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PROJECT / PROGRAMME TO COMBAT THE LOSS OF LIVING RESOURCES AND
THE DEGRADATION OF THE COASTAL AREA IN THE GUINEA CURRENT LAEGE
MARINE ECOSYSTEM AREA

Contract N° GP/RAF/04/004/11-B2

PROJECT FOR THE ESTABLISHMENT AND MANAGEMENT OF MARINE PROTECTED AREAS IN BENIN

(Pilot Project in the 16 Guinea Current Large Marine Ecosystem countries)

Prepared for the Governments of Angola, Benin, Cameroon, Congo, Cote d'Ivoire, Gabon, Ghana, Guinea, Equatorial Guinea, Guinea Bissau, Liberia, Nigeria, the Democratic Republic of Congo, Sao Tome & Principe, Sierra Leone, and Togo by the United Nations Industrial Development Organization (UNIDO) with the cooperation of the United Nations Environmental Programme (UNEP).

FINAL REPORT

By CEDED-ONG

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List of acronyms and abbreviations

ABE	Agence Béninoise pour l'Environnement (Benin Environmental Agency)
MPA	Marine Protected Area
CA	Chef d'Arrondissement
CBRST	Centre Béninois de Recherche Scientifique et Technique (Benin Scientific and Technical Research Center)
CEDED	Centre pour l'Environnement et le Développement Durable (Environment and Sustainable Development Research Center)
CRHOB	Centre de Recherche Halieutique et Océanologiques du Bénin (Benin Halieutic and Oceanographic Research Center)
CV	Chef de Village (Village Chief)
DDEPN	Direction Départementale de l'Environnement et de la Protection de la Nature (Regional Department of the Environment and Nature Conservation)
DGE	Direction Générale de l'Environnement (General Directorate of the Environment)
EPP	Ecole Primaire Publique (Public Primary School)
FAST	Faculté des Sciences et Techniques (Faculty of Sciences and Technology)
GCLME	Grands Ecosystème Marin du Courant de Guinée (Guinea Current Large Ecosystem)
GIRMaC	Gestion Intégrée des Ressources Marines et Côtières (Marine and Coastal Resources Integrated Management)
GPS	Global Positioning System
MEPN	Ministère de l'Environnement et de la Protection de la Nature (Ministry of the Environment and Nature Conservation)
ONG	Organisation Non Gouvernementale (Non Governmental Organisation)
UNIDO	United Nations Industrial Development Organisation
TFP	Technical and Financial Partner
NR	Natural Resources
UAC	Université d'Abomey – Calavi (University of Abomey-Calavi)
UNAPECAB	Union Nationale des Pêcheurs Continentaux du Bénin (Benin National Union of Continental Fishermen)
UNAPEMAB	Union Nationale des Pêcheurs Marins et Assimilés du Bénin (Benin National Union of Marine and Assimilated Fishermen)
UNESCO	Organisation des Nations Unies pour l'Education, la Science et la Culture (United Nations Education, Science, and Culture Organisation)

Executive summary

The process of Marine Protected Areas establishment of as a whole lasted twelve months.

The advances made in the conduct of the process from the beginning until today, have been effective through the completion of key activities around the main steps outlined in this report. It is important to remember that the study on the identification and description of Marines Protected Areas (MPA) conducted in 2007 was the basis for any significant technical approach that led to the development of the step reports and the final one.

The program of awareness and sensitization of local populations and communities in the project area of MANAGEMENT COMMITTEE courses, from November 2009 to January 2010. However, awareness has continued as necessary during the conduct of other activities within the framework of the implementation of the mission. The practice of awareness and sensitization was conducted as a first step toward three targets like: the municipal councils (mayors and heads of districts); borough councils (district chief and village chiefs) and populations (heads of villages or neighborhoods, counselors and populations). The team implementing the project has traveled to that end, five municipalities, eight boroughs and twelve villages with the four identified sites.

The realization of large-scale detailed mapping identified sites (1:5,000 - 1:10,000) for each of the four sites designated as validated and Marines Areas to protect highlighted the topography, vegetation, biodiversity, land use, density of population and population center of the sites in question and described as follows: (i) site Nazoumè - Bouche du Roy, (ii) site-Avlékété Togbin, (iii) site of Aire Marine d'Avlékété and finally (iv) at Lac Nokoué.

Management plans and zoning of each site identified, the rest very capital was conducted on the basis of the work cited above and also on the basis of brief descriptions (physical characteristics, use conflicts, environmental issues management) each selected site. This has lead to the achievement of zoning plans highlighting the ecological sensitivities of each MPA.

The delimitation and demarcation of physical AMP identified was conducted in a participatory momentum with a strong involvement of local communities. This helped to highlight the terrestrial boundaries and external areas selected. Furthermore, identification of buffer zones and free zones has also been, the subject of consultation with local populations. This participatory process has the merit to inform local communities, about the physical boundaries of MPAs, even if they are not all materialized for a number of technical considerations objects of current thinking.

The action plan was prepared for horizon year 2011 and focuses on the activities and sub-activities to be undertaken to improve the articles on the socio-economic status of resident populations of marine protected areas, but also mostly part of a dynamic protection and restoration of resources and endangered species because of human pressures. Activities / sub activities include deductions contribute to achieving the following results: (i) to protect vulnerable species and habitats (biodiversity and ecosystems) (ii) protect the fragile life stages

(spawning and rearing), (iii) improving the productivity of fisheries in the region and raise fallen socio-economic benefits for local communities, (iv) improving the skills of local communities to enhance their autonomy in terms of organizational management institutional, technical and even financial. It was developed following a participatory approach that involved the local authorities concerned at different levels, administrative authorities and the beneficiaries themselves.

The plan for monitoring and evaluation indicators for measurement will allow to account for the observed improvements in terms of protection / ecology at the AMP identified. This last phase of the process has highlighted, operational activities, management activities and the organizational and coordination for the implementation of activities.

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Introduction

The West African marine and coastal area has been marked by constraining trends characterized by an alarming degradation of the ecosystems, an overexploitation of the species owing to an increasing population that depends on natural resources (NR). It is a very sensitive area that is home for many chemical, physical, and biological interactions.

Nowadays, there is no doubt that people are settling in such coveted milieus and mainly along water bodies. As for the marine environment, it serves as natural dumping site for all sorts of waste including waste water and domestic as well as industrial waste. That situation is worsened by the trend in land use, related to the increase of populations living in coastal areas and industrial development. Furthermore, the area is often subject to recurrent political and economic instabilities that put the populations in unprecedented stalemate/dilemma. In fact, that situation leads the population to use natural resources in an unsustainable manner to the extent that the survival and integrity of habitats and biological species are severely threatened in the whole sub-region.

The need to provide effective responses to such problems that are becoming serious threats to the development of fisheries led the United Nations Industrial Development Organization (UNIDO) to initiate projects worldwide in the field of water resources management, and mainly in the field of marine and continental ecosystems management.

To that effect, it received approval from the GEF Council to implement the project titled “Fight for the Development of Living Resources and the Degradation of Coastal Areas in the Guinea Current (LME) through Baseline Ecosystems Regional Actions” for the sixteen countries of the Guinea Current Large Marine Ecosystems.

That initiative is part of the objectives of the GCLME, which mainly focus on priority issues identified by the 16 GCLME countries including Benin in order to support fishing, the use of coastal marine resources in order to achieve sustainable development. To that effect the Center for Environment and Sustainable Development (CEDED-NGO) has been selected following an invitation for tenders for the implementation of the Demonstration Project “Establishment and Management of Marine Protected Areas in Benin through contract N° GP/RAF/04004.

Within the framework of that contract and in conformity with the terms of reference, the mission and obligation of CEDED-NGO was to prepare the management framework required for the establishment of four marine areas to be protected previously identified in 2007 during the identification and the description of marine areas to be protected (MPA). Such areas include:

- Nazoumè-Bouche Roy Site (8679 ha) ;
- Avlékété Togbin Site (1800 ha) ;

- Avlékété Site (16390) ;
- Lake Nokoué Site (339 ha).

The task consisted in the establishment of a series of mechanisms ranging from the project development to the establishment of its implementation. Thus, from 2009 to October 2010, as leader of the process, CEDED-ONG conducted with relevant official stakeholders, a series of activities to reach the objectives of the study as defined in the ToRs and agreed in the contract signed between the CEDED-NGO and UNIDO.

This report, which summarizes the services provided (main activities performed) within the framework of this process includes three (03) parts:

- Technical activities performed by the Center in collaboration with other stakeholders and the overall methodological sequential approach used;
- Outcomes obtained by phase ;
- Lessons learned from the experience.

1. CONTEXT, JUSTIFICATION AND INPUTS OF THE STUDY

1.1 Context and justification of the study

The creation of MPA, considered as the “showcase” of the experimentation of sustainable development, through the West African eco-region, has been a process undertaken by various stakeholders in the sub-region to stem such harmful trends. Hence, since the international congress held in Geelong in 2002 on the Marine Protected Areas, stakeholders in the West African sub-region, with the support of the international community, have engaged in the priority process of safeguarding marine and coastal biodiversity, namely halieutic resources and other key species, main food sources of very poor populations.

Benin, a West African coastal country should not be excluded from that process. This is all the more important since the wet ecosystems in Benin’s coastal area play various functions including: production function (fisheries, handicraft, etc.), the space function (leisure, swimming, etc.), ecological regulation function (water bird habitats, flood buffering, etc.) and the cultural function (water-related myths and rites, sacred sites, etc.). Those functions are complementary and reinforce one another.

The geographical area covered is the coast and the marine area close to the coast; it extends over 125 km from West to East and it covers 8692 sq km (7.7 percent of the national territory) and involves approximately 50 percent of the population. That area is made up of a complex ecosystem with physiographic, biological, as well as anthropogenic components and it attracts thousands of people. Unfortunately, many factors and problems threaten the conservation and the sustainable utilization of the ecosystems in that coastal area. Such factors include:

- a high demographic pressure which results in anarchical occupation of the land and Management committee and often conflicting utilizations;
- the increasing demand in water resources for agriculture, industry and human consumption ;
- growing pressures related to the increase land use that result in the constant degradation of the ecological features and also the degradation of values, functions, and services of the various ecosystems of the wetlands in Benin coastal area;
- bacteriological, biological, and chemical pollution of land and water bodies ;
- the Management committee of the increasing demographic pressure and economic challenges that jeopardize the survival of some local communities and animal and plant species ;
- climate change and its forecast Management committees, such as the high frequency of extreme phenomena, temperature rise and sea-level rise and the induced/spill-over effects on the survival of species and communities;

- The deficit of means and opportunities for an effective participation of communities that have been empowered within the framework of the decentralization of state authority.

In order to reverse such trends, local communities, together with public authorities decided to create Marine Protected Areas to manage in a sustainable and synergetic manner the ecosystems of the wetlands in Benin coastal area.

The project for the Establishment and management of Marine Protected Areas in Benin remains undoubtedly the active stage of the study conducted in 2007 on the identification and description of Marine Areas to be Protected (MPA).

1.2 Objectives of the study

That initiative intended to meet the objectives of the GCLM project, mainly focused on the priority issues identified by the 16 GCLME countries including Benin, the goals of the long term development of the project are, according to the terms of reference, as follows:

- (i) identify and support fishing areas ;
- (ii) restore degraded habitats and
- (iii) reduce land and ship-related pollution by setting up a regional management institution for a sustainable utilization of living and non-living resources in the GCLME.

In order to reach the above objectives, a series of activities and tasks were performed during the implementation period of the project.

1.3 Tasks to be performed

According to the terms of the contract signed between UNIDO and CEDED-ONG, this mission consists in supporting the government of Benin in the establishment and management of Marine Protected Areas identified in the four sites selected during the identification and the description of the Marine Protected Areas, in Benin, in July 2007.

In fact, the four sites located are the following:

- " Nazoumè-Bouche Roy Site (8679 ha) ;
- " Avlékété Togbin Site (1800 ha) ;
- " Avlékété Site (16390) ;
- " Lake Nokoué Site (339 ha).

Under the leadership of the GCLME, Coordinator of the Regional Project and under the direct supervision of the Ministry of the Environment and Nature Conservation and the Benin Environmental Agency, the NGO worked together with many stakeholders to set up the required organizational framework for the establishment of the four Marine Protected Areas following a participatory approach that involved all the concerned stakeholders.

Specifically, the expected outcomes are the following:

1.4 Expected outcomes of the study

At the end of the study, the following outcomes are expected in conformity with the terms of reference (in annex):

- ❖ **the organization of a series of sensitization and awareness-raising campaigns** intended for the riparian populations of the MPAs
- ❖ **the development of detailed and large-scale mapping of the identified sites** (1:5,000 - 1:10,000) for each of the four sites validated and retained as Marine Protected Areas showing the topography, vegetation, biodiversity, land use, density of the population and the settlement center, areas with high ecological values and environmental pressure;
- ❖ **the development of management plans and zoning plans** for each identified site enabling to show clearly the ecological sensitivities of each MPA and therefore areas to be protected, buffer zones, and free land use;
- ❖ **the delineation and physical demarcation of identified areas** using a participatory approach with a strong implication of local communities;
- ❖ **the development of a plan of action for each MPA** showing the planning and budgeting of activities;
- ❖ **the development of a monitoring/evaluation for measuring indicators** enabling to account for protection/ecological improvements noted at the level of identified MPA;
- ❖ **the drafting and submission to project partners of a capitalization report** of the process, the subject of this report.

2.

MAIN ACTIVITIES PERFORMED AND METHODOLOGICAL APPROACHES

2-1 Scope of the mission and literature review

The first stage of the methodology was the scoping of the mission, which enabled experts contracted for the start up, the institution in charge of the study (CEDED-ONG), and institutional partners like the Ministry of the Environment and Nature Conservation (MEPN) to harmonize their understanding and perceptions of the study. Thus, this stage enabled to clarify the various expected outcomes from the mission, to have a consensual understanding of the expectations of the sponsor and to define, based in binding agreement, the different phases of the mission in conformity with the prescriptions of the terms of reference.

Then, a team of expert was set up to perform the sensitization and awareness-raising activities. To that effect, the team of experts set up included geographers, a socio-anthropologist, a cartographer, a lawyer and a planner-economist.

The experts conducted the literature review taking into account the different foci targeted by the expected outcomes. That literature review was the exploratory phase of the qualitative and quantitative data involved of interest to the study. The literature review was conducted through a selective consultation of various documents including books, articles, study reports, documents and information collected on websites. It should be noted that the literature review was also conducted on the basis of the findings of the diagnosis study conducted in August 2007 on the “identification and description of marine areas to be protected in Benin”. Major archives were also consulted.

Then, two experts of the team went on a study tour in the Senegal Marine and Coasted Protected Areas (AMCP), precisely the Joal-Fadiouth MANAGEMENT COMMITTEE, approximately 150 km from Dakar in June 2007. On the whole, that mission offered the opportunity to organize many working sessions mainly with officials, researchers, and engineers of the World Bank Programme titled “Integrated Marine and Coastal Resources Management: GIRMaC”, which enabled the participants to build on the Senegal experience for the conduct of this mission.

2.2 Implementation of the various phases of the mission

2.2.1 Development and implementation of an awareness-raising and sensitization program

On the whole, the methodological approach within the framework of this awareness-raising and sensitization program included seven stages: (i) setting up of the expert team, (ii) project ownership meeting by experts and institutions involved, (iii) development of the schedule of information sessions and setting of appointments, (iv) development of the content of awareness-raising and sensitization program, (v) education of local authorities, (vi) sensitization of populations and (vii) collection of populations’ concerns.

More specifically, the methodological approach took the following aspects into account:

▪ **Setting up of the experts team**

The experts' team included the following:

- Mrs. GUEDEGBE Innocencia, Communication specialist,
- Mrs. ICHOLA Rihanath, MEPN representative
- Professor FIOGBE Emile, Biologist
- Dr DIMAN Roger, Oceanographer
- Mr. AGBON Cyriaque, Topo cartographer,
- Mrs. AGOSSOU Mireille (Assistant of Professor HOUNDENOU Constant)
- Mr. OWOLABI Cyprien Sociologist at CEDED.

▪ **Meeting of ownership of the project by involved experts and institutions**

That meeting enabled stakeholders to take ownership of the project. Gloomy aspects were also highlighted such that each expert and government institution is aware of tasks to be implemented in the field and to prepare the implementation phase of activities to be performed.

▪ **Development of information session schedules and setting of appointments**

This task took into account local authorities education sessions (at the level of townships and districts involved) as well as sessions devoted to the sensitization of populations (at the level of different villages taken into account by the project). Those different activities took place in November and December 2009.

▪ **Development of the content of the awareness-raising and sensitization programme**

The participatory and adult education approaches are as follows:

- (i) presentation of the project ;
- (ii) presentation of localized MPS sites in Benin marine environment on maps ;
- (iii) explanation of activities to be performed in the project areas ;
- (iv) debates (interventions of participants) ;
- (v) focus group on three different topics ;
- (iv) debates (interventions of participants).

▪ **Education of local authorities**

This activity consisted in presenting to local authorities (i) the general background of project on the management of Marine Protected Areas in Benin (issues, objectives and expected outcomes of the project), (ii) information on activities to be performed for the implementation of the project in Benin and (iii) information to lead local authorities to get involved in the project and become stakeholders.

It was a participatory and adult education approach conducted in the following order:

- (i) presentation of the project ;

- (ii) presentation of the localized MANAGEMENT COMMITTEE sites in Benin marine and coastal environment on maps ;
- (iii) explanation of activities to be performed in project areas ;
- (iv) debates (interventions of participants).

▪ **Sensitization of grassroots populations**

This consisted in sensitizing village chiefs and their populations on (i) the general background of the project on the management of Marine Protected Areas in Benin (issues, objectives and expected outcomes of the project), (ii) information on activities to be performed within the framework of the implementation of the project and (iii) the advantages of the project in order to maximize its ownership by populations.

It was a participatory and adult education approach that followed the following order:

- (i) presentation of the project ;
- (ii) presentation of localized MPS sites in Benin marine environment on maps ;
- (iii) explanation of activities to be performed in the project areas ;
- (iv) debates (interventions of participants) ;
- (v) focus group on three different topics ;
- (iv) debates (interventions of participants).

