	
	Training young schoolchildren in nursery development, seed collection and environmental conservation	
No UA	Realization and materialization of ecotourism tours	
	Establishment of a fishing and turtles museum (Construction of the museum building, directory of customs and traditions, fishing related material in the region, directory of knowledge related to turtles, documentary film on turtles and fishing, map on turtles from egg laying to hatching, etc.)	
TRANSITION ZONE		No UA

Development zones	Development Units	Defined activities
TRANSITION ZONE	No UA	Building an office for Doukpo association
		Regular organization of fairs and events around the areas of the reserve to present the products of the area and promote socio-cultural mixing
		Capacity building of women for the development of salt production activities, realization of nurseries of local plant species
		Support of autonomous funds to the association for the development of activities
		Wood energy box plantation



IX- MANAGEMENT AND GOVERNANCE BODIES

9.1- Governance and Management body

Since Bouche du Roy is a community biodiversity conservation area whose land has been granted by the local population for conservation purposes, the management system must contrast with those known until then where the State is the owner of the land (Classified domain) and be participatory with local populations (co-management). In this case, the management is mandated and consists of the delegation of management authority to an organ set up consensually by both neighboring municipalities, in this case the already existing Association for the Conservation and Promotion of Nature of ACCB-Bouche du Roy (ACP-DOUKPO).

The management bodies set up are:

A Village Natural Resource Management Committee (CVGRN) is set up in the neighboring villages of each of the three zones. The CVGRN is made up of members from the various existing village groups and associations (women's group, youth association, hunters' brotherhood, dignitaries of religions, fishermen's association, etc.). The role of this committee is to ensure the rational use and safeguarding of natural resources in the village area concerned in relation to

the reserve (monitoring at the level of the villages covered by their allocation, restoration and reforestation of protected areas, alerting on specific management indicators, etc.).

A Natural Resources Management Council per zone (CGRN-East Zone, CGRN-South Zone, CGRN-North Zone). Since the Community Biodiversity Conservation Area of Bouche du Roy has three zones (South East Zone, North Zone, South West Zone), this association is an emanation of village management committees in each zone. The board's mandate is to implement the major orientations (management and planning directives, implementation of intervention programs, accounting management of actions, etc.) and to ensure the regular holding of meetings at village level.

The Conservation and Promotion Association of the ACCB-Bouche du Roy (ACP-DOUKPO) which is the umbrella association bringing together the three CGRNs. It is the mandated Association with the administrative role of management of the protected area. It is the interface between the municipalities and the other dismemberments. It is finally the melting pot of negotiation between municipality offices, technical and financial partners and NGOs.

The figure below presents the implemented organization chart of the institutional management framework mis en œuvre.

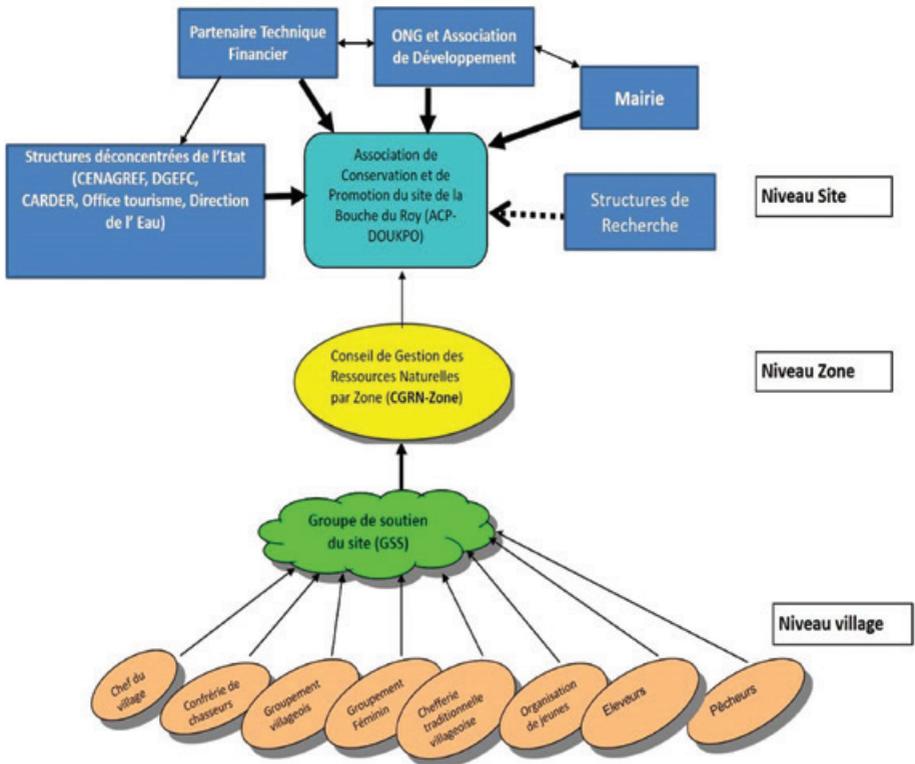


Figure : Organizational chart of the institutional management framework of the ACCB-Bouche du Roy

Legend :

CENAGREF = National Center for the Management of Wildlife Reserves;
 DGEFC = General Directorate of Waters, Forest and Hunting;
 CARDER = Regional Center of Action for Rural Development;

With regard to the mode of governance, in view of all that is described above, it is understood that the appropriate mode of governance is shared governance. Indeed, a set of actors here share the authority of administrative and financial decision. The bodies of the decision-making authority are then the public actors (CENAGREF, Municipality office) and the local populations represented by the Association of Conservation and Promotion of the ACCB-Bouche du Roy (ACP-DOUKPO)



9.2- Monitoring-evaluation

The purpose of the monitoring and evaluation system is to assess the level of achievement of the objectives and to take corrective action if necessary. The monitoring system here focuses on the objectives and results to be achieved. At Bouche du Roy site, the monitoring and evaluation system focuses on ecosystem conservation, eco-tourism, the promotion of profit-generating activities and infrastructure equipment; with indicators to evaluate the three functions of biosphere reserves, namely conservation, development and logistical support.



APPENDIX 1: FUNDING PLAN FOR ACTIVITIES SCHEDULED IN THE PAGS

Budget headings	Total cost (FCFA)
Protection activities	31 200 000
Infrastructures and equipment	174 500 000
Research, Monitoring and biomonitoring	51 000 000
Education and Capacity-building	26 000 000
Economic valuation	92 000 000
CARBON CERTIFICATION Process	66 000 000
Operating and institutional expenses	78 506 240
GRAND TOTAL OF THE BUDGET	519 206 240

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