



*NGO in special consultative statutes
with the economic and social council
of the united nations ECOSOC*

*Coope SoliDar R.L. (Cooperativa
Autogestionaria de Servicios
Profesionales para la Solidaridad Social R.L.)*

TECHNICAL NOTE

**PROJECT FOR SUPPORT TO SUSTAINABLE MANAGEMENT AND BIODIVERSITY
CONSERVATION OF THE MANGROVE
IN GBAGA CHANNEL IN BENIN AND THE WETLANDS
IN TÁRCOLES, CENTRAL PACIFIC COAST
OF COSTA RICA**

Mai, 2009

I – TITLE OF THE PROJECT

<p style="text-align: center;">PROJECT FOR SUPPORT TO SUSTAINABLE MANAGEMENT AND BIODIVERSITY CONSERVATION OF THE MANGROVE IN GBAGA CHANNEL IN BENIN AND THE WETLANDS IN TÁRCOLES, CENTRAL PACIFIC COAST OF COSTA RICA</p>

II –PROBLEM DEFINITION AND JUSTIFICATION:

Mangrove ecosystems in tropical areas shelter a broad spectrum of biological diversity. The animal diversity comprises, among other things, species of birds, reptiles, fish, crustaceans and molluscs. Moreover, the mangroves have other functions of stabilization of the litoral and prevention of coastal erosion. The mangroves also provide human populations with many economical activities and goods: dwelling of the families, grounds for breeding and culture, firewood, fishing, hunting and ecotourism, among other things. They provide also medicinal substances and offer habitats and natural seedbeds to many important watery species. Therefore, they play an important role as places of interest for conservation and productivity.

As developing, tropical countries, both Benin and Costa Rica share many similarities in ecosystems and resources. The situation of coastal and lowland wetlands is very critical in the two countries, due to a series of factors. In Benin, the principal threats relate to the loss of the productivity of the lake, the destruction of the habitats of aviary and wild fauna, the capture of the birds for illicit sale, impunity, non-respect or knowledge of the laws and texts and non-respect of the traditional practices of nature conservation. In Costa Rica, the main threats to these wet ecosystems are the lack of land use policies, uncontrolled touristic development, pollution and overexploitation of resources.

The present proposal will attempt to address these issues in order to advance towards local sustainable development. This project is for the moment a pilot project which will be implemented during the first phase at Benin and thereafter in Costa Rica, in partnership with the Costa Rican organization COOPE SOLIDAR R.L. through a reciprocal project.

- Benin:

In the case of Benin, the current state of massive destruction of the mangroves carries a hard blow to the world environment. The migratory birds, which populate these mangroves, are threatened of extinction in Benin, which also constitutes a threat against the world biodiversity since in fact the same birds migrate towards other areas. In the same way, all the marine coasts, which extends to Nigeria, is threatened by coastal erosion. If nothing is done, since the mangrove plays an important role on the stabilization of the littoral, the coastal ecosystems will be seriously threatened of disappearance, affecting communities as well.

The target groups of the project are the bordering communities of the Gbaga channel particularly groups of women, the local authorities and young people groups in ten villages. The women play a very important part in the natural stock management and are at the base of many activities, they will be very implied in this project, as well as the men of the communities.

On the socio-economic level, the households draw the essential of their products of subsistence and source of income of several activities to knowing, the fishing which is the principal activity, the food and market-gardening production of against season, small animal breeding, etc. The relative importance of fishing holds of the availability in water level, but also the lack of arable lands which limit the possibilities of agricultural development. This situation is a factor that could justify the poverty of the population living in the wetlands of the south Benin. Because of that, the populations develop unhealthy behaviours without respect to the environment.

The women although representing more than 50% of the Beninese population do not have right to the ground and devote themselves to small activities such as the transformation of the products of fishing, the food and market-gardening production, the small animal breeding, small trade etc. They are seldom represented in the authorities of decision-making, in spite of the fact that they constitute the engine of the development. All this cannot contribute to the good development of the localities. This project will bring a local response to the various current problems observed in the medium and will facilitate the development of similar initiatives along the Gbaga channel for the resolution of the great evils which undermine the conservation of the resources of this area. The implementation of the project will be done according to the principle of sustainable development, by taking into account the ecological, economical and social aspects (Population, Profit, Planet or PPP) but also of gender equity. This in order to ensure perennality of it, improving the living conditions for men as well as for women and making it possible that the future generations benefit from it.