▪ **Collection of the issues raised by populations**

Focus group discussions were organized on three topics including fishing-salt production, agriculture-forestry, and culture-tourism; which enabled to understand the problems of each site related to the projects and solutions suggested by the populations themselves.

2.2.2- Mapping of marine areas to be protected

▪ **Technical design and methodology**

The technical and methodological design was conducted according to the following stages:

- ✓ **Mission orientation and scoping session:** organized with all experts involved in the study in order to share information on the road map of the mission and to enable the team to better identify the needs that should lead to a smooth development of the management plans.
- ✓ **Development of collection tools** on the basis of aids and collection tools in order to ensure their consistency. Therefore, notebooks were used in the field to record cartographic data collected.
- ✓ **Recruitment of the technical staff** to collect data. Two experts were therefore hired in topo cartography and one in biodiversity. The field work lasted four weeks.

▪ **Data collection**

Identification of data sources

In that respect, the planimetric data sources used were as follows : (i) existing topographic maps at 1/50 000, 1/25 000 and 1/20 000; (ii) maps of presentation of the four sites; (iii) direct survey of the four sites using Differential GPS TRIMBLE R3 and GPS Garmin 76C.

- ✓ **The documentary research that** consisted in looking for planimetric documents and using the final report on the identification and description of the Marine Areas to be Protected.
- ✓ **The data collection in the field** that consisted in (i) the prospection visit on the site ; (ii) the collection of the data properly speaking and (iii) information exchange meetings between expert cartographers enabling to assess the quality of the data collected, to discuss among team members of problems encountered and possible solutions and new orientations to be adopted in the data collection.

▪ **Data processing and map development**

- ✓ **Data entering and processing:** the GPS data were transferred into a computer using Trimble Digital Fieldbook et de Map source. Such data were processed using Trimble Business Center and Excel. A topo cartography summarizing the main information collected was developed and the graphics/style of drawing was selected.
- ✓ **Map development:** the information collected enabled to enrich the GIS with MAPINFO and/or ARCVIEW.

The maps were developed at a scale of 1/5000 and 1/10000 on many sheets and on A1 format followed an explanatory **leaflet/note**.

2.2.3 Development management plans

Generally speaking, the methodological approach used within the framework of the development of the participatory management plans includes seven stages including : (i) meeting of experts to ponder over the MANAGEMENT COMMITTEE management mechanisms and bodies (ii) development of the exchange sessions schedule on the MANAGEMENT COMMITTEES and setting of appointments, (iii) development of the content of the exchange sessions on the MANAGEMENT COMMITTEE management, (iv) exchange meetings with populations and (v) setting up of the MANAGEMENT COMMITTEE management village committees, (vi) consultation meetings with the national fishermen's associations and the committees set up for the development of the MANAGEMENT COMMITTEE zoning plans.

This approach includes the following stages:

- **Setting up of the field team:** the participatory diagnosis that led to the development of the environmental management plans was conducted by a multidisciplinary team including among others communication specialists, biologists, oceanographers, geographers, and for sure the representative of the Minister of the Environment and

Nature Conservation and the Representative of the Benin Environmental Agency (ABE).

- **Organisation of a series of experts meeting to ponder over the appropriate MANAGEMENT COMMITTEE management modes and bodies.** The objective is to consider the appropriate MANAGEMENT COMMITTEE management modes and bodies and management plans specific to each site on the basis of the existing laws on the management of coastal areas, halieutic resources and socio-cultural heritage in Benin as well as the role of stakeholders that will be involved.
- **Development of the schedule of information sharing sessions and setting of appointments** with the populations of the 11 villages involved in the project from 16 to 24 March 2010. The villages are Avlo Plage; Nazoumè; Djondji; Gbèzoumè, Adounko kpèvi, Agbanzin kpota; Avlékété; Hio; Togbin; Adounko Daho Ganvié 1 and 2.
- **Development of the content of the exchange programme:** the participatory and adult education approaches were mainly used and the agenda was the following : (i) details on the existence of protected and non protected halieutic reserves and the sacred animal and plant species in the area ; (ii) MANAGEMENT COMMITTEE management modes and bodies ; (iii) alternative activities; (iv) debates (interventions of participants); (v) setting up village management committees.
- **Organisation of a series of consultations** with the professional fishermen's associations at the national level: Benin National Union of Marine and Assimilated Fishermen (UNAPEMAB) and the Benin National Union of Continental Fishermen's (UNAPECAB) respectively on 10 and 11 June 2010 specifically for the identification of reserves, buffer zones, and free fishing areas and the validation of management plans.
- **Conduct of a series of activities** for the participatory identification of biological reserves, buffer zones and free fishing areas in June.
- **Implementation of the participatory process with key stakeholders (MEPN, ABE, and local authorities):** it is important to recall that the MANAGEMENT COMMITTEES are regulated by the principle of co-responsibility and consultation between the Government, the local authorities involved, and the communities living directly on the resources or near such resources. In that respect, aside from general and scattered organized with various stakeholders, the participatory process used with the Ministry of the Environment and Nature Conservation (MEPN), the Benin Environmental Agency (ABE) and the involved townships was crucial in the drafting of this progress report.

2.2.4 Physical Demarcation and delineation of the four sites

At the methodological level, the physical demarcation and delineation mission of the four identified MANAGEMENT COMMITTEE was conducted through seven main phases including:

- **Mission orientation scoping session among experts** organized among all experts involved in the process in order to harmonize viewpoints on the content of the mission and exchange on the road map. The session also enabled the topo-cartographer expert to know the needs of other experts with regard to the participatory physical demarcation and delineation of the MANAGEMENT COMMITTEES.
- **Preparatory phase for And characterization of the technological package :** development of collection tools in such a way as to have consistent data collection instruments and tools. Field notebooks were used to record topographic collected data.
- **Selection of GPS characteristics:** Measurements were taking in the field using differential GPS Trimble Recon in fast static or in PPK, depending on the case in *Post-treatment*. The GPS are of 1 mm accuracy and well adapted to the work. The configuration of the devices for the post-treatment were the following: (i) True Bearing: 10° ; (ii) measurement rhythm : 5 seconds.
- ✓ *The specification of the performance required the following characteristics: Code L1 C/A 12 channels, integral carrier cycle L1, WAAS/EGNOS; Technology Trimble Maxwell GPS for monitoring satellites in difficult conditions* ***spécification de performance a requis les caractéristiques suivantes : Code L1 C/A 12 canaux, cycle de porteuse intégral L1, WAAS/EGNOS; Technologie Trimble Maxwell GPS pour suivi des satellites dans des conditions difficiles.***
- ✓ *Topography GPS static and static-rapid1* : Horizontal : $\pm (5 \text{ mm} + 0.5 \text{ ppm})$ 2 RMS ; Vertical : $\pm (5 \text{ mm} + 1 \text{ ppm})$ 2 RMS
- ✓ *Cinematic Topography:* Horizontal : $\pm (10 \text{ mm} + 1 \text{ ppm})$ 2 RMS ; Vertical : $\pm (20 \text{ mm} + 1 \text{ ppm})$
- **Caractéristiques of the boundary mound mould :** the mould used for making the boundary mould had a geometrical form with a base and squared summit. The side of the base is 30 centimeters and its height is also 30 centimeters. The side of the summit is 20 centimeters and its height is 20 centimeters.
- **Consultation with site management village committees** enabled the field team to discuss with committee members and mainly the leaders/bureau members on the intervention implementation approach and its advantages.

The consultations were organized during the development of the MANAGEMENT COMMITTEE zoning plans and involved the various village management committees. Such

consultations enabled stakeholders to work hand in hand and to harmonize their viewpoints on activities to be carried out and mainly on the sensitive areas where the boundary mounds are to be erected.

- **Consultation with representatives of the Ministry of the Environment and Nature Conservation (MEPN) and involved townships.** At the level of townships, the consultations were organized with district leaders but much more with village chiefs who are more familiar with sites and their boundaries.

- **Conduct of the physical demarcation and delineation operations on the ground**

✓ **Erection of boundary stones**

Data source : the data sources for the the demarcation and delineation of the MANAGEMENT COMMITTEES used are as follows : (i) maps of the four sites ; (ii) digital camera ; (iii) direct survey of the four sites using GPS Differential TRIMBLE R3 ; (iv) Progress report No. 2 on detailed mapping of the Marines Areas to be Protected.

- **Graphic definition of the angle points limiting the MANAGEMENT COMMITTEE sites:** these are the boundaries of the MANAGEMENT COMMITTEES defined in 2007 and confirmed in 2010 by the detailed mapping. They enabled to highlight (by GIS) angle points and particular points.
- **Haulage of boundary stones to the MPA sites:** the haulage was ensured by truck, by motorboats, by canoe, by motorcycle, or by people depending on the requirement in the field.
- **Erection of the bounday stones properly speaking :** the geographic coordinates of the points defined graphically were entered into the GPS and the method of erection of points configurated in the GPS was used. In fact, that method consisted in finding accurately on the gound the points entered and therefore places where the boundary stones are to be erected.

bureau@tpsgc.gc.ca.

✓ **Relevé des bornes externes**

To that effect, the methodology suggested was mainly the direct survey of the boundary stones erved on the ground. Hence, the baseline station (fixed GPS) was positioned at Togbin for the Avlékété-Togbin and the Marine Area Avlékété and for the Nazoumè-Bouche du Roi and in Abomey-Calavi for the Lake Nokoué site where reference points were defined. The second GPS (mobile GPS) was used for the survey of boundary stones limiting the MANAGEMENT COMMITTEES. The information obtained from the two GPS enabled to have a mm accuracy.

Measurements were taken by Differential GPS Trimble Recon in Fast static or in PPK depending on the case in Post-treatment.

✓ **Boundary stones making**

The boundary stones were pre-fabricated on the prepared site and transported the concerned sites with the support of local populations

2.2.5 Development of action plans

This action plan was developed according the following approach and stages:

- Development of the planning tool ;
- explanation of the tool to the restricted working groups that are the executive bureaus of the management committees set up in villages during consultation sessions organized in that respect;
- re-explanation of the approach, of the various stages of establishment of Marine Protected Areas during a national workshop that enabled the setting up of the orientation and monitoring committees of the MANAGEMENT COMMITTEES;
- analysis of the relevance of activities suggested in the draft management plan formerly developed and reformulation of some activities ;
- Explanation of some major points and practical direction to be considered within the framework of the conduct of the process and **prospects**.
- Prioritization of the participatory approach at the level of stakeholders and learning approach of beneficiary communities ;
- Development of draft action plan and budgeting.

2.2.6 Development of the monitoring-evaluation plans

Within the framework of this monitoring-evaluation mechanism of the project for the establishment and management of the MANAGEMENT COMMITTEES, four categories of parameters resulting from the indicators were retained. There are biological, physical, socioeconomic, socio-cultural and tourism parameters.

Definition of biological parameters

The biological indicators were determined from the measurements of the following biological parameters:

- The level of regeneration of degraded habitats ;
- The increase of fishing catches ;
- The development of fisheries ;
- The number, size (biomass), composition and structure of fish populations ;
- The abundance of juveniles of target species, the population of animals of specific interest ;
- etc.

Physical parameters

The physical indicators taken into account have more to do with the aspects related to the evolution of the coastline, construction of fish concentration structures or mechanisms, the creation of recreational and tourism infrastructure were considered.

Socioeconomic parameters

The socioeconomic indicators retained are related to the social, organizational, and economic life of local populations involved in the utilization of the resources and should enable to estimate the benefits resulting from the ecosystem MANAGEMENT COMMITTEES within and outside of the protected areas. They have to do with:

- the diversification of income sources of the local population ;
- the reorganization and development of fisheries ;
- the statistics on catches and the prices of halieutic products ;
- the decision-making system at the level of the local community ;
- the perception of the ecosystem management by the population ;
- communication and adherence of the beneficiaries.

Socio-cultural and tourism parameters

Here, the socio-cultural consideration prevailed and in relation with the protection/rehabilitation of some sacred forests and sites.

2.3 Drafting of interim and final reports of the study

The information collected, processed, and analyzed enabled to have summaries by result. The major aspects of the findings have been summarized in this report which has sections that faithfully present all the expected outcomes of the study.

Thus, apart from the executive summary, acronyms and abbreviations, the introduction and methodology, the main components of this report are : (i) development and implementation of an awareness creation et sensitization programme; (ii) the maps of the marine areas to be protected; (iii) the development of the management plans; (iv) the physical demarcation and delineation of the four sites; (v) the development of action plans and finally the development of the monitoring-evaluation plans.

This provisional report has been drafted following the completion of the mission and on the basis of analysis conducted by experts as well as on the basis of comments and inputs by the expert of the Regional Coordinating Unit of the project. Then, the various improvements of such actors will facilitate the drafting of the final version of the study report.

To put it in a nutshell, the methodological approach used by the consultant is summarized in figure 1 below.

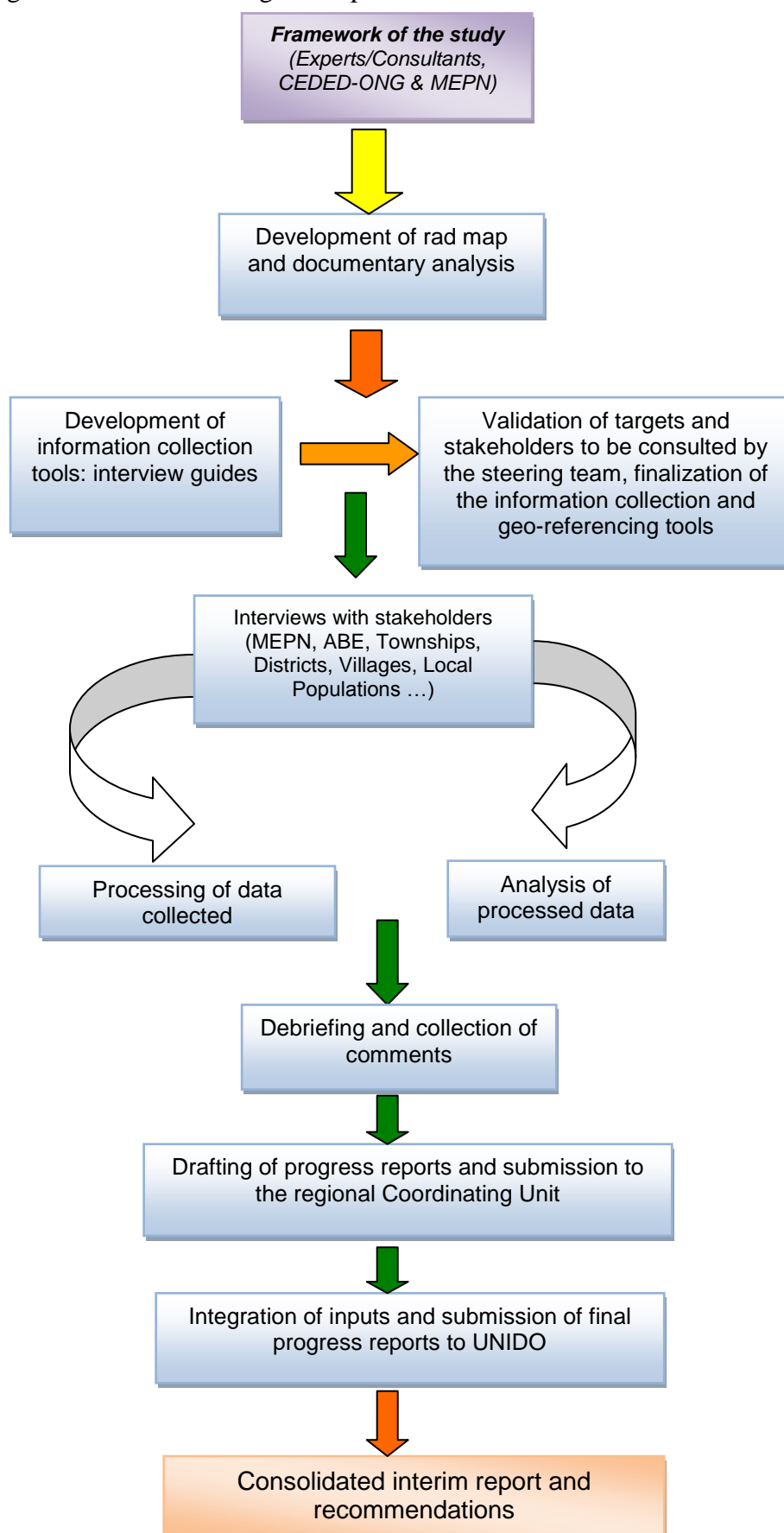
2.3 The experts team contracted for conducting the study

The performance of the various activities that led to the drafting of the progress reports, the integration of the various amendments and comments and the drafting of the consolidated final report was ensured by Mr. Marc DJIDOGBE (Geographer environmentalist) assisted from time to time by a team of researchers, mainly for field activities (sensitization, cartography, demarcation...). The whole process was coordinated by Professor Constant HOUNDENOU.

The experts' team included:

- Mrs. GUEDEGBE Innocencia, Communication specialist,
- Mrs ICHOLA Rihanath, MEPN representative;
- Professor FIOGBE Emile, Biologist;
- Dr DIMAN Roger, Oceanographer
- Mr. AGBON Cyriaque, Topo cartographer;
- Mrs AGOSSOU Mireille ;
- Mr. OWOLABI Cyprien, Sociologist at CEDED.

Figure 1: diagram of the methodological steps followed.



3.

OUTCOMES OBTAINED BY PHASE

Phase N° 1

An orange arrow pointing downwards, with a white outline, indicating the flow from Phase N° 1 to the main title.

3.1 EDUCATION AND SENSITIZATION OF RELEVANT STAKEHOLDERS

Those various sessions enabled to present among others to administrative, local authorities and to grassroots populations: (i) the general context of the project for the management of Marine Protected Areas in Benin (issues, objectives and expected outcomes of the project), (ii) information on activities to be conducted for the implementation of the project and (iii) information to lead local authorities to get involved in the project and to become stakeholders. This enabled the:

- organization of many information and sensitization meetings with various institutional stakeholders such as CRHOB/CBRST, DDEPN-AL/MEPN, ABE, DGE, FAST/UAC, CEDED- ONG...
- tenue de séances de sensibilisation et de conscientisation des communautés concernées par le projet et prise de contact avec les autorités locales et autres acteurs locaux (maires, CA, chefs villages, autres).
- Organization of sensitization and education of communities involved in the project and ice-breaking with local authorities and other local actors (mayors, CA, village chiefs, others). A total of four townships were impacted: Grand Popo (17 persons); Kpomassè (15 persons met); Ouidah (20 participants; Abomey-Calavi (10 persons).

Meeting at district level enabled to reach a number of stakeholders from the following districts: Agbanto (16 persons) ; Avlo (34 persons) ; Nazoumè (50 persons) ; Godomey (10 persons) and Adouko (40) to name just a few.

The table below shows the exhaustive list of territories of townships, districts and villages where the sensitization sessions were organized on the four sites.

Table 1: Presentation of the various sites

	Townships	Districts	Villages and hamlets involved
Nazoumè-Bouche du Roi Site	Kpomassè	Agbanto	Nazounmè, Gandénou, Kpossikodji, Gogotèkpomè,
	Grand-Popo	Avlo	Avlo-plage, Lanhou, Kouéta, Hakouè
	Ouidah	Houakpé-Daho	Gbèzounmè, Kpétédji
		Djègbadji	Djondji

	Townships	Districts	Villages and hamlets involved
Avlékété-Togbin Site	Ouidah	Avlékété	Adouko-Kpevi, Lissessa
			Hiyo-Houta, Hiyo-Houégbo
			Adjahindji, Avlékété, Togbo
			Kpodjido, Kodji-Aga, Koguèmè
			Agbazin-Kpota

	Abomey-Calavi	Godomey	Adounko-Daho
			Togbin

	Townships	Districts	Villages and hamlets involved
Avlékété Marine Area Site	Ouidah	Avlékété	Adounko-Kpevi, Lissessa
			Hiyo-Houta, Hiyo-Houégbo
			Adjahindji, Avlékété, Togbo, Kpodjido, Kodji-Aga, Koguèmè
			Agbazin-Kpota

	Townships	Districts	Villages and hamlets involved
Lake Nokoué Site	So-Ava	Godomey	Godomey Xlacomè
	Sèmè kpodji	Aholouyemè	Tchonvi

Phase N° 2

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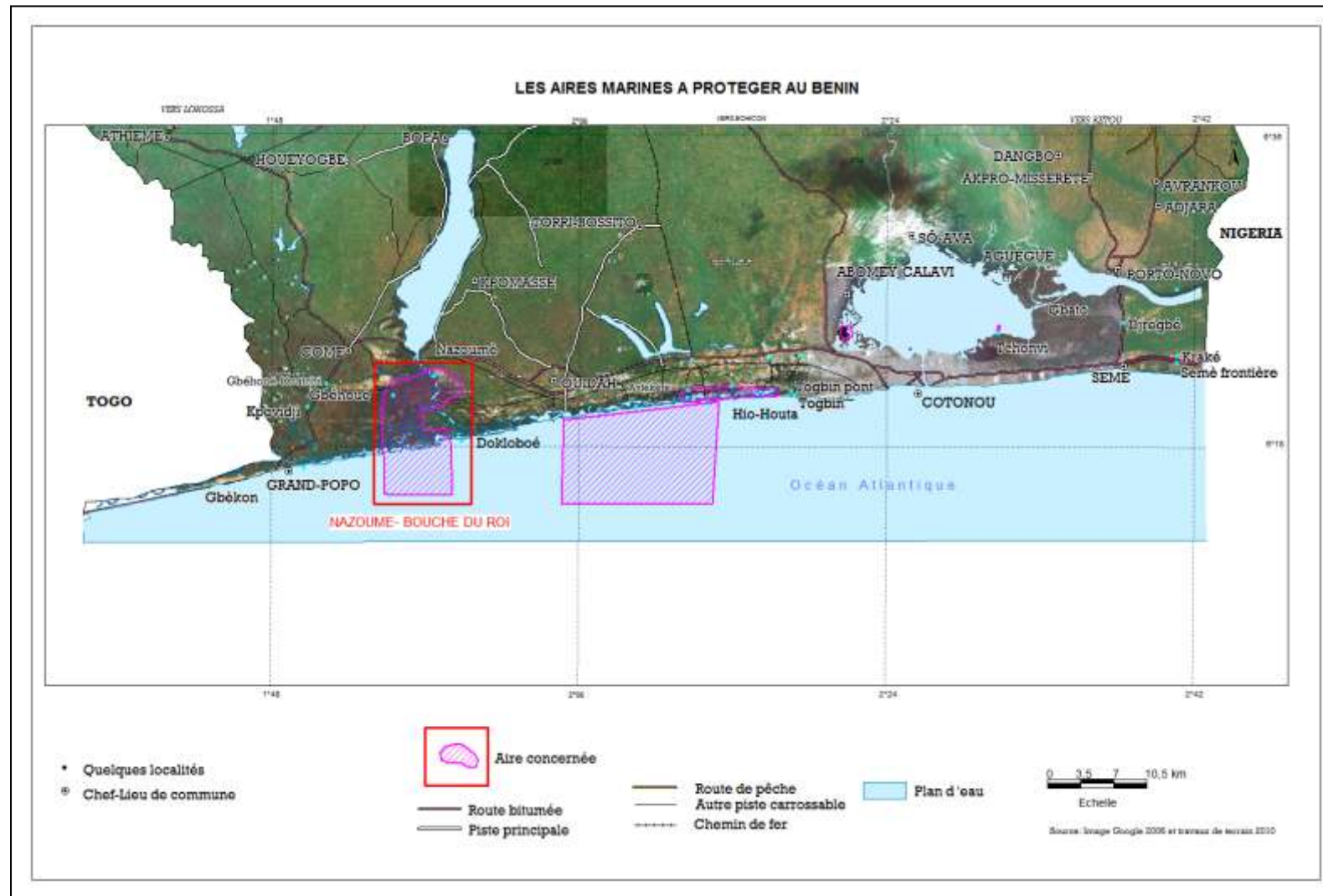
**LOCATION OF EACH MANAGEMENT
COMMITTEE AND DEVELOPMENT OF
DETAILED MAPS**