This project will bring a local response to the various current problems observed in the surroundings and will facilitate the development of similar initiatives along the Gbaga channel for the resolution of the threats that undermine the conservation of the resources in the environment. The present initiative will answer the national strategic orientation, aiming at the promotion of a regional planning which ensures the regional development and the rational management of the environment; an orientation which guided the government in its strategy aiming at protecting the wet ecosystems and which allowed the inscription of the zone of mangrove on the sites of the RAMSAR Convention for the accompaniment of the communities in the development of good practices.

The implementation of the project through the support with the development of the generating activities of incomes will not only make it possible to support the actions of conservation but also to ensure the autonomisation of the bordering communities (men and women together) and consequently to contribute to reduction of poverty in the localities concerned. The project lies perfectly within the scope of the strategic plan of management of the wetlands of Benin and the actions considered tally with the priorities of our Integrated Coastal Zone Management Program. The project will be strongly focused towards the gender equity approach.

This project which is a pilot project will be implemented through an integrated approach with the tools such as Bio-rights and the Saving for the change which are again mechanisms of financing very adapted to the context of wetlands management and poverty reduction. The Bio-rights approach is a mechanism which stresses the economic development, the nature conservation, and the concientisation, it acts of an approach formulated in favour of poor and which stresses gender equity.

- **Costa Rica:**

The Central American Isthmus has served for hundreds of thousands of years as a natural barrier separating the marine life form populations along the Pacific and Caribbean coasts. This fact, along with the geo-morphology of the more than 1,200 kilometers of Costa Rican coastline, has endowed the country with a large variety of marine environments and eco-systems. Among them are reefs, estuaries, mangroves, seaweed beds, and rocky sea bottoms. (Comisión de la Zona Económica Exclusiva, 2006).

The Costa Rican estuaries, which are rich in biological diversity, are not problem free. The problems include: poor planning for recreational areas in the coastal zones, excessive sedimentation, deforestation in the mangroves, and dragging channels in the estuaries to use flooded parcels of land in various aquaculture endeavors or to harvest salt. The existing protection laws to stop ecological destruction or non-sustainable practices.

Costa Rica has close to 80 mangrove sites with a total area of 41,002 hectares that are almost exclusively concentrated on the Costa Rican Pacific where 99% of the total mangrove areas have been reported. From the ecological point of view, as defined by Jiménez *et al.* (1985), these eco-systems are critical habitats because they are reproduction and breeding grounds for shrimp, crabs, fish, and

nesting birds. Since they are ecosystems involving a transition area from sea to land, they play a fundamental role as barriers protecting against coastal erosion and the onslaught of natural phenomena such as hurricanes. Other associated coastal ecosystems include lagoons that also serve as shelters to species of fish, aquatic birds and many invertebrates important for the maintenance of an equilibrated food chain in the areas. From the human point of view, these ecosystems have importance as sources of food and economic security.

Other medium to high-level threats identified are the advance of the agricultural frontier and a general change in land use, either through urban or industrial development. The report points out that these changes in usage not only occur in the geographic areas close to the mangrove systems; they also are seen in the high- and mid-level parts of watersheds. This situation alters the level of sedimentation carried off by the rivers. The three causes most frequently attributed with causing these changes include highway construction, building dams, and deforestation.

As for issues of a more administrative nature, the main threats consist of the lack of clear legislation regulating how the mangroves are protected and used and the conflicts between institutional competencies, for example the Instituto Nacional de Pesca y Acuicultura (INCOPECA) and the Ministerio de Recursos Naturales y Energía (MINAE). Added to all this, there are gaps in the existing information about the state of these ecosystems in the country. Other matters that need to be considered are the current poverty levels generally experienced by the communities associated with the mangroves, as well as global warming as a general threat to coastal-marine ecosystems.

The reciprocal project in Costa Rica will be located in the community of Tárcoles, in the County of Garabito. This place is part of the Central-Pacific coast, which is a zone with important economical activities such as fishing and touristic development. The area is part of the Gulf of Nicoya, in the Province of Puntarenas. According to estimates, the community has close to 2,000 people.

From the biological point of view, Tárcoles is located in a strategic site. The district is a point of transition from the very humid and humid tropical rainforests located on the country's southern coast and the dry forests found on its northern coast. The community is located between two mangroves that are extremely important for coastal marine species conservation: Tivives and Guacalillo mangroves. In addition, the community has a small lagoon system. Due to its biological importance, the Costa Rican government has defined two protected wilderness areas, the Carara National Park and the Tivives Protection Zone.

In the areas close to Tárcoles, the ecological potential has caused the development of medium- and large-scale tourism projects, bringing about major land speculation and placing pressure (as have other similar cases in the world) on the local residents to sell or leave their land, thus increasing the circles of poverty in the urban centers. Associated with this sort of tourism, issues external to the region have appeared such as an increase in drug usage (particularly by young people), crime, prostitution, etc. Even so, the social scenario is further complicated by the data from the Costa Rican Institute on Statistics and the Census in its "State of the Nation" report (2006) that claim that Tárcoles is one of the most depressed regions in the country. This situation reflects the enormous social gaps and economic inequality visible in the area.

Moreover, there is a need to underscore the high levels of pollution and sedimentation that affect the wetlands in the area. This pollution is carried towards the Gulf of Nicoya through the Grande de Tárcoles River, which collects much of the garbage discarded from the Great Metropolitan Area in the country's center. The area contains more than 80% of the population and the largest number of industries. This is one more factor that is chipping away at the marine-coastal resources base and, thus, decreases the opportunities of coastal communities like Tárcoles to develop sustainable activities. This means an increased risk of food insecurity and places artisanal fishing as a source of employment in danger.

The situation that artisanal fishermen are undergoing on the sea is equally complex: the Gulf of Nicoya is the most exploited marine eco-system in the nation. The shrimp fishing fleets, that use drag-line fishing methods, not only compete for the same sea spaces as other fishing endeavors, but they also have a strong negative influence on marine diversity. This large scale fisheries, in conjunction with the pollution and destruction of the remaining mangroves and coastal lagoons, is a great issue due to the important role that these systems play as nurseries for fish and invertebrate larvae, indispensable for the fishing chain.

Considering this complex reality, Coope SoliDar R.L. began an associative relationship with a cooperative called CoopeTárcoles R.L. This institution is a unique fishermen's cooperative that has adopted a Code of Responsible Fishing. It was created in the 1980's by the local fishermen to be able to market its products directly, finance fishing equipment, and to train fishermen. CoopeTárcoles R.L. has spent more than 20 years in ongoing community work and service. It has approximately 30 active members, both men and women.

Tárcoles' economic development is directly linked to the fishing industry and CoopeTárcoles R.L. is the driving force behind the local community's economy. For approximately five years, CoopeSoliDar R.L. and CoopeTárcoles R.L. have been developing an associative relationship oriented toward developing responsible fishing practices, toiling to conserve marine and coastal resources in the long run and to develop actions that improve the local community's quality of life.

The purpose of the process developed as part of the associative relationship is to achieve an integral vision of how to manage the area's natural resources as a function of obtaining an improvement in the quality of life for a marginal artisanal fishing community. Based on this, the two cooperatives have formed the Consortium POR LA MAR R.L., an initiative focused on the development of inclusive and sustainable economical activities associated with responsible artisanal fishing, such as communitarian tourism. Por La Mar R.L. is also advancing towards the development of recycling plans and involvement of women and youth into alternatives that permit integral development of the community as well as conservation of biodiversity and cultural identity. In addition, a process has begun to get the Costa Rican government to recognize the first Artisanal Community Based Marine Responsible Fishing Area. The main objective is to ensure artisanal fishing and the marine resource base that allows practicing the activity in the long term.

Considering this context, it is clear that the conservation and sustainable management initiatives are urgently required in the area. These natural resources have great potential to permit local integrated development. Therefore, it is fundamental to support research and sharing of knowledge among technicians and local populations; to strengthen the human values of solidarity and respect; and to efficiently implement measures to increase local participation in the sustainable management of these important ecosystems. Thus, this project will allow the creation of management goals to preserve the ecosystems and the traditional livelihoods of local inhabitants.