LES AIRES MARINES A PROTEGER AU BENIN

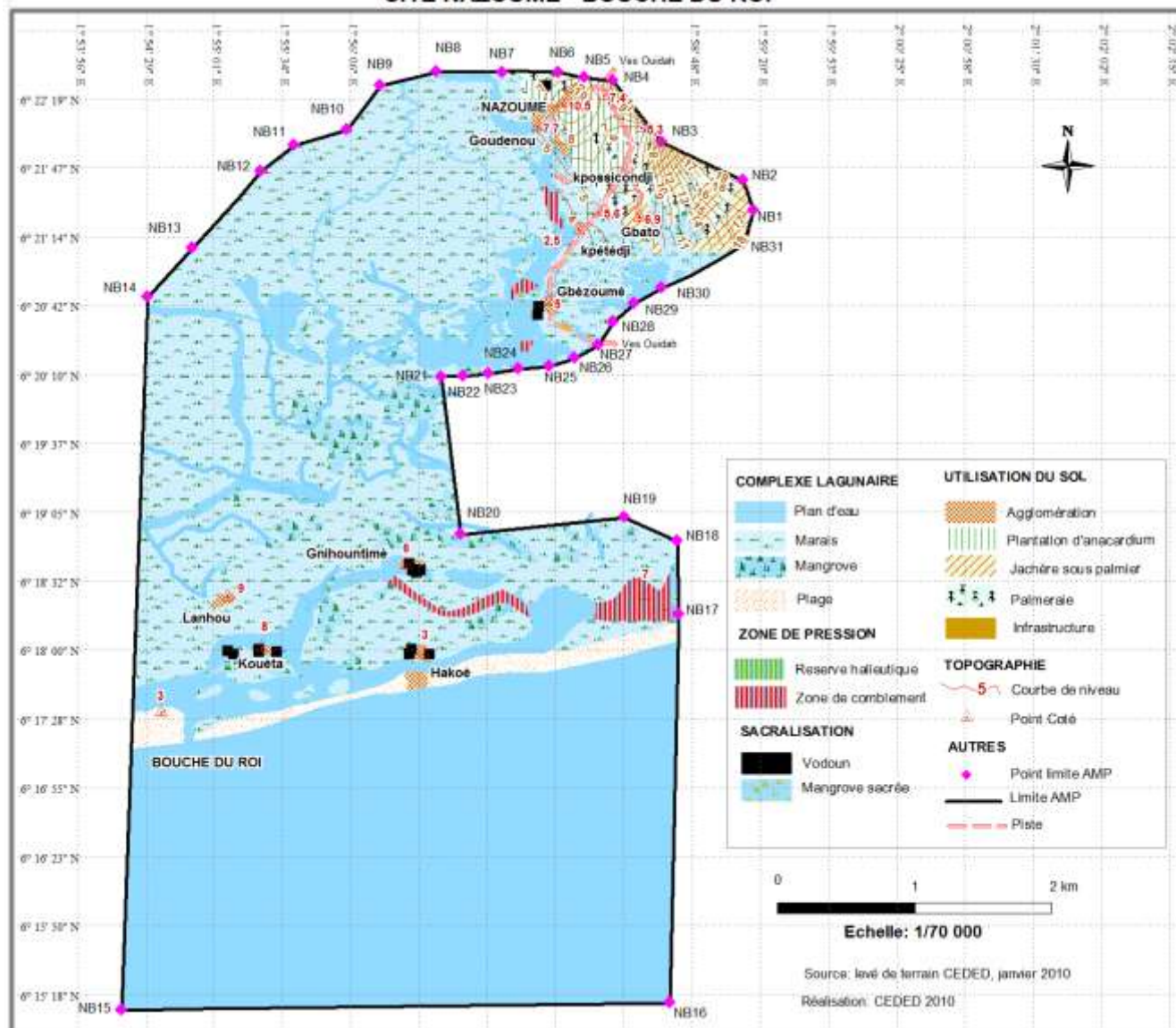


3.2.1 NAZOUME – BOUCHE DU ROY SITE

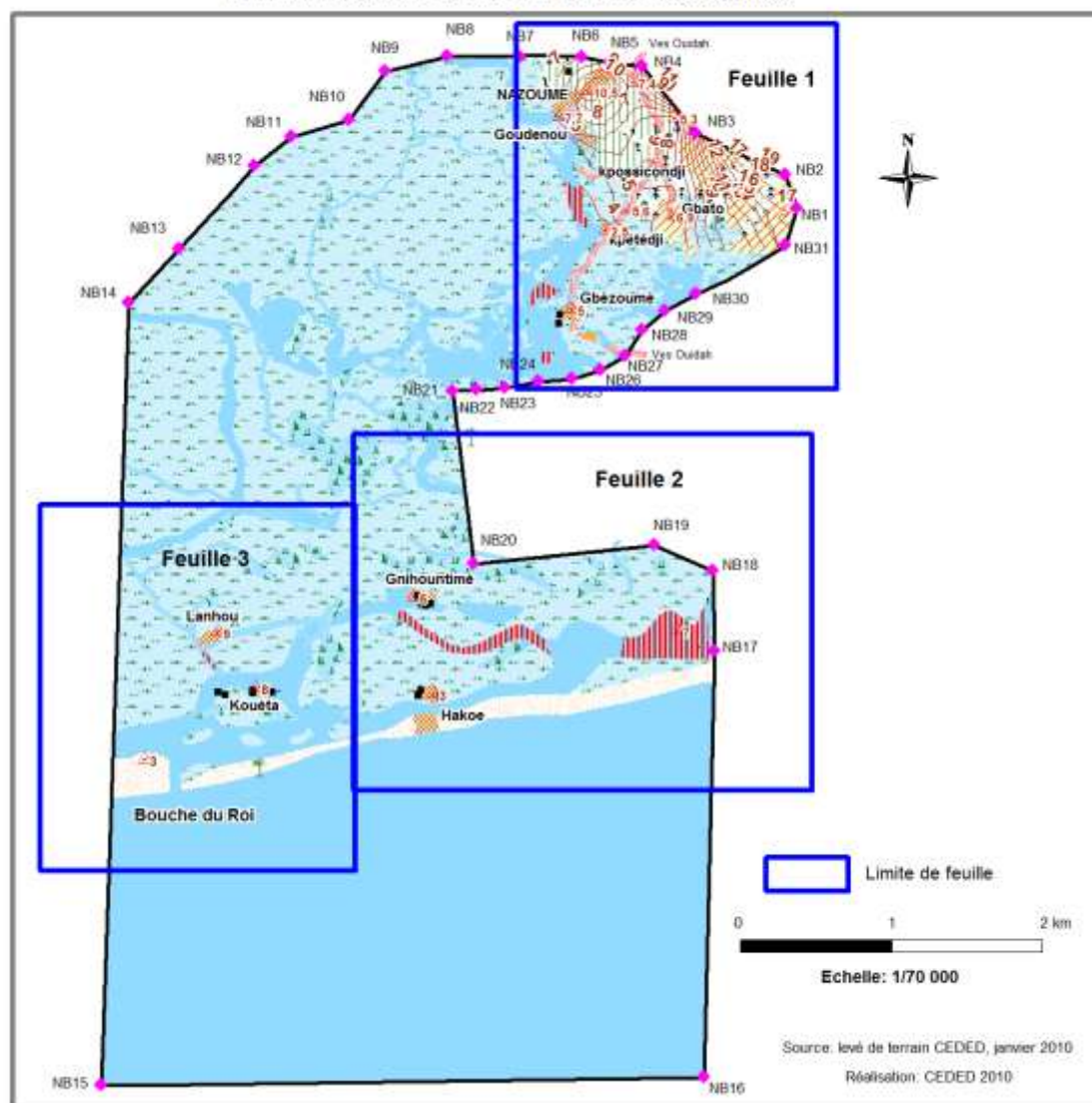
NAZOUME-BOUCHE DU ROI Site

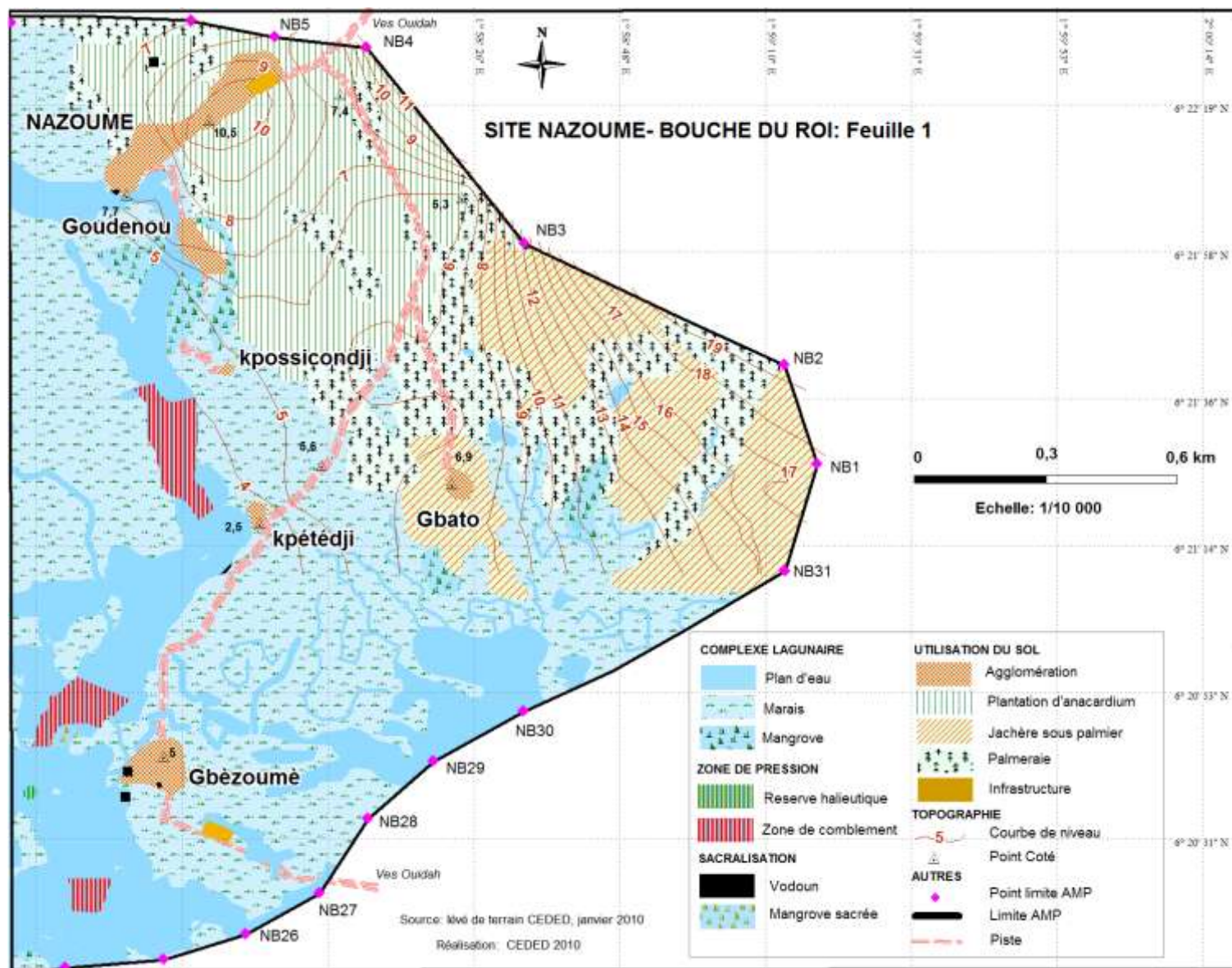


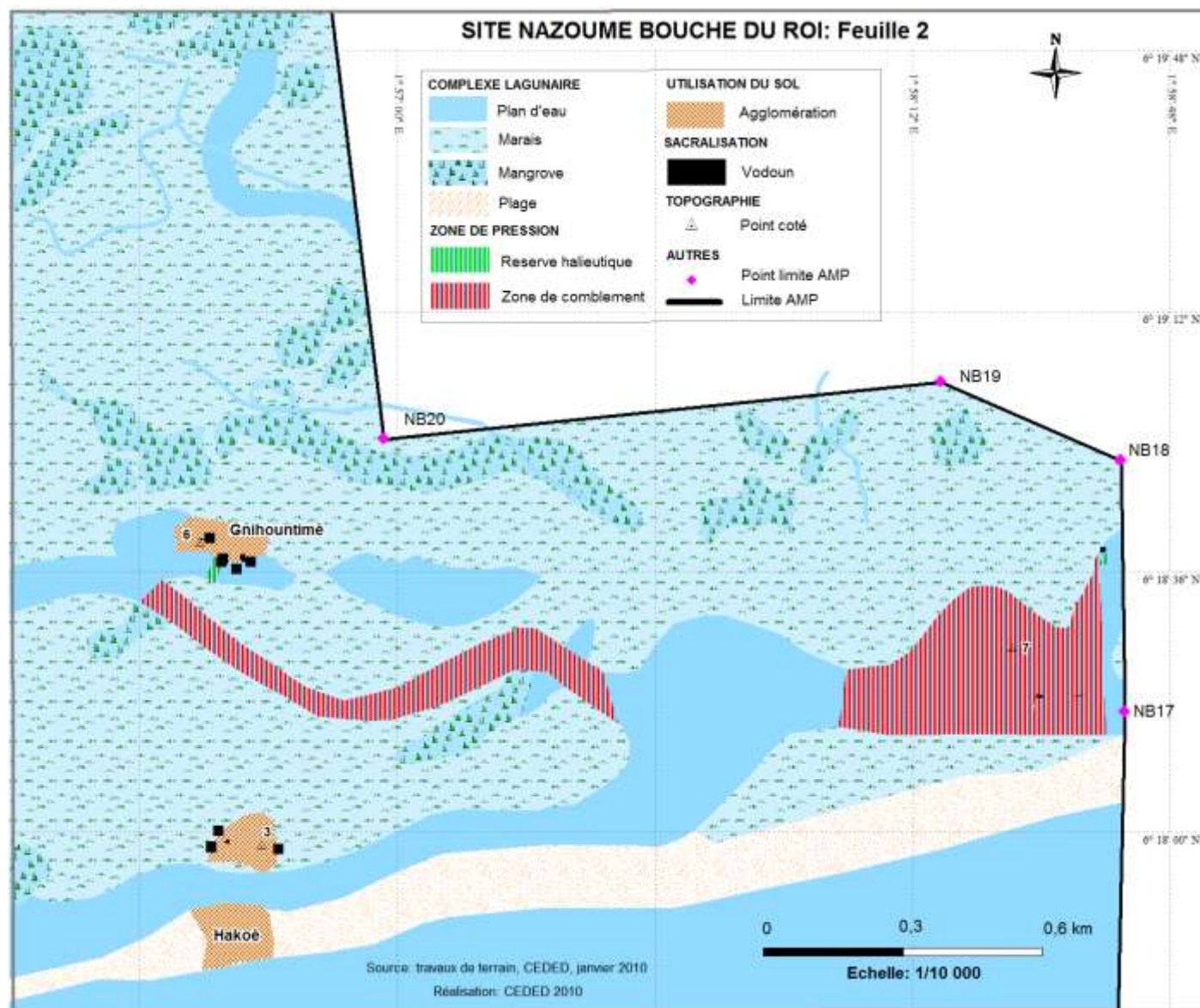
SITE NAZOUME - BOUCHE DU ROI

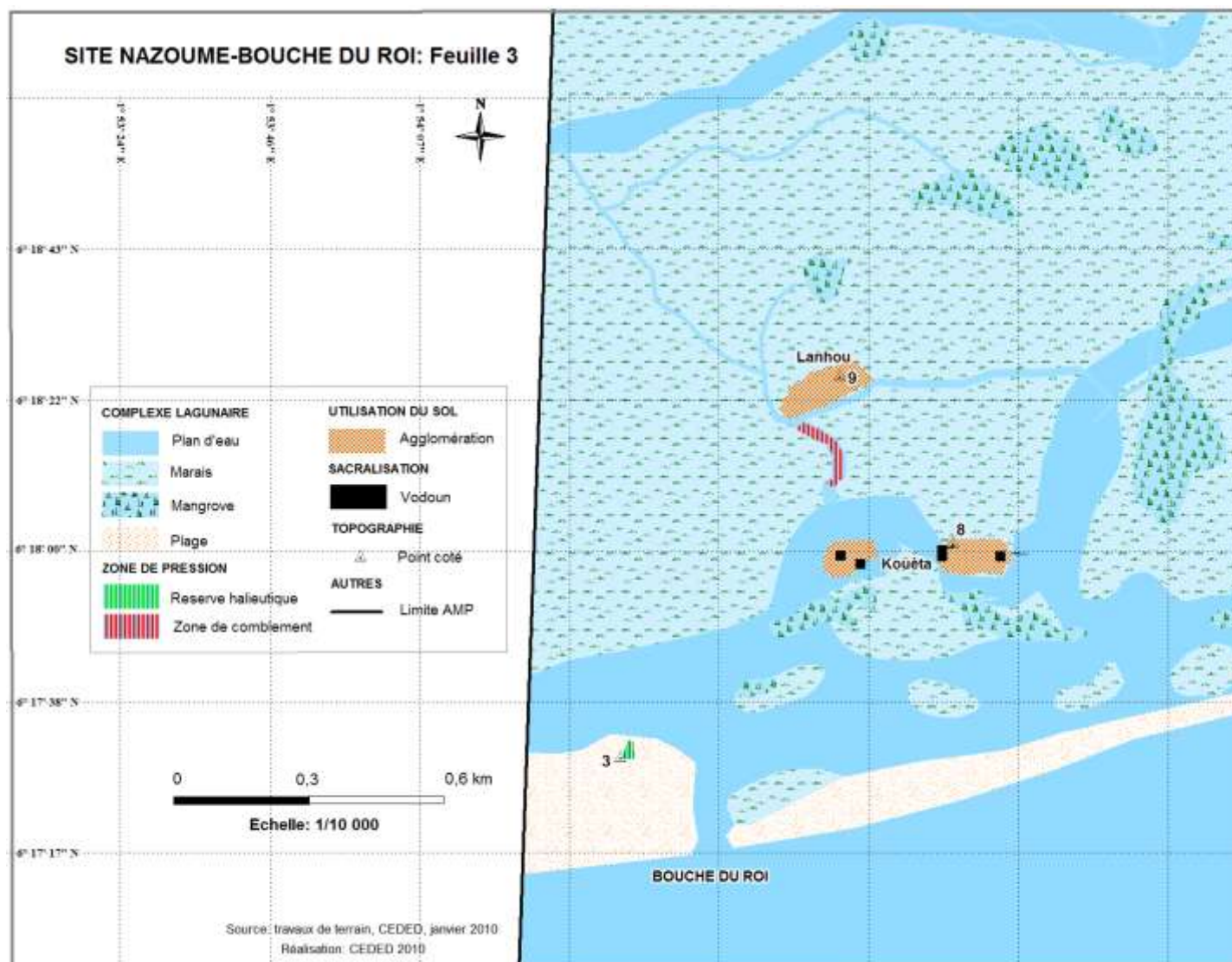


SITE NAZOUME- BOUCHE DU ROI: les feuilles

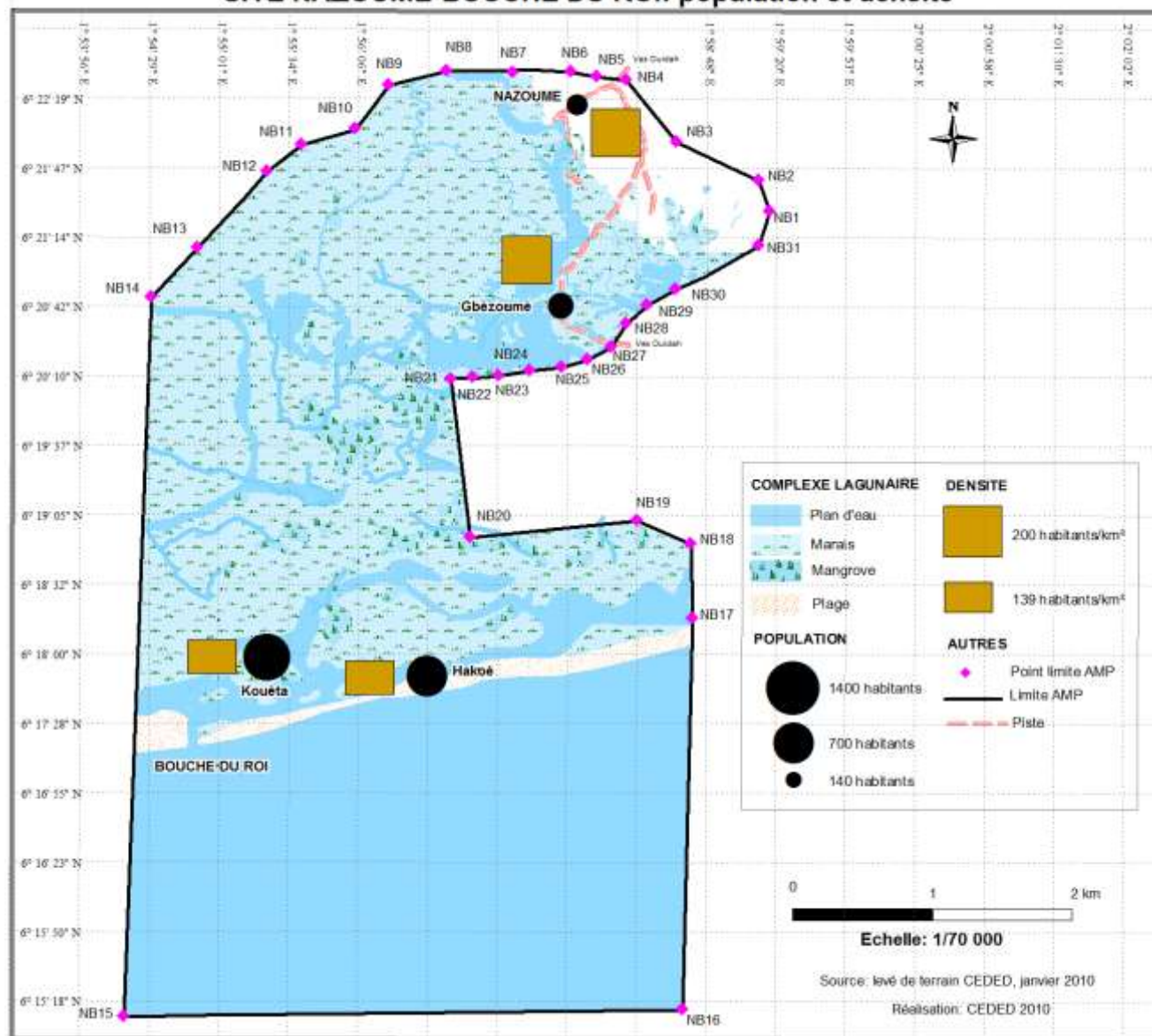






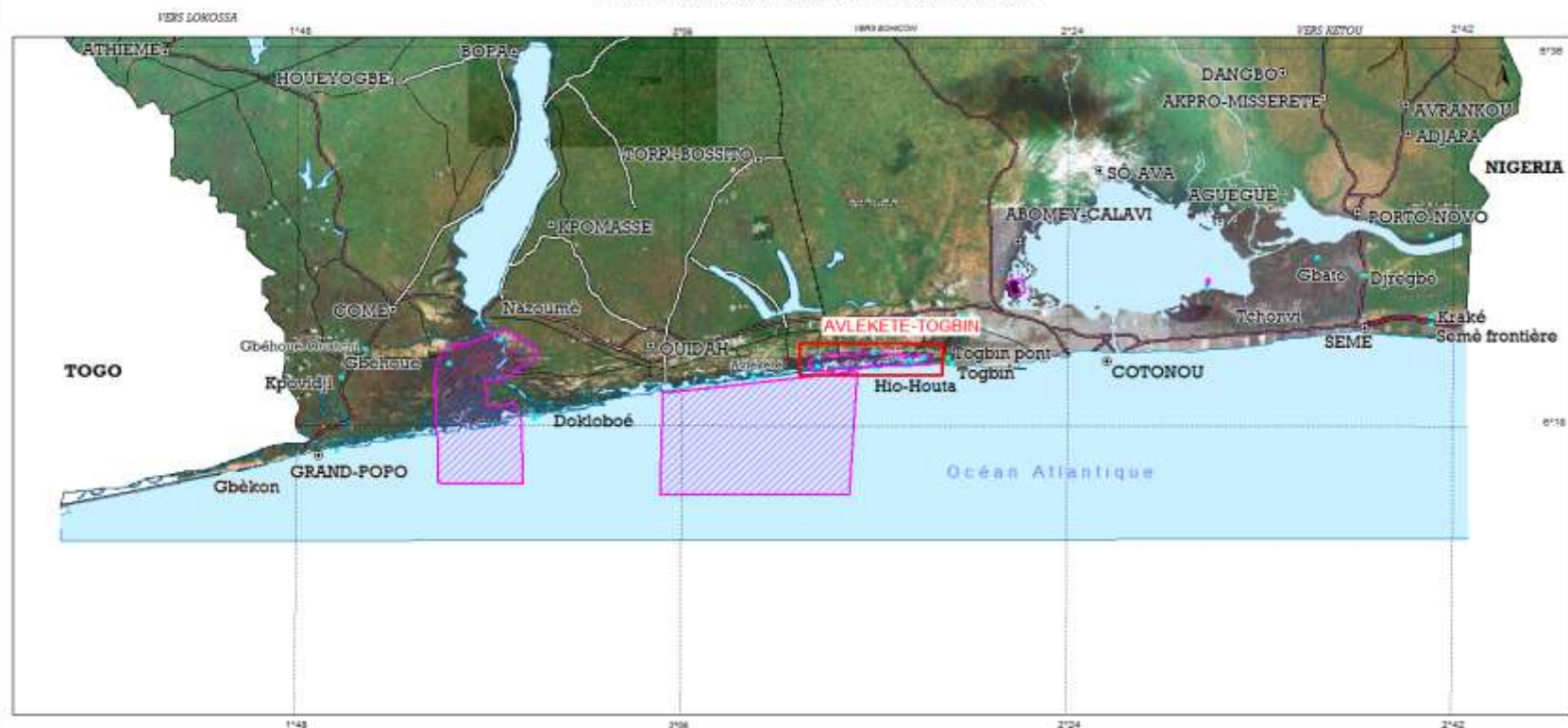


SITE NAZOUME-BOUCHE DU ROI: population et densité



3.2.2 AVLEKETE – TOGBIN SITE

LES AIRES MARINES A PROTEGER AU BENIN



- Quelques localités
- ⊙ Chef-Lieu de commune



Aire concernée

— Route bitumée
— Piste principale

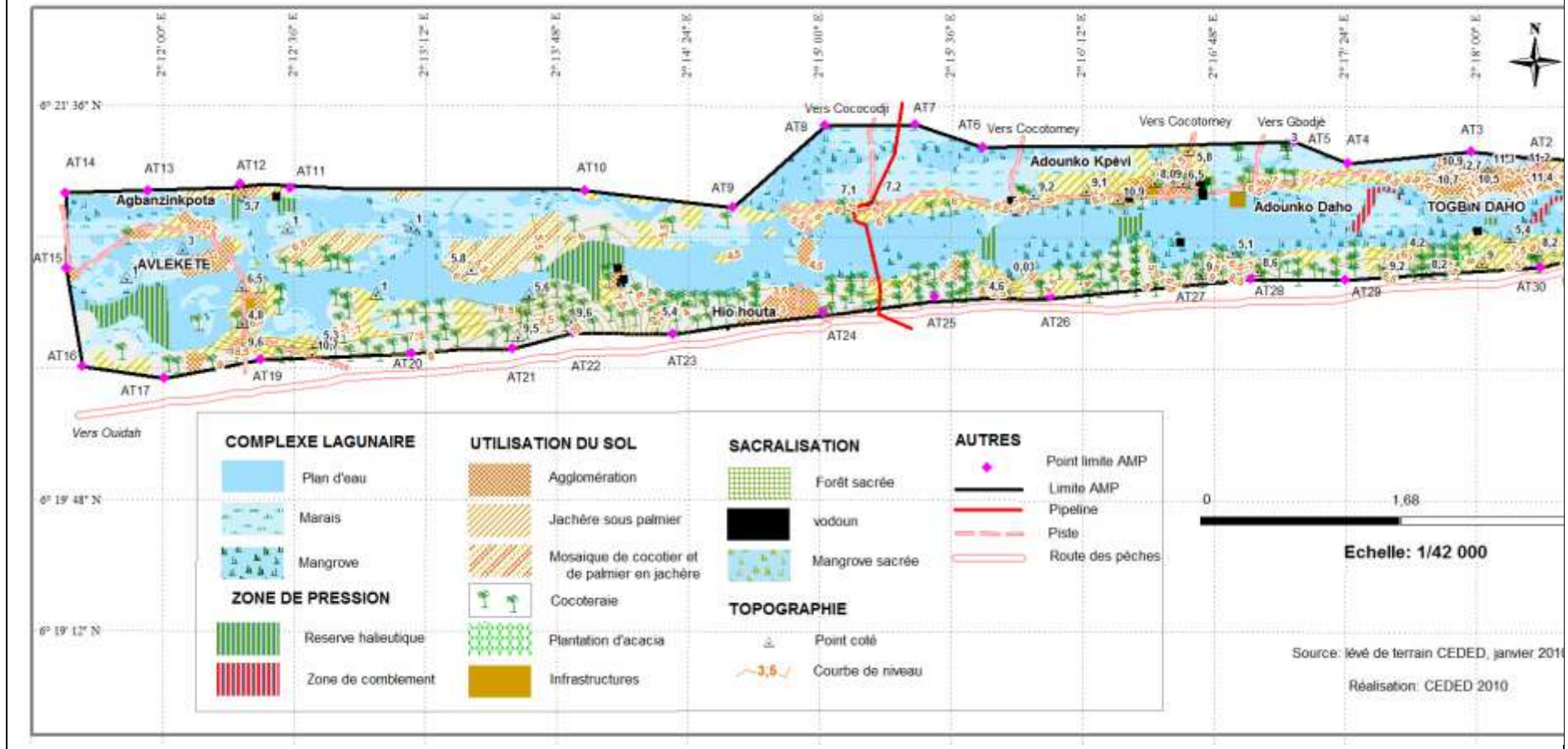
— Route de pêche
— Autre piste carrossable
— Chemin de fer

Plan d'eau

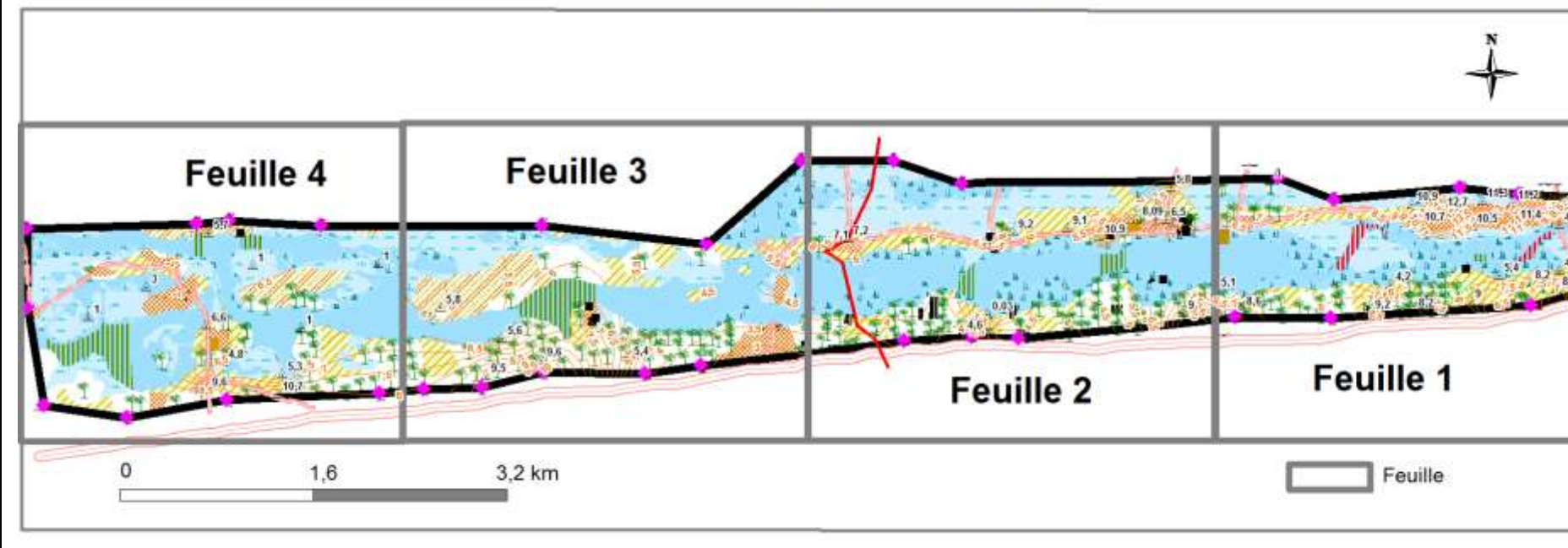
0 3.5 7 10.5 km
Echelle

Source: Image Google 2006 et travaux de terrain 2010

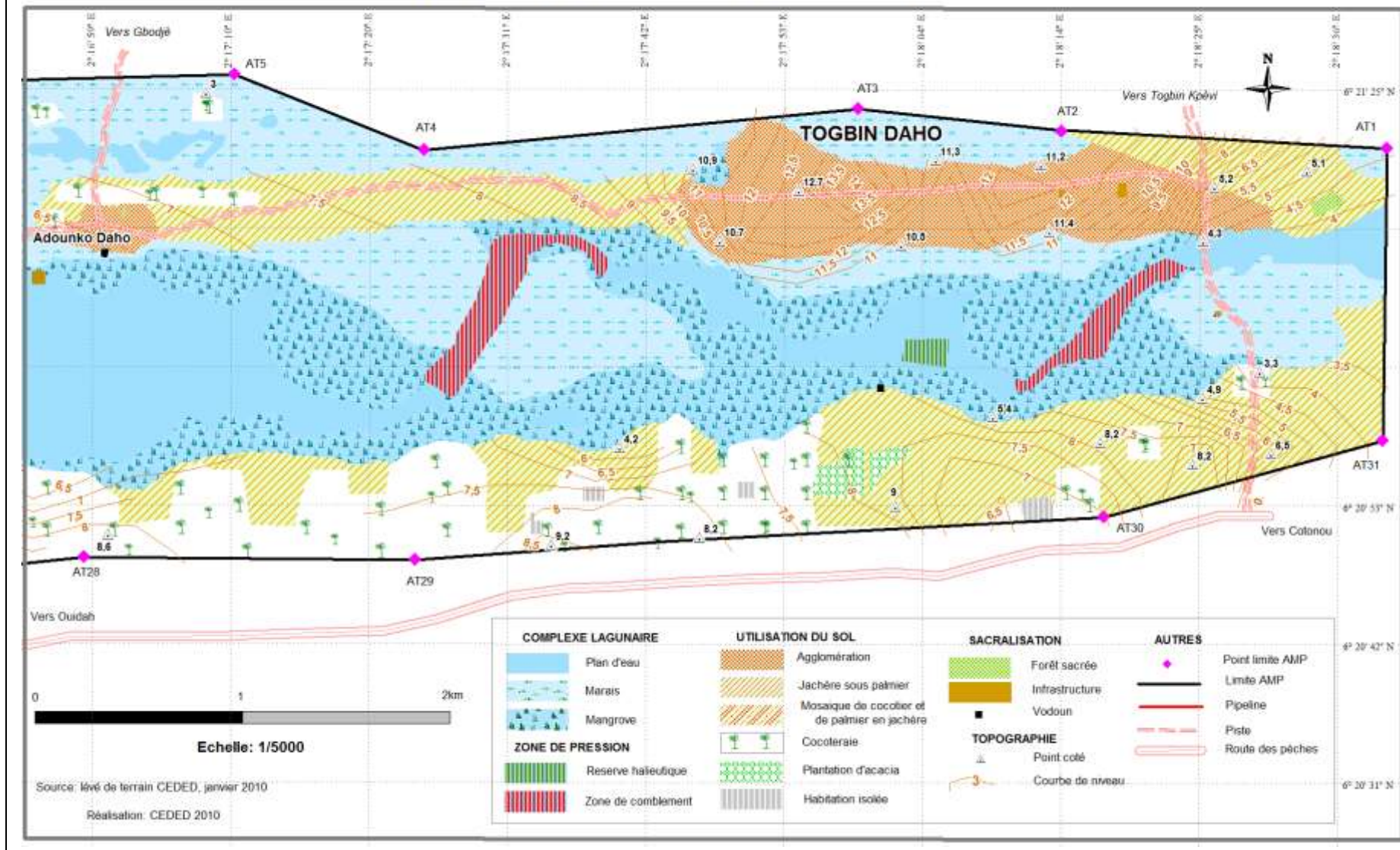
SITE AVLEKETE-TOGBIN



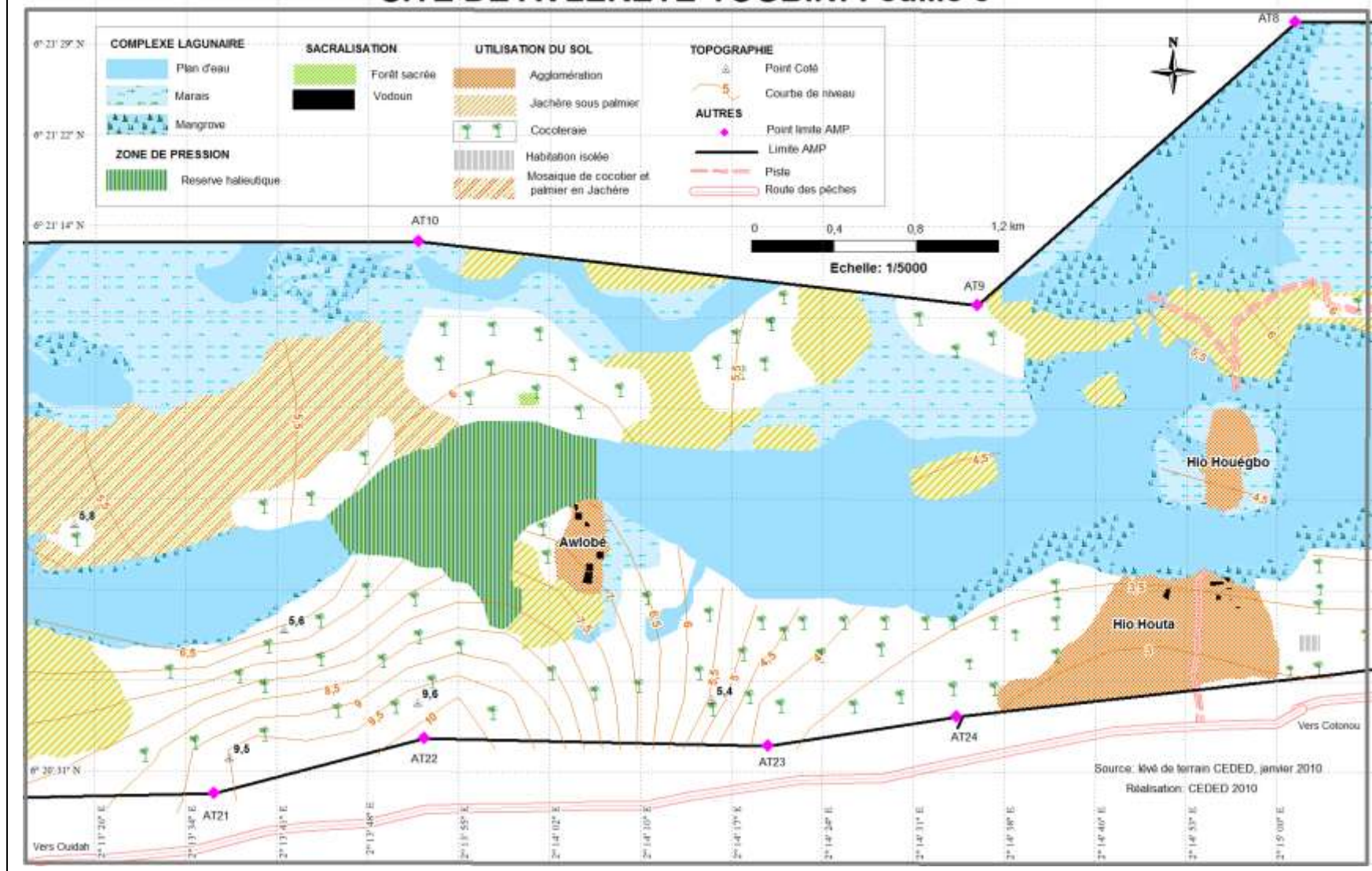
SITE DE AVLEKETE-TOGBIN: les 4 feuilles



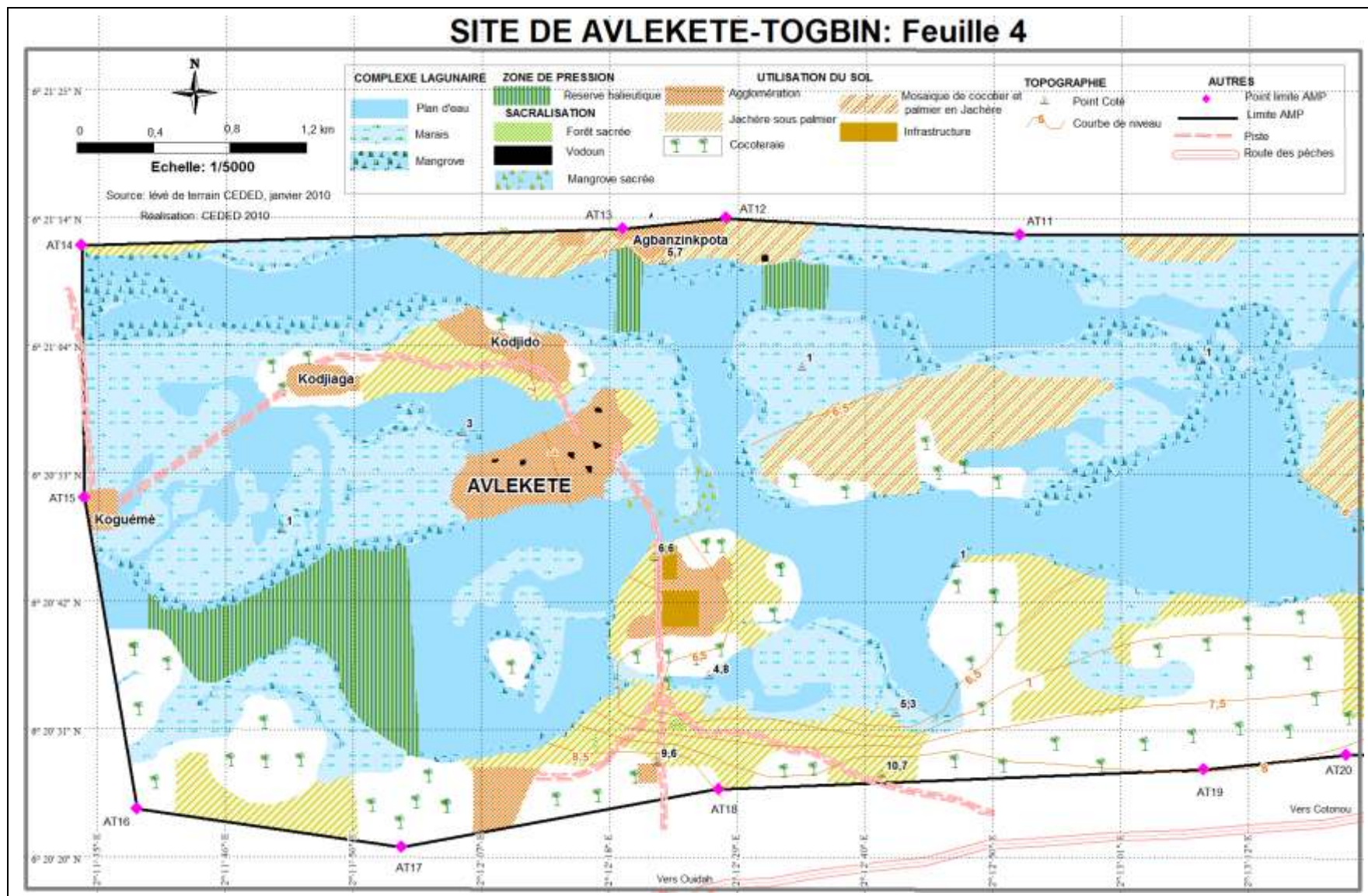
SITE DE AVLEKETE-TOGBIN: Feuille 1



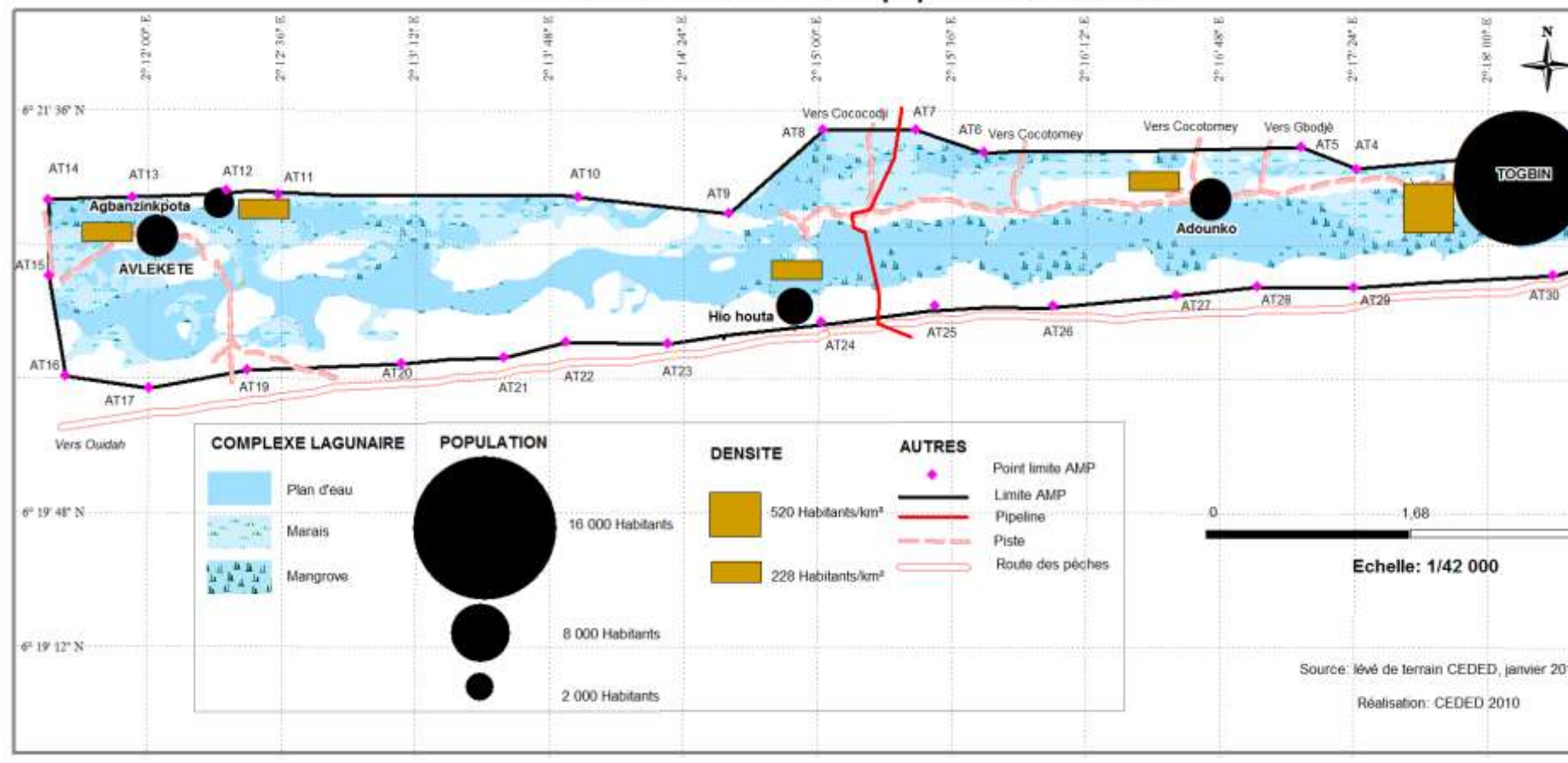
SITE DE AVLEKETE-TOGBIN: Feuille 3



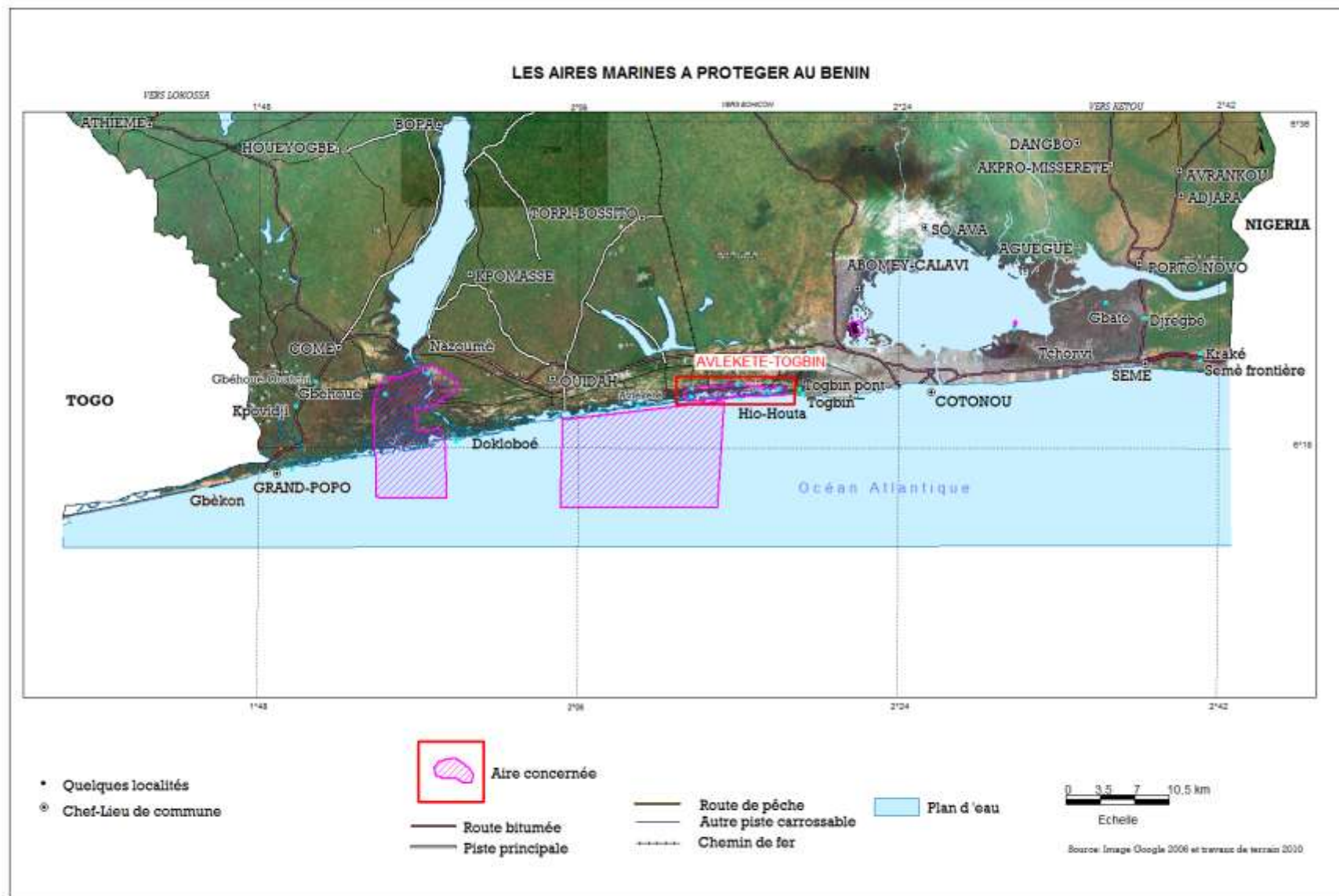
SITE DE AVLEKETE-TOGBIN: Feuille 4



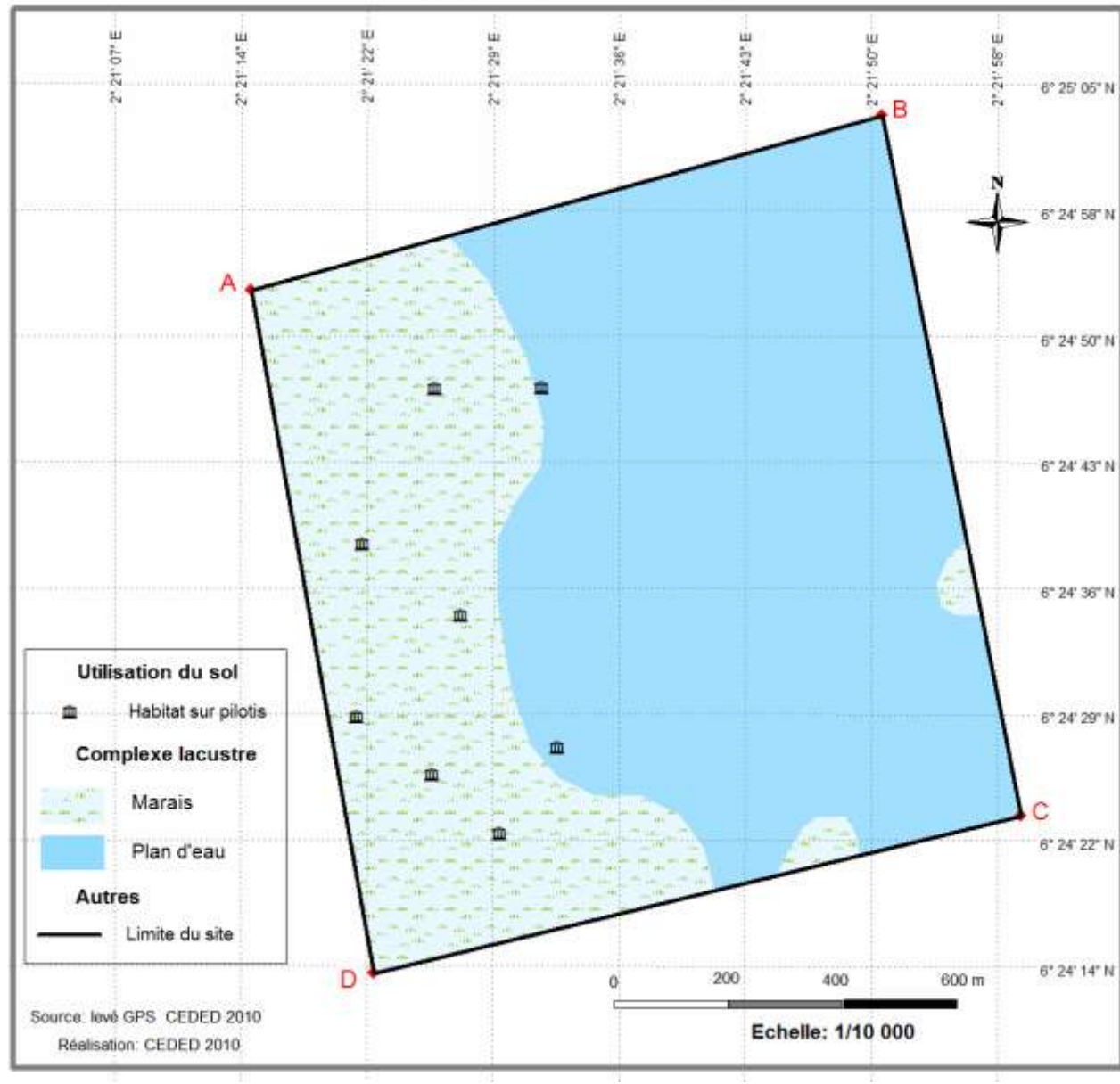
SITE AVLEKETE-TOGBIN: population et densité

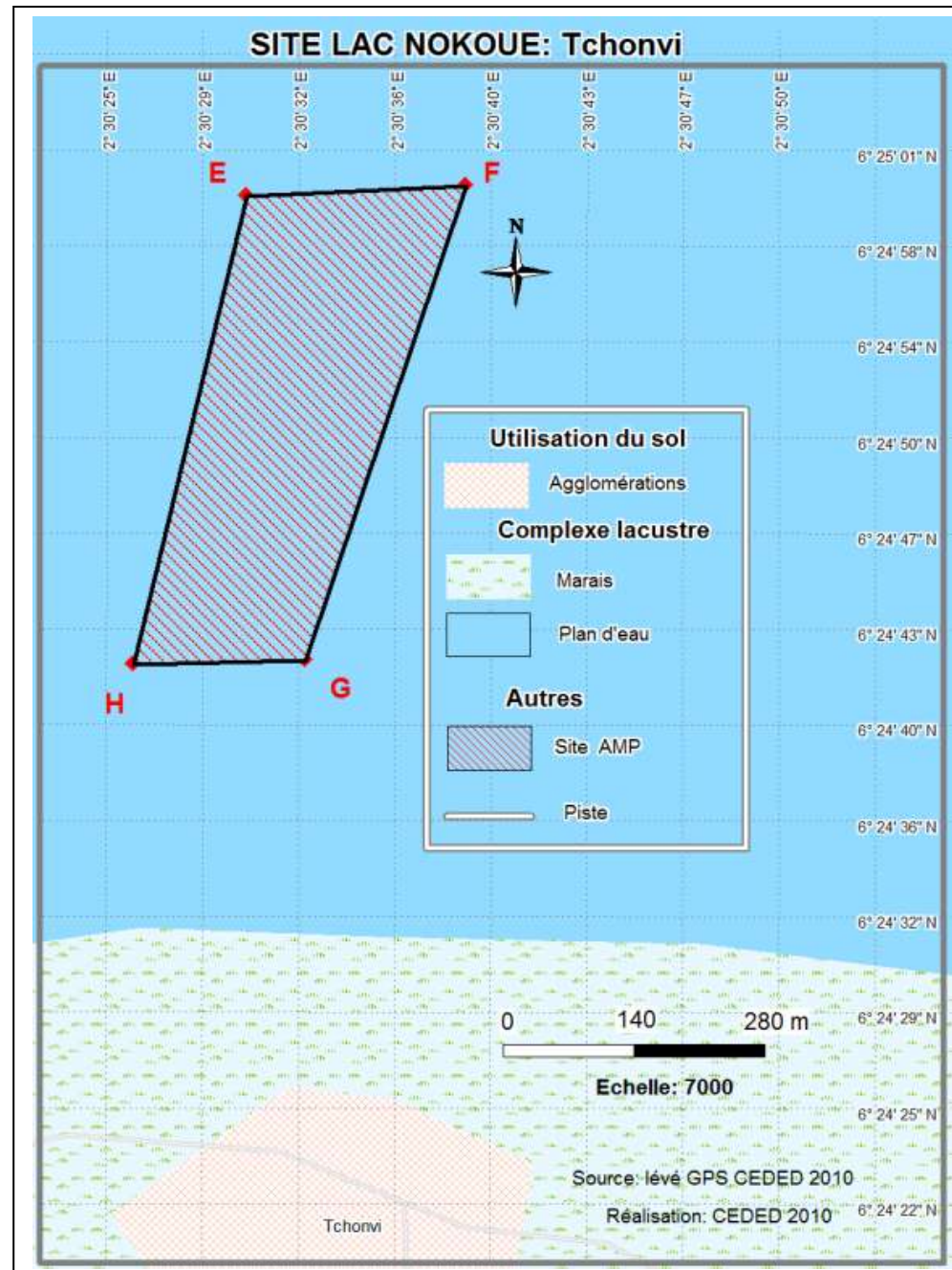


3.2.3 LAKE NOKOUE SITE



SITE LAC NOKOUE: Ganvié





3.2.4 AVLEKETE MARINE AREA SITE

LES AIRES MARINES A PROTEGER AU BENIN



- Quelques localités
- ® Chef-Lieu de commune



Aire concernée

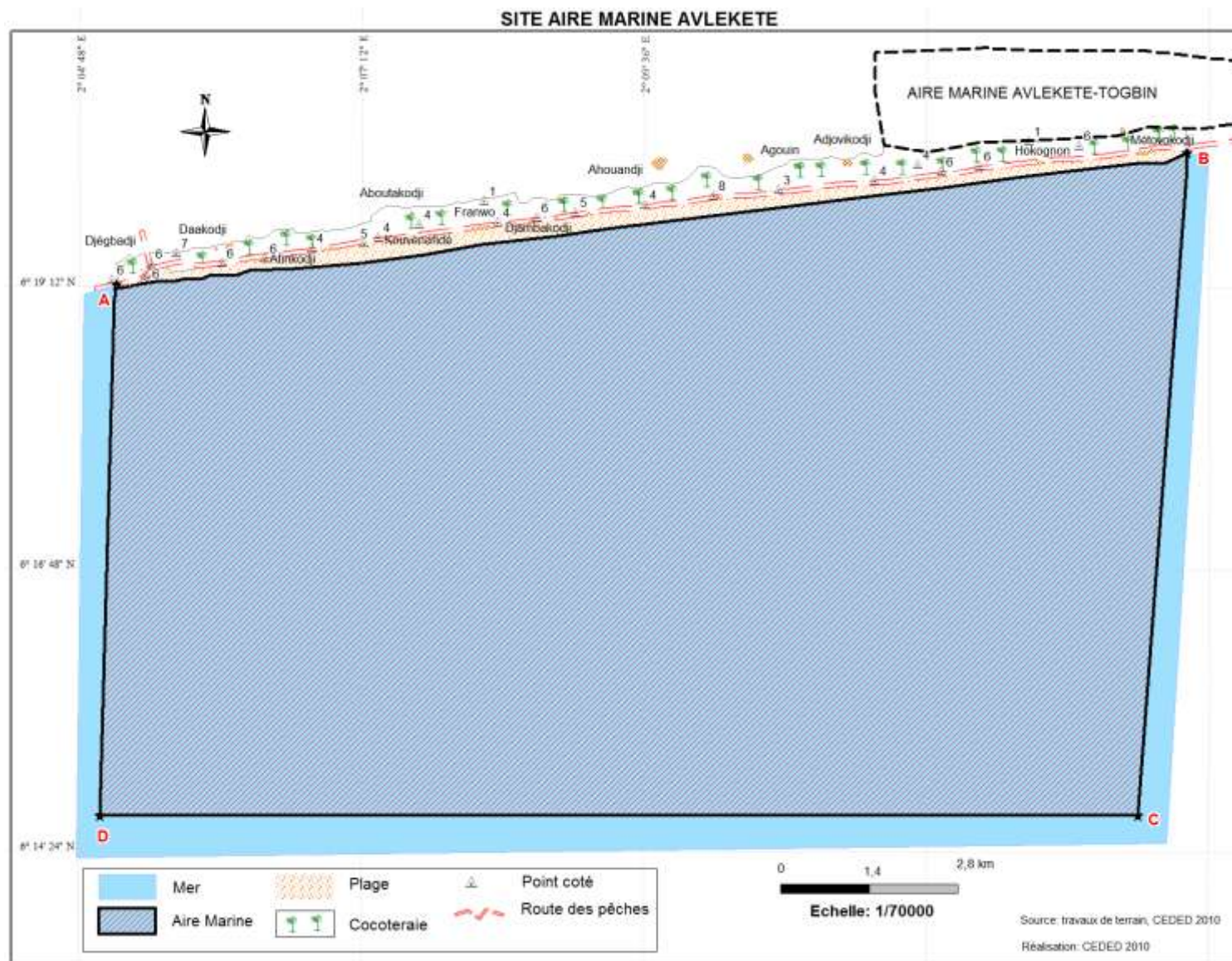
- Route bitumée
- Piste principale

- Route de pêche
- Autre piste carrossable
- Chemin de fer

Plan d'eau



Source: Image Google 2006 et travail de terrain 2010



Phase N° 3

A large orange arrow pointing downwards, with the text "Phase N° 3" inside its upper rectangular part.

**3.3 MANAGEMENT PLANS
AND ZONING PLANS OF
EACH MANAGEMENT**

3.3.1 ESTABLISHMENT OF INSTITUTIONAL AND REGULATORY MECHANISMS

The institutional mechanism and the regulatory framework established for the management of MANAGEMENT COMMITTEES were adapted from the regulation relating to the establishment of Marine Protected Areas in Benin. It should also be recalled that the study was to lead to the introduction of a draft decree on the management of Marine Protected Areas to the approval of the Council of Ministers

3.3.1.1 Institutional mechanisms

At the highest level, it is important to recall that the implementation of the national policy on Marine Protected Areas is achieved through the following institutional framework:

- National Administrative Authority : Ministry of the Environment ;
- Permanent MANAGEMENT COMMITTEE National Committee or Orientation and Monitoring Committee : it includes the main national institutions involved in activities related to the marine and coastal environment, the townships, the university, NGOs and relevant professional organizations ;
- Technical and Scientific Support Body: Benin Halieutic and Oceanographic Research Center.

The nominative compositions, attributions, and functioning of the various bodies of the institutional framework will be dealt with in orders by the Minister of the Environment.