III – OBJECTIVES AND EXPECTED RESULTS

1-Overall objective

To contribute to the sustainable management and the conservation of biological resources of mangrove and lagoon ecosystems through the participation of local communities and the reduction of poverty.

2- Specific objectives

- To restore and settle a plan for conservation and recovery of the mangrove and the lagoon ecosystem biodiversity of Gbaga Channel in Benin and in Tárcoles, Central Pacific coast of Costa Rica.

- To promote methods of sustainable participative management of the mangrove of Gbaga channel and its riverside people in Benin and the mangroves and lagoon system in Tárcoles, Central Pacific coast of Costa Rica.

3- Expected outcomes

Within the framework of this project two major results are awaited.

- 1) The biological resources of Gbaga channel and in Tárcoles, Central Pacific of Costa Rica re-known and endowed with a restoration and preservation plan.
- 2) The basis of the rational exploitation of the Gbaga channel and Tárcoles mangroves and lagoons based on an integral and gender equitable approach.

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4- Indicators

The indicators relating to the activities are as follows:

Activity 1: To train and sensitize the local populations in the five villages including the school establishments with the sustainable management of the resources

Indicator 1: 1000 persons among whom half are women know the access rules and the sustainable modes of mangrove resources management

Activity 2: To achieve and implement a plan of regional development and management of the mangrove

Indicator 2: a framework document of regional development and management exists and is implemented in two region in Benin and Costa rica.

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Activity 3: Setting a mechanism of local regulation of the aforesaid channel management

Indicator 3: a local convention that takes into consideration men and women yearnings exists and is applied in Benin and Costa rica.

Activity 4: To train and initiate the young people and the women leaders on the restoration of the habitats of fauna

Indicator 4: 4 ha of ground are reforested and guarded in Benin and Costa rica.

Activity 5: To restore the banks

Indicator 5: 400.000 seedlings of mangroves are planted in Benin and Costa rica.

Activity 6: To promote environmental education in educational circle

Indicator 6: 20 environmental clubs exist and are functional in Benin and Costa rica.

Activity 7: To develop the good practices of management

Indicator 7: A repertory good practices of mangrove management exists in Benin and Costa rica.

Activity 8: To set up a device of permanent follow-up

Indicator 8: a committee of follow-up exists by village in Benin and Costa rica.

Activity 9: To ensure the technical framing of all the groupings

Indicator 9: 60 groupings has a certificate of training in Benin and Costa rica.

IV BENEFICIARIES

The beneficiaries of the project in Benin are the bordering communities of the Gbaga channel (men and women) in Benin, the local authorities and young people groups in ten villages. In Costa Rica, the beneficiaries of the project would be the communities of Tárcoles, as well as communities close to the managed ecosystems, specially women that collect molluscs, artisanal fisherpeople and other groups, such as young men and women, who are involved in eco-touristic activities.

V- IMPLEMENTATION STRATEGY

1- Activities

The activities will be carried out in the ten villages in Benin and in the community of Tárcoles, Costa Rica, including school establishments

Objective 1: To restore and settle a biodiversity protection plan for the mangrove and lagoon ecosystems of Gbaga channel in Benin and Tárcoles, Costa Rica, with the sustainable management of the resources

Activity 1: To train and sensitize the local populations

It is an activity which allows a mobilization of the various actors on specific topics in order to draw up the points of agreement on the strategy to be developed to achieve the goals of the project;

It is planned for this activity the realization of the didactic and educational materials (film, posters, brochures, folders) intended for the ecological awakening and for the sensitizing of the populations;

The program PCEE will be developed by a group of experts who will undertake to reinforce the capacities of the local councillors and responsible for the engineering departments and people resources of the commune in collaboration with the team of ECO-ECOLO and CoopeSoliDar R.L. .

This program is initiated in order to ensure the participation of this target and the perennality of the actions of this project.

The didactic material elaborated will ensure permanent sensitizing not only directly benefited communities of the project but also other close by which are not directly implied in this project. It will also reflect the traditional knowledge and cultural identity of the communities involved in both countries.

Sensitizing will be done by meetings of talks on various sets of themes accompanied by film projection and the installation of the posters of sensitizing.