In that respect, the coordination of the implementation of the management plan is ensured by the Management Committee whose composition, attributions, organization, and functioning will be set by an inter-ministerial order.

The committee will include representatives of the administration, the university, the grassroots populations, local governments, NGOs working in the field of the environment, relevant socio-professional groups, and tour operators.

It is all the same necessary to underscore the fact that the framework is an ongoing process that would be approved and validated by relevant institutions.

To that effect, for the implementation of the aforementioned framework on the ground two MANAGEMENT COMMITTEE management bodies will be needed: the village/hamlet management committees and the site management committees including some members of the village committees and other key stakeholders.

▪ Village Management Committees

A village management committee (see the list of the members of each committee, sub-annex 1) will be set up and it will include 5 to 15 members depending on the size of the village and the number of hamlets.

Such committees include the village chief or one of his councilors, fishermen, farmers, handicraftsmen, and at least two women to comply with gender equity.

Following the exchange sessions with populations on MANAGEMENT COMMITTEE management, the elected bureau of the village management committee is as follows: (1) a Chairperson; (ii) a Secretary; (iii) a Treasurer; (iv) an Organization Representative, and (v) a Councilor.

■ Site management committees

At the local level (townships and districts): there will be a management committee per site. Such committees shall include two representatives of each village management committee (a man and a woman); a representative of the relevant districts, a representative of the relevant townships, a representative of NGOs working in the area, a representative of the Government (Regional Directorate of the Environment and Nature Conservation). However, thinking about the strategic establishment of the Orientation and Monitoring Committee, it has been decided to simply appoint people who, from the beginning of the process have proved to be dynamic and dedicated to the advancement of the process. This will enable to circumvent strategically political contingences looming ahead owing to the implication of some local authorities at the local level who tend to be too political in their orientations and during discussions.

3.3.1.2 Regulatory framework

The regulatory framework on Management committees mainly the national policy on conservation and the international commitments entered into by Benin in that respect. Thus, national efforts in the area natural resources conservation were initiated since the colonial period. The willingness of the colonizer to protect the environment led to i) the establishment of listed forests mainly upstream of rivers, ii) the protection of riparian forests, iii) the creation of national parks.

Many national initiatives following independences show that a national policy on protection and conservation is being developed progressively. We have for instance:

- The institutionalization of ministries and institutions in charge of natural resources (forests, water, national parks, marine environment, etc.);
- The signature of the Algiers Convention ;
- The national seminar on desertification in 1985 ;
- The adherence to the UNESCO conventions on human and national heritages ;
- The ratification of many conventions related to the protection of the fauna and flora such as CITES, CMS, etc.;
- The water code (1987);
- etc.

Nonetheless, it is following the Rio conference (1992) and the globalization of the awareness of the need to protect the environment in order to lay solid foundations for sustainable development that Benin strengthened its conservation policy through a number of **landmark** facts. The national policy on conservation of biodiversity in general, and aquatic and marine **biology** in particular, contains some major orientations including:

- The national strategy and the orientation plan for the management of biological diversity : it is the national document of implementation of the convention on biological diversity and enforcement of its principles.
- The ordinance N° 20/PR/MDRC/SP dated 25 Avril 1966, relating to the general regulation of fishing in continental waters (...). Customs and human rights considerations can, in no way, be obstacles to measures that the government will deem necessary to take in order to increase, restrain, limit, ban or safeguard production” (article 3).
- The ordinance n° 68-38/PR/MTPTPT dated 18 Juin 1968 amended by the Ordinance n° 69-49/PR/MAE dated 9 Décembre 1969 relating to the Merchant Navy Code : it provides that "orders by the maritime authority prepared in collaboration with the organization in charge of research on maritime fishing shall determine, should the need arise :

- ✓ areas and periods when fishing is banned, either fully or for some species ;
- ✓ nets, fishing gears, instruments, banned fishing processes and modes, either fully or in some conditions ;
- ✓ arrangements to prevent spawning ground destruction and to ensure the conservation of fishing areas, mainly arrangements related to merchant size of various species fished.
- ✓ prohibitions related to fishing, sale, purchase, transport by hawking, or to the use of fish spawns, crustaceans, shellfish, and other marine animals that do not reach the prescribed dimensions;
- ✓ baits or substances whose utilization is prohibited apart from those provided for in article 191 of the current code ;
- ✓ order and police measures to ensure fishing conservation and to regulate fishing ;
- ✓ the establishment and exploitation of fisheries, ponds, oyster parks, mussels, or other marine animals located at sea or in a public maritime space, subject to the fact that the amount and allocation of tax to be levied during the granting, the transfer or renewal of permits are set by decree” (article 190);

- the law n° 93-009 dated 2 July 1993 relating to forest regime in the Republic of Benin: it defines the status of the different types of vegetation on the national territory. It also defines the management scheme of listed forests, state forests, state protected land, etc. this is the main orientation with regard to the conservation policy of forest ecosystems;
- the law n° 2002-016 date 18 October 2004 relating to the fauna regime in the Republic of Benin: it sets “the basic principles and the general conditions of protection, management and development of the fauna and its habitats by implementing measures for conservation, development, and sustainable utilization of wild animals, their habitats and their biological diversity” (article 1). The law lays the foundations of the creation of national protected areas;

- ✓ “The phrase "protected areas" refers to areas where fauna protection and management measures are implemented and they include in particular integral natural reserves, national parks, wildlife reserves, special reserves or fauna sanctuaries, and game sanctuaries” (article 5);

In addition to the different categories of protected areas referred in article 5 of the aforementioned law, it will be possible to create other types of protected areas, mainly as a result of the implementation of international conventions Benin has signed” (article 14).

However, the convention on biological diversity, of which Benin is party, stipulates in its article 8 that each contracting party shall create a system of protected areas or areas where special measures are necessary for the conservation of biological diversity and, effectively manage such areas.

Furthermore, following the seventh ordinary 2004 session specifically devoted to protected areas, the CBD General Assembly took the decision VII/28 including a programme one objective of which is to create by 2012 a marine protected area network in order to contribute to the achievement of the three strategic objectives of the convention. The definition of marine and coastal protected area retained is the following: “any area, defined within or adjacent to a marine environment, including the waters, the flora, the fauna, as well as the associated cultural and historical values/artifacts, listed in accordance with the law or other effective means including negotiation, with a level of protection of its marine and coastal biodiversity higher than the level of protection of surrounding areas.”

La convention sur la protection du patrimoine mondial naturel et humain recommande également à toutes les parties contractantes l’inscription de sites significatifs, notamment ceux qui recèlent de valeurs biologiques, sur la Liste du Patrimoine Mondial.

The convention on the protection of the world natural and human heritage also recommends that all contracting parties should register significant sites, mainly those encompassing biological values, in the World Heritage List.

Other conventions specifically developed for the development of the marine environment also include obligations related to the implementation of specific protection measures:

- the MARPOL on the protection of the marine environment by ships ;
- the Washington convention on the international trade of endangered fauna and flora species (CITES);
- the United Nations Convention on the Law of the Sea;
- the Abidjan Convention;
- the Ramsar Convention on Wetlands of International Importance.

3.3.2 SUMMARY OF THE REFERENCE SITUATION OF EACH MPA

3.3.2.1- Nazoumè- Bouche du Roy Site

OVERVIEW OF NAZOUME SITE - BOUCHE DU ROY				
Introduction/Physical Description	Local Populations and Activities	Local/Traditional Practices	MPA Stakes/Impacts Management	Management Needs Expressed by Communities
<p>Area : 2512 ha</p> <p>Description of ecosystems</p> <p>Nazoumè-Bouche belong to the agro-ecological sector of Lower Mono River Valley and is made up of a multitude of small lakes and ponds (specific habitats for fish and bird species)</p> <p>Site covered with plant formations (grassy savannahs, swamps, plantations of coconut-trees and a few mangrove forests), a refuge for wild fauna including terrestrial and aquatic species</p> <p>Place of refuge for numerous faunas, and aquatic, terrestrial and fowl species (see report August 2007) which participate in the functioning of ecosystems in the sector</p>	<ul style="list-style-type: none"> • Many socio-cultural groups including Xwla, Péda and Gin). • Melting pot as a result of numerous migrations. • Many economic activities are carried out including (sea and inland fishery, fish breeding in folds or ponds, backyard flock, pig husbandry, marketing of agricultural commodities and handicraft) • Tourism and commercial activities are also carried out. • Agriculture characterized by food crops and market gardening with a system of agricultural production mainly based on corn farming as the leading product, cassava and market gardening. <p>Fish breeding activities conducted in the sector relate essentially to inland and sea fishery, but chiefly to traditional fishing practised with traditional techniques (cast nets, gillnets, haul nets, basket traps, etc.)</p>	<ul style="list-style-type: none"> • Unchecked collection of wood from mangroves for the manufacture of traditional fishing gears such as Acadja, and for energy wood; • Poor management of waste water from households as well as solid wastes; • Pollution due to concentration of phosphorus dumped by Togo. That pollution has harmful impacts on the algal biomass. 	<ul style="list-style-type: none"> • Regeneration of devastated ecosystems through the prohibition of the exploitation of the ecosystems; • Overfishing, many breaches of fishing regulations; • Restocking of piscifauna thanks to effective management of the ecosystems housing them and the formal prohibition of any predation on the site; • Reappearance of extinct species through a comprehensive regeneration mechanism of the ecosystems on the site; • Restocking of bird species subsequent to the creation of conditions conducive to their survival 	<ul style="list-style-type: none"> • The dredging of the lake to deal with the obstruction and filling up of the AHO channel which dries up the lake and causes fish scarcity; • The problem of boundaries between the partner communes of Ouidah, Kpomassè and Grand-Popo to prevent sources of conflicts; • Project support to communities to encourage them not to fish anymore within the restricted areas ; • Fishing regulation and the management of marine protected areas; • Consultation with the managers of similar projects such as Lagune Project

OVERVIEW OF AVLEKETE-TOGBIN SITE				
Introduction/Physical Description	Local Populations and Activities	Local/Traditional Practices	MPA Management Stakes/Impacts	Management Needs Expressed by Communities
<ul style="list-style-type: none"> The d'Avlékété-Togbin site, with a surface area of 1,800 ha is part of the coastal plain which is a complex of barrier beaches separated by swampy deeps and lagoons. 	<ul style="list-style-type: none"> The site houses a community made up of various socio-cultural groups, most of which are rural populations. They are mainly Xweda and Pédah and such other communities as the 	<ul style="list-style-type: none"> Damage to ecosystems on the site resulting essentially from the various activities carried out by the populations such as salt business which cause the depletion of mangrove areas ; 	<ul style="list-style-type: none"> Development of coastlines and waste water disposal; Conservation and protection of biodiversity; Natural resource 	<ul style="list-style-type: none"> Project support to communities to encourage them not to fish anymore within the restricted areas ;

3.3.2.2 Site de Avlékété-Togbin

<ul style="list-style-type: none"> • It is crossed by the coastal lagoon called Djessin which covers an area of 12 sq. km 	<p>Fon, the Aïzo, the Tofin, the Wémè and the Adja.</p> <ul style="list-style-type: none"> • The populations living on the site carry out various activities such as agriculture, fishery, salt business, trade and tourism, etc. • Traditional salt exploitation is also largely developed. That activity is carried out by the Xwla, a population from the heights of Adja which settled on the coastal lagoons. 	<ul style="list-style-type: none"> • Pollution due to the poor management of solid and liquid wastes; • Agricultural activities are mostly responsible for nutriment-caused pollution, persisting organic pollutants and pesticides. 	<p>valorisation;</p> <ul style="list-style-type: none"> • Reduced damage to vegetation cover; • Creation of a biosphere zone; • Fishing overcapacity (depletion of fish resources, alteration of biotopes, ancillary capture of sensitive species) ; • Illegal seasonal or permanent occupancy of the Maritime public property. 	<ul style="list-style-type: none"> • Fishing regulation and the management of marine protected areas ; • Consultation with the managers of similar projects such as Lagune Project ; • Protection and restoration of habitats, species and fish resources ; • Managing frequentation ; • Managing and enhancing customs.
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3.3.2.3- Site de l'aire marine d'Avlékété

OVERVIEW OF AVLEKETE MARINE AREA SITE				
Introduction/Physical Description	Local Populations and Activities	Local/Traditional Practices	MPA Management Stakes/Impacts	Management Needs Expressed by Communities
<ul style="list-style-type: none"> • The site selected for the creation of an AMP in Avlékété is located off dune ridges not covered by sea water at low tide, separated by inter-dune depressions parallel to the coast, and shallows ; • It is bordered in the north by the lagoon and in the south by the village of Avlékété; • There are two types of ecosystems: • Lagoon ecosystems and terrestrial ecosystems: the lagoon environment is favourable to a vegetation of mangrove including <i>Rhizophora racemosa</i> and <i>Avicennia germinans</i>. 	<ul style="list-style-type: none"> • The population of the Avlékété site is made up of several communities and the most numerous are the Xweda and the Pédah, with some sparse communities of the Fon, the Aïzo, the Tofin, the Wémè and the Adja. • The populations living on the site carry out various activities such as agriculture, fishery, salt business, trade and tourism, etc. • Traditional salt production is also largely developed. That activity is carried out by the Xwla, a population from the heights of Adja which settled on the coastal lagoons. 	<ul style="list-style-type: none"> • Damage to the ecosystems of the site; • Pollution resulting from the poor management of solid and liquid wastes 	<ul style="list-style-type: none"> • Regeneration of devastated ecosystems ; • Restocking of piscifuna and fowl fauna; • Reduced damage to vegetation cover ; • Reduced risks of pollution. 	<ul style="list-style-type: none"> • The prohibition of the use of some fishing gears by the Government ; • Recovery of lands ; • The preservation of sacred forests; • The respect for shrines ; • The respect for traditional practices ; • Dredging of the lagoon.

3.3.2.4 Site du lac Nokoué

OVERVIEW OF THE LAKE NOKOUE SITE				
Introduction/Physical Description	Local Populations and Activities	Local/Traditional Practices	MPA Stakes/Impacts	Management Needs Expressed by Communities
<p>Area : 339 ha</p> <ul style="list-style-type: none"> • The site of Lake Nokoué is located south of the lagoon of Porto-Novo (from Nigeria border up to eastern outskirts of Cotonou). • Considering its surface area, Lake Nokoué (Nonxwé) is the biggest lake in Benin. • The site harbours various types of swampy areas dominated by such species as <i>Paspalum vaginatum</i>, <i>Cyrtosperma senegalensis</i> and <i>Cyperus articulatus</i>, <i>Typha australis</i> and <i>Cyperus striatus</i>. 	<ul style="list-style-type: none"> • Riparian communities: Toffin, Fon, Gun, Yoruba etc. • Main activities: fishing, sand quarry exploitation; • The lake shelters a big community of fishermen. • Traditional fishing is practiced mostly with traditional techniques such as Acadja, cast nets, gillnets, haul nets, basket traps, longlines, fish-trap barriers, etc. that activity is practiced mainly by Toffin and Gun populations. 	<ul style="list-style-type: none"> • Filling-up of the lake • Pollution of the lake and the lagoon; • Damage to vegetation cover; • Overexploitation of fish resources. 	<ul style="list-style-type: none"> • Biodiversity conservation and protection ; • Natural resource valorisation ; • Reduced damage to vegetation cover ; • Creation of a biosphere zone ; • High fishing pressure; <p>Threats on the quality of waters.</p>	<ul style="list-style-type: none"> • Protection and restoration of habitats, species and fish resources ; • Managing frequentation; • Managing and enhancing customs ; • The development of a quality image for the relevant communities.