Activity 2: To achieve and implement a plan of regional development and management of the mangrove

It will be a question within this framework of gradually leading the profited communities to define the rules and principles of management just as the plan of exploitation of space for purposes to extract from it the maximum of benefit without attacking the area.

The development of this plan of installation will follow upon studies (forest, socio-economic, and environmental evaluation) which will be undertaken by the researchers of Universities and technicians from the implementing institutions, accompanied by local participants, in order to evaluate the ecological and socio-economical conditions, to make an analysis that allows and which will make it possible to have a good knowledge of the area for a better management.

For this purpose all the local actors implied in the management of the channel will be invited. In the same context the various recommendations will be the subject of an administrative act which will have the force of law in the area and used like such.

Activity 3: Setting of local regulation of the aforesaid channel/lagoon management

The issue is especially of the installation of a local code of conduct approved by all the social groups with a gender approach that will be guaranteed by the local committees which will have the support of the local authority to inflict sanctions in order to guarantee the success and the perennality of the project.

The code will be worked out by an expert and will be validated during a workshop which will gather the representatives of the communities, the local councillors, the groups of women and the representatives of the government institutions.

Activity 4: To train and initiate the young people and the women leaders on the restoration of the habitats of fauna

If the water birds can find their framework thanks to the restoration of the banks they also need suitable space on firm ground. Within this framework and to make it possible other species to find their shelter, it will be proceeded to the reforestation of the surfaces favourable with their nesting and their pittance and and to the gradual settling of the questions of rare energy wood in the area. The wood plantation will be also a source of energy managed by a specific grouping which will profit from the generated benefit.

This activity will allow:

On the ecological level to contribute to the reconstitution of vegetable cover in the area of the project and consequently biodiversity. The activity will also make it possible to fight against the climatic changes.

On the socio-economic level to generate substantial incomes with the members of the groupings which will take care some on the one hand and at the community in general from the benefit carried out by the wood sale. The availability of wood in the vicinity and the cost relatively weaker will make it possible the bordering communities to make economies, which will enable them to face other loads.

Activity 5: To restore the banks

it is an activity which will make it possible to reduce the process of filling of the channel thanks to the reforestation of the banks at the level of the degraded zones of the selected localities . That will consist in planting the mangroves and developing a policy of follow-up in order to reduce their destruction. Thus one will facilitate the reconstitution of the spawning grounds for certain watery species.

Thus it will facilitate the reconstitution of the spawning grounds for some of watery species but also that of the rich fauna of the mangroves and to give again with the mangrove Channel Gbaga all his functions of wetlands. 50 000 seedlings of mangroves will be put out of ground by the communities with the technical support of ECO-ECOLO, the follow-up will be also carried out in the same way.

In Costa Rica, Coope SoliDar R.L. will be assisting the restoration of the lagoon system by the adequate management of solid wastes and other types of pollution, as well as the planting of native vegetation in the area.

Activity 6: To promote environmental education in educational circle

Nowadays, the destruction of the ecosystems and cultural erosion call upon an awakening for the protection of our traditional values. The objective of this activity is to ensure the transmission of traditional ecological knowledge the younger generation and to reinforce their capacity to improve the Community living conditions.

It is the action which will make it possible the rising generation to take the good practices, in the long term to adapt them and contribute to the safeguard of the still existing inheritance.

It will be created an environmental club composed of girls and boys by school in the localities concerned with at the beginning with a training of the teachers implied in the project.

Activity 7: To develop the good practices of management

The objective of this activity is to contribute to the improvement of the management of the Gbaga Channel of Benin and the lagoon system in Tárcoles, Costa Rica, through the promotion of the good endogenous practices which govern its use. One indicates currently certain changes compared to last and within sight of this alarming situation whose principal cause is the increase unceasingly increasing in the coupled population of the exacerbation of poverty in the zone. It follows incompatible socio-economic behaviour from there to a durable management of the natural resources.

It will be an issue of capitalizing the good practices and of using them to develop the actions of essential sensitizing to a change of behavior. Thus all what the recipients will have established as regulates which applies well in the area will have to be the subject of a capitalization in order to preserve the future generations against current realities.

Activity 8: To set up a device of permanent follow-up

This action will make it possible to ensure the follow-up of the actions to be carry out by the project through a system of payment for environmental services. It will be set up in each locality of the project a committee of follow-up made up of the recipients of the project. The members of these committees will profit from a payment for generating activities of benefit allowing them to provide for their needs following an evaluation in the event of success.

Objective 2: To promote methods of sustainable participative management of the mangrove of Gbaga channel and its riverside people in Benin and the mangroves and lagoon system in Tárcoles, Central Pacific coast of Costa Rica.

Activity 9: To ensure the technical framing of all the groupings

Trainings will be held to promote the development of sustainable activities. The trainings will be directed towards the improved economic stoves, the use of solar energy (solar kitchen, solar energy conversion into electric power), apiculture and pisciculture, among others.

The recipients of the programme of reinforcement of capacities will be the members of groupings which take an active part in the implementation of the project and adhere to the principles systems of payment for the environmental services. With through the approach bio-rights, the populations will profit from technical and financial supports to develop activities generating of benefit on the basis of result of the project. The improvement of the conditions of existence will be thus ensured.

what has been done in the first phase (the outcomes); some pictures may be a plus to show the results;

Project Name: PROJECT FOR SUPPORT TO SUSTANAIBLE MANAGEMENT AND BIODIVERSITY CONSERVATION OF THE MANGROVE OF GBAGA CHANNEL IN BENIN

Project Code: 06-P-07 ECO ECOLO

Lead Organization: ECO - ECOLO

Partner Organizations: COOPESOLIDAR

Partner Countries: BENIN – COSTA -RICA

Execution Period: November 2008 – April 2009

1.- Introduction

The general objective of the project for support to sustainable management and biodiversity conservation of the mangrove of Gbaga channel in Benin is to contribute to the sustainable management and the conservation of biologic resources of mangrove through the participation of the communities in the base and the reduction of poverty.

The activities are implemented in ten villages of Grand-pop township : Hillacondji, Agoué1, Agoué 2, Missihouncondji, Houedenoucondji, Ayiguinnou, Zogbedji, Nicouecondji, Yondocondji, Ewécondji.

For the first semester, the activities scheduled are :

Activity 1: To train and sensitize the local populations in the ten villages including the school establishments with the sustainable management of the resources

Activity 2: To achieve and implement a plan of regional development and management of the mangrove

Activity 4: To train and initiate the young people and the women leaders on the restoration of the habitats of fauna

Activity 5: To restore the banks

Activity 6: To promote environmental education in educational circle

Activity 7: To develop the good practices of management

Activity 8: To set up a device of permanent follow-up

All activities have been implemented in good conditions, ECO –ECOLO's team is working with population for the follow activities.

2. Advancement in Complying with the Objectives

The project has a general objective and two specific objectives.

The project has as a general objective to contribute to the sustainable management and the conservation of biologic resources of mangrove through the participation of the communities in the base and the reduction of poverty.

SPECIFIC OBJECTIVE 1 :

To restore and settle a plan for protection of the mangrove ecosystem biodiversity of Gbaga channel :

Activity 1: To train and sensitize the local populations in the ten villages including the school establishments with the sustainable management of the resources

Indicator 1: 500 persons among whom half are women know the access rules and the sustainable modes of mangrove resources management .

It is planned for this activity the realization of the didactic and educational materials (film, poster, folder) intended for the ecological awakening and for the sensitizing of the populations;

The program PCEE has been developed by a group of experts who undertake to reinforce the capacities of the local responsible of the commune in collaboration with the team of ECO-ECOLO. This program is initiated in order to ensure the participation of this target and the perennality of the actions of this project.

It has been organized a sensitizing activity with radio in Benin and Togo which has been hearded in the countries and a film has been elaborate.

The sensibilization plak as been elaborate which to ensure permanent sensitizing not only profit communities of the project but also those bordering of the Gbaga channel and which are not directly implied in this project.

Sensitizing has been done by meetings of talks on various sets of themes accompanied by film projection and the installation of the plak of sensitizing.

More than 700 persons have been sensitizing.

100% of this activity has been done for the semester



Picture 1 : Awarness in Missihouncondji



Picture 2 : Awarness in houedenoucondjicondji



Picture 3: training of local authorities PCEE



Picture 4 : sensitizing plak

Activity 2: To achieve and implement a plan of regional development and management of the mangrove

indicator 2: a framework document of regional development and management exists and is implemented

The workshop of the management plan validation has been organized and the activities are implemented



Picture 6 : workshop family picture



Picture 7 : working group

Activity 4: To train and initiate the young people and the women leaders on the restoration of the habitats of fauna

Indicator 4: 2 ha of ground are reforested and guarded



Picture 8 : seed bed

A training on the seed bed realization has been organized to prepare the soil afforestation.

10 000 plants will be put on ground on June.

100% of activity has been done for the semester.

Activity 5: To restore the banks

Indicator 5: 200.000 seedlings of mangroves are planted

100 000 seedlings of mangroves has been put on ground by the communities with the technical support of ECO-ECOLO, the follow-up will be carried out in the same way. There are 230 000 plants put on ground for all the project.

It is an activity which will make it possible to reduce the process of filling of the channel thanks to the reforestation of the banks at the level of the degraded zones of the selected localities .

100% of activity has been done for the semester.



Picture 9 : mangrove afforestation



Picture 10: mangrove afforestation by
ECO ECOLO executive Director

Activity 6: To promote environmental education in educational circle

indicator 6: 5 environmental clubs exist and are functional

9 environment clubs has been created and 636 pupil and teachers are involved in the project. A training has been organized to reinforced capacities of teachers. The clubs are animated by ECO ECOLO' team.

The objective of this activity is to ensure the transmission of traditional ecological knowledge the younger generation and to reinforce their capacity to improve the Community living conditions.

It is the action which will make it possible the rising generation to take the good practices, in the long term to adapt them and contribute to the safeguard of the still existing inheritance.



Picture 11 : pupil involoved in the program



Picture 12 : teachers after training

**Activity 8: To set up a device of permanent follow-up
indicator 8: a committee of follow-up exists by village**

It has been set up in each locality of the project a committee of follow-up made up of the recipients of the project. The members of these committees will profit from a payment for generating activities of benefit allowing them to provide for their needs following an evaluation in the event of success.

This action will make it possible to ensure the follow-up of the actions to be carry out by the project through a system of payment for environmental services.

100% of activity has been done for the semester.



Photo 13 : Houedenoucondji committee



Photo 14 : Ayiguinnou comittee

SPECIFIC OBJECTIVE 2 :

To promote methods of sustainable participative management of the mangrove of Gbaga channel and its riverside people in Benin.

The activity of this specific objective is for the second semester.

Table 1.

Advancement of activities and compliance with the proposed parameters

General Objective:

The project has as a general objective to contribute to the sustainable management and the conservation of biologic resources of mangrove through the participation of the communities in the base and the reduction of poverty

Specific objectives	Activities	% Implementation	Outcomes	% Achievement	Process indicator	Comments
1 . To restore and settle a biodiversity protection plan for the mangrove ecosystem of Gbaga channel	To train and sensitize the local populations in the ten villages including the school establishments with the sustainable management of the resources	100	More than 700 persons have been sensitizing. People knew the importance of mangrove ecosystem	80	500 persons among whom half are women know the access rules and the sustainable modes of mangrove resources management .	The process must be continuous for better results
1.To restore and settle a biodiversity protection plan for the mangrove ecosystem of Gbaga channel	To achieve and implement a plan of regional development and management of the mangrove	100	The environment management plan is achieve and implemented	100	The workshop of the management plan validation has been organized and the activities are implemented	
To restore and settle a biodiversity protection plan for the mangrove ecosystem of Gbaga	To train and initiate the young people and the women leaders on the restoration of the habitats of fauna	100	More than 150 persons has been trained on nursery installation, Nursery are in all village and schools	50	2 ha of ground are reforested and guarded	

channel						
To restore and settle a biodiversity protection plan for the mangrove ecosystem of Gbaga channel	To restore the banks	100	More than 230.000 seedlings of mangroves are planted	100	200.000 seedlings of mangroves are planted	
To restore and settle a biodiversity protection plan for the mangrove ecosystem of Gbaga channel	To promote environmental education in educational circle	100	9 environmental clubs exist and are functional	60	5 environmental clubs exist and are functional	
To restore and settle a biodiversity protection plan for the mangrove ecosystem of Gbaga channel	To set up a device of permanent follow-up	100	a committee of follow-up exists by village	100	a committee of follow-up exists by village	

3. Obstacles and Corrective Measures

A summary of all of obstacles found during the execution of the plan for the corresponding period, indicating the corrective measures to be applied in order to correct or overcome the resulting situation and the result obtained (See Table 2). The description of the obstacles must be presented in order to justify the variation between the proposed time table and the actual execution of the project.

Obstacles Faced	Corrective Measures	Results
The training of PCEE program is not in the budget	The activity has been implemented with the producing video fund	25 local authorities has been trained A public radio animation has been organized and with a video production

4. **Unscheduled Activities**

In the event that it is considered necessary to execute activities that are not foreseen in the original logical framework, a description indicating the corresponding objective must be included. For cases in which these activities do not correspond to any of the foreseen objectives, the specific objective must be drafted. For all of the cases the need to execute the unforeseen activity and the construction of an additional objective must be justified (See Table 3). The new proposed objectives as well as their corresponding activities must respond to the general objective.

Unscheduled Executed Activities

Objective	Activities	Products	Comments
Awareness of populations	Producing awareness plaq in all villages of the project	Awareness plaq	All population in the villages or not from the locality are sensitized on mangrove protection

Time Table and Execution Plan

xxxx : schedule activities

xxxxx : implimented activities

The activities wich are not implemented are scheduled for the second semester.

Specific objectives	Expected outcome	Activities	Country	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Responsible	List of human and economic resources needed
Objec tif 1 : - To restor e and settle a plan for protec tion of the mang rove ecosy stem biodi versit y of Gbag a chann el	1 the livin g reso urce s of Gba ga chan nel are resto red and pres erve d	1 To train and sensiti ze the local popula tions in the ten village s	Bé nin - Cos ta Ric a	x x x x	x x											Coord ina tor	EC O- EC OL O TE AM 7 200 US D
		2 To carry out and imple ment a plan of Indica ting install ation and manag ement of the mangr ove				x x x	x x x	x x x	x x x	x x x	x x x	x x x	x x x				Coord inator Consu ltant

		6 To promote environmental education in educational circle		x x x x	x x x x	x x x x	x x x x	x x x x	x x x x	x x x x	x x x x	x x x x	x x x x	Coordinator	Team EC O- EC OL O 300 0 US D
		7 To develop the good practices of management					x x	x x	x x	x x	x x	x x		Coordinator Com muniti es	Team EC O- EC OL O 100 0 US D
		8 To set up a device of Indicating permanent follow-up		x x x										Coordinator Com muniti es	Team EC O- EC OL O
Objec tif 2 : - To prom ote metho ds of sustai nable partic ipativ e mana geme	2 the man grove of the Gba ga chan nel is ratio nall y	9 To ensure the technical framing of all the groupings			x x	x x	x x	x x	x x					Coordinator Com muniti es	Eco col o tea m 940 0 US D

nt of the mangrove of Gbag a channel and its riverside people in Benin	expl oited the																		
Travel Benin Costa Rica										X	X								
First evaluation										X	X								Team EC-ECOLO -PSC
Report miparcours											X	X							Coordinator
Final evaluation													X	X	X	X			team EC-ECOLO -PSC
Final report																			coordinator

WHAT WILL BE DONE IN THE SECOND PHASE WITH OBJECTIVES

- 1 To train and sensitize the local populations in the ten villages (end)
- 3 Setting of local regulation of the aforesaid channel management.
- 4 To train and initiate the young people and the women leaders with the restoration of the habitats of fauna (end)
- 6 To promote environmental education in educational circle (end)

7 To develop the good practices of management

9 To ensure the technical framing of all the groupings

WHAT IS THE KNOWLEDGE THAT THEY COULD SHARE WITH THE PARTNER IN THE SECOND

Through the report we can see that mangrove biodiversity is degraded but population contribute to restore it. People need to develop another activities to contribute to protect and conserve mangrove in Benin

DIFFICULTIES ENCOUNTERED

During the project implementation no major difficulties have been encountered, those that lie ahead are related to the suspension due to evaluations. Indeed, the major part of its project activities scheduled in the second half but in the light of new information received from the CEPED and are related to evaluations of pilot projects, some seasonal activities such as plantations will not be executed and therefore constitute injury to the achievement of project objectives.