3.3.3 MPA MANAGEMENT PLAN

3.3.3.1- Sectoral Activities management plan

NAZOUNME - BOUCHE DU ROI SITE								
ENVIRONMENTAL PROBLEMS NOTICED	MITIGATION MEASURES/ACTIVITIES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	LOCATION (RELEVANT VILLAGE)	ACHEDULE	RESPONSIBILITIES			ESTIMATE D COST (FCFA)
					Implementati on	Surveillance	Monitor ing	
Orientation 1 : Fishing-salt production sector								
Coastal erosion and movement of the sea outfall from time to time	Resort to the MEPN expertise to get the fixation of the sea outfall	Reports of the meetings with MEPN	Djondji Avlo plage	To be determined	Site village management committee	MPA management committee	CEDED-ONG Townshi p ABE	PM
Lagoon filling up owing to the use of fishing gears in organic matters	Initiate the dredging of the lagoon		Nazoumè Djondji	-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Overfishing	Sensitize populations on the compliance with fishing regulations applicable in their area	Session reports Meeting minutes	Nazounmè Avlo Djondji Gbèzoumè	-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Orientation 2 : Agriculture – Forest Sector								
High pressure exercised on the vegetation for making fishing tools	Protect some ecosystems by prohibiting any form of utilization	Posters and sensitization notice boards erected		-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Soil degradation due to the use of chemical fertilizers	Resort to integrated soil fertilization management methods	New farming methods used		-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Tree cutting in forest for firewood	Restore sacred forests	Sensitization sessions	Nazounmè Avlo	-	Site village management	MPA manageme	CEDED-ONG	PM

		Reforested areas			committee	nt committee	Townshi p ABE	
Uncontrolled sale of arable land and wetlands	Induce the taking of an order by the mayor to regulate land selling	Availability of the order and level of ownership by local authorities		-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Lack of organization of alternative income generating activities (gardening, soap production...)	Encourage local processing activities and support the marketing of produced soap	List of IGA per area Existence of markets for selling products	Nazounmè	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Orientation 3 : Culture - Tourisme Sector								
Disappearance of sacred forests	Reforest the mangrove and restore sacred forests	Reforested areas Protection and restoration measures put in place	Djondji	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Destruction of fish and marine turtles habitats	Implement measures of protection and monitoring of turtles and endangered species	Protection measures of endangered species put in place		-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Dropping of cultural and ancestral practices	Rehabilitate cultural practices (reconstruction of temples, compliance with prohibited practices, revamping of folk groups)	Restoration of local cultures and traditions of the milieu	Nazounmè Avlo-Plage Djondji Gbèzounmè	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Observatories and natural ecotourism areas are not in place	Creation and development of ecotourism areas through the establishment of ponds for reptile breeding (varanuses, caymans, boas, Seba pythons)	Availability of exclusive tourism areas	Nazounmè Avlo-Plage Djondji Gbèzounmè	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM

AVLEKETE – TOGBIN SITE								
ENVIRONMENTAL PROBLEMS NOTICED	MITIGATION MEASURES/ACTIVITIES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	LOCATION (RELEVANT VILLAGE)	ACHEDULE	RESPONSIBILITIES			ESTIMATE D COST (FCFA)
Orientation 1 : Fishing – Salt production Sector								
Scarcity and depletion of halieutic products	Create optimum conditions to favor the return of species that formerly disappeared from the area	Level of improvement of fishing catches Rate of regeneration of disappeared species	Adounko-kpèvi	To be determined	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Non compliance with no-fishing areas and prohibited fishing gears recommended fishing gears	Sensitize populations on no fishing areas to enable the reproduction of halieutic products Strengthen the committees in charge of monitoring prohibited fishing gears	Sensitization notice boards and posters Availability of monitoring committees	Avlékété Agbanzin-kpota	-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Pollution of the lagoon with waste water and solid waste, including plastics and rubbish	Initiate sanitation activities in all the villages	Availability of garbage cans Presence of DSW collection institutions and rate of subscription of populations		-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Misunderstanding of fishing regulations laid down by the Government	Initiate sensitization and clarification activities on the advantages of the regulatory mechanisms put in place	c	Agbanzin-kpota	-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Orientation 2 : Agriculture – Forests Sector								
Uncontrolled sale of arable land and	Taking of order by the mayor to	Availability of the	AdounkoKpèvi	-	Site village	MPA	CEDED-	PM

wetlands	regulate the sale of land	order and level of ownership by local authorities	AdounkoDaho Togbin, Hiyo		management committee	managem nt committee	ONG Townshi p ABE	
Loss of soil fertility	Resort to the integrated soil fertility management methods	New farming methods practiced	Agbanzin-kpota	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Pollution of soil and banks with solid and liquid waste and faeces	Build bank protection barriers and install garbage cans and public latrines	Presence of beacons and belts	Agbazin-Kpota AdounkoKpèvi AdounkoDaho Togbin Hiyo Avlékété	-	Site village management committee	MPA management committee	CEDED- ONG Townshi p ABE	PM
Under-development of alternative income generating activities (gardening, processing of local produce)	Encourage local produce processing activities such as bleach production, liquid soap, toilet soap and processing of foodstuffs (coconut oil, gari, tapioca...)	A list of IGA activities identified by area is available	Togbin	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Orientation 3 : Culture and tourisme sector								
Dropping of customs and social taboos	Restoration of cultural practices (reconstruction of temples, periodical sacrifices to divinities, compliance with social taboos)	Communities have restored their cultures and local traditions of their milieu	Agbanzin-kpota	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM
Destruction of sacred forests and worship areas	Reforest the mangrove and initiate a process of restoration of sacred forests and worship areas	Better attention is paid to sacred forests and worship areas	Agbanzin-kpota	-	Site village management committee	MPA manageme nt committee	CEDED- ONG Townshi p ABE	PM

AVLEKETE MARINE AREA SITE								
ENVIRONMENTAL PROBLEMS NOTICED	MITIGATION MEASURES/ACTIVITIES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	LOCATION (RELEVANT VILLAGE)	ACHEDULE	RESPONSIBILITIES			ESTIMATE D COST (FCFA)
Orientation 1 : Fishing – Salt production Sector								
Scarcity and depletion of halieutic products	Create optimum conditions to favor the return of species that formerly disappeared from the area	Level of improvement of fishing catches Rate of return of disappeared species	Avlékété	A déterminto be determined	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Non compliance with no-fishing areas and use of recommended fishing gears	Sensitize populations on no fishing areas to enable the reproduction of halieutic products Strengthen the committees in charge of monitoring prohibited fishing gears	Sensitization notice boards and posters Availability of monitoring committees	Avlékété	-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Pollution of the lagoon with waste water and solid waste, including plastics and rubbish	Initiate sanitation activities in all the villages	Availability of garbage cans Presence of DSW collection institutions and rate of subscription of populations	Agbanzin-kpota	-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Misunderstanding of fishing regulations laid down by the Government	Initiate sensitization and clarification activities on the advantages of the regulatory mechanisms put in place	Better understanding of new laws regulating the fishing sector		-	Site village management committee	MPA manageme nt committee	CEDED-ONG Townshi p ABE	PM
Orientation 2 : Agriculture-Forest Sector								
Uncontrolled sale of arable land and wetlands	Taking of order by the mayor to regulate the sale of land	Availability of the order and level of ownership by	Avlékété	-	Site village management committee	MPA manageme nt	CEDED-ONG Townshi	PM

		local authorities				committee	p ABE	
Loss of soil fertility	Resort to the integrated soil fertility management methods	New farming methods practiced	Agbanzin-kpota	-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Pollution of soil and banks with solid and liquid waste and faeces	Build bank protection barriers and install garbage cans and public latrines	Presence of beacons and belts		-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Orientation 3 : Culture and Tourism Sector								
Dropping of customs and social taboos	Restoration of cultural practices (reconstruction of temples, periodical sacrifices to divinities, compliance with social taboos)	Communities have restored their cultures and local traditions of their milieu	Agbanzin-kpota	-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Destruction of sacred forests and worship areas	Reforest the mangrove and initiate a process of restoration of sacred forests and worship areas	Better attention is paid to sacred forests and worship areas	Avlékété	-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM

LAKE NOKOUE SITE								
ENVIRONMENTAL PROBLEMS NOTICED	MITIGATION MEASURES/ACTIVITIES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	LOCATION (RELEVANT VILLAGE)	ACHEDULE	RESPONSIBILITIES			ESTIMATE D COST (FCFA)
Orientation 1 : Secteur pêche - saliculture								
Scarcity and depletion of halieutic products	Create optimum conditions to favor the return of species that formerly disappeared from the area			To be determined	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Non compliance with no-fishing areas	Restore cultural practices (reconstruction of temples, periodical sacrifices to divinities, compliances with social taboos			-	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Lake filling up due to the deterioration of artificial spawns (acadjas et Ha)	Look for new fishing techniques and dredge the lake			-	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Use of prohibited fishing gears	Sensitize local populations so that they use authorized fishing gears			-	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Overfishing	Sensitize populations for them to comply with no fishing periods to enable the reproduction of halieutic products			-	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Orientation 2 : Agriculture – Forests Sector								
Loss of soil fertility	Resort to integrated soil fertility management methods			-	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Soil pollution with solid and liquid waste	Build bank protection barriers and install garbage can and public latrines			-	Site village management committee	MPA manageme nt committee	CEDED Townshi p ABE	PM
Cutting of forest trees for firewood	Restoration of sacred forests			-	Site village management	MPA manageme	CEDED Townshi	PM

					committee	nt committee	p ABE	
Under-development of alternative income generating activities (breeding, gardening, processing of local produce)	Encourage rabbit, poultry, pork, sheep and cattle breeding by the group that is already taking care of it Encourage the construction of a fish market			-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Orientation 3 : Culture and Tourism Sector								
Non compliance with customs and social taboos	Restore cultural practices (reconstruction of temples, periodical sacrifices to divinities, compliance with social taboos)			-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Destruction of sacred forests and worship areas				-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Pollution of banks with solid waste (rubber bags, household waste and other waste)	Construction of bank protection barriers and installation of public garbage cans and latrines			-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM
Pollution of water bodies with waste water (domestic water, laundry water, etc...).	Sensitization of populations on the need to preserve water quality			-	Site village management committee	MPA management committee	CEDED-ONG Township ABE	PM

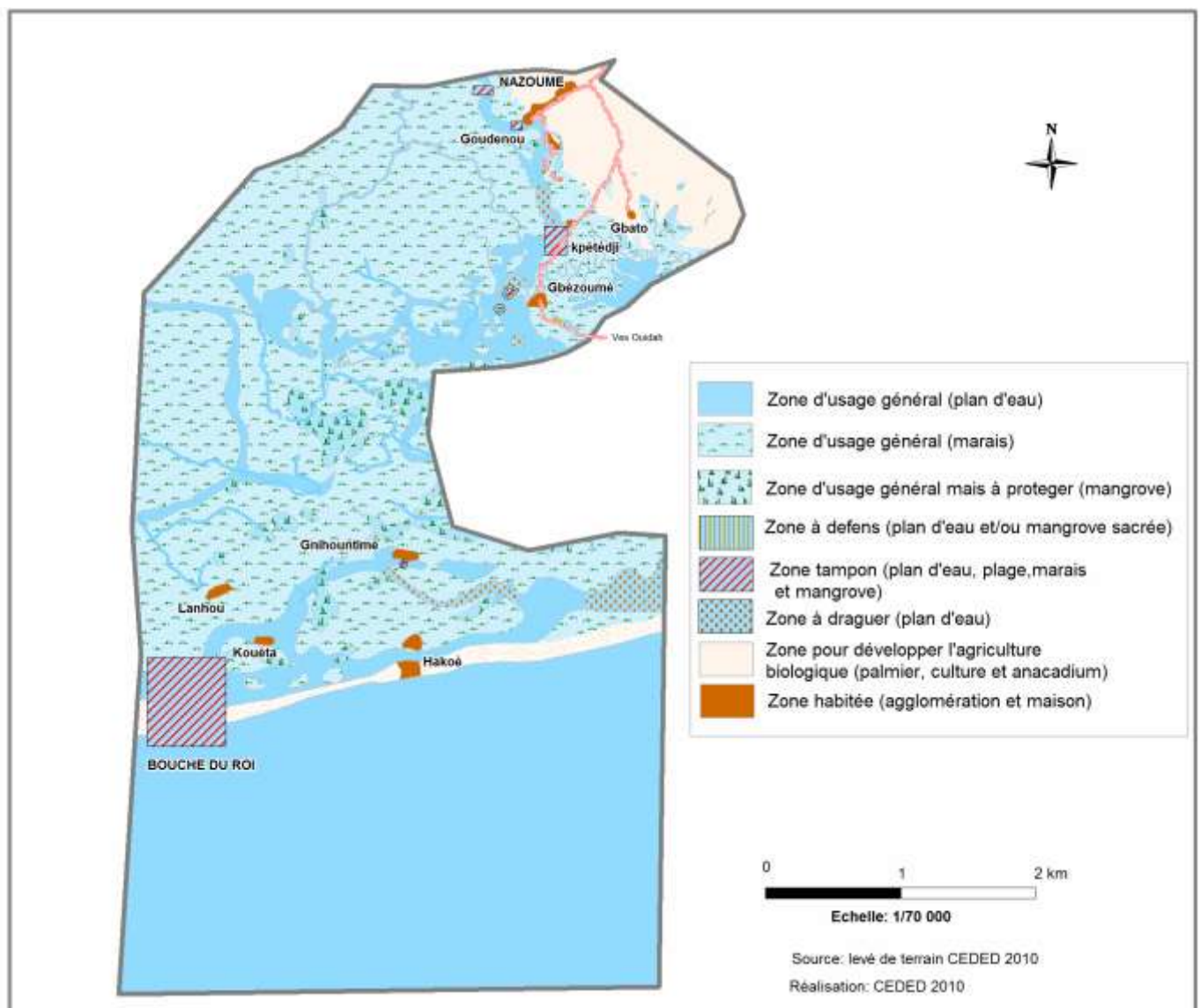
3.3.3.2- Management plan of cross-cutting activities

GENERAL ORGANIZATION AND MANAGEMENT OF ACTIVITIES CROSSCUTTING ALL THREE SECTORS					
ACTIVITIES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	LOCATION (RELEVANT VILLAGE)	SCHEDULE	RESPONSIBILITIES	COUT ESTIMATIF (FCFA)
Train stakeholders in co-management of recreational and tourism areas (marketing)	Bureaus of the management council and village committees trained	All relevant villages		CEDED- ONG Management council Village committees	PM
Organize exchange, experience sharing, and capitalization visits among MPAs	A rotating visit is organized every six months at the level of each MPA Case studies conducted	Each MPA		CEDED-ONG Township ABE	PM
Initiate meetings with the private sector and Tour operators in Benin and at the international level	A multi-actor mechanism that can enable to make the MPA a tourism destination exists	-	-	CEDED- ONG Relevant Townships Relevant Sector Ministries Management committee	PM
Ensure a media coverage of some key activities of the MPAs	Each MPA has a good visibility in the conduct of its key activities	-	-	CEDED-ONG Relevant Townships The news media (TV, newspapers...)	PM
Train stakeholders in co-management and management of tourism and cultural heritage	The various stakeholders are familiar with participatory management tools of cultural and tourism heritage	-	-	CEDED - ONG Consultants Tourism Experts	PM
Organize exchange visits among MPA management committees and village committees	A learning and mutual experience sharing mechanism exists and enables to enrich the process	-	-	CEDED- ONG Other institutions	PM
Develop advertisement and documentaries on the specificities of each MPA	Two shows are presented on the MPA zoning and highlight protected species in the relevant milieu	Eligible MPAs	-	CEDED- ONG Village management committee MPA management committee The news media	PM
Initiate periodical meetings with management committees and bodies at various levels in conformity with regulations	Gouvernance within management bodies is quite transparent	-	-	CEDED- ONG Village management committee MPA management committee	Néant

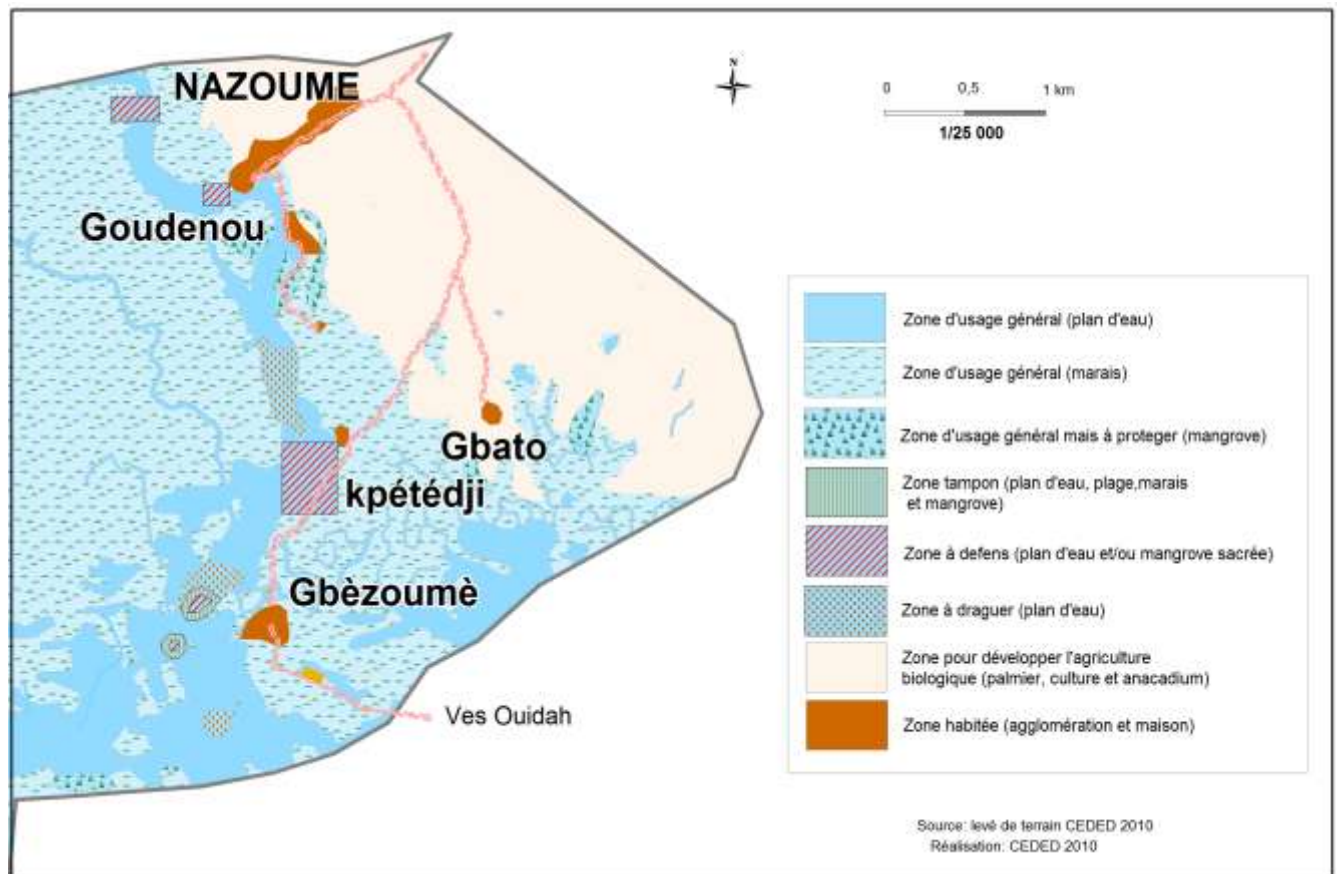
Development of MPA communication and sensitization aids (gadgets, information leaflets, tee-shirts, various posters)	The management of each MPA enjoys good visibility	Eligible MPAs	-	CEDED-ONG Tourism Experts Documentary Journalists Communication specialists	PM
Initiate meetings with the educational and scientific community	The conservation and protection of MPAs becomes a strategic component of environmental education	-	-	Academics, Ecologists CEDED-ONG ERE-specialized institutions	PM
Participate in sub-regional meetings on MPA managers capacity building	MPA managers at the local level are involved in a permanent learning and capacity building process	-	-	CEDED-ONG Experts Regional and international MPA management institutions	PM
Develop a general and sectoral action plan for the management of the four MPAs	A general action plan exists and each MPA has its own specific action plan	The four MPAs and each MPA	-	CEDED-ONG	PM
Identify potential funding sources of protection activities to be undertaken	Potential donors have been identified		-	CEDED-ONG Experts Regional and international MPA management institutions	

3.3.4 ELABORATED ZONING PLANS

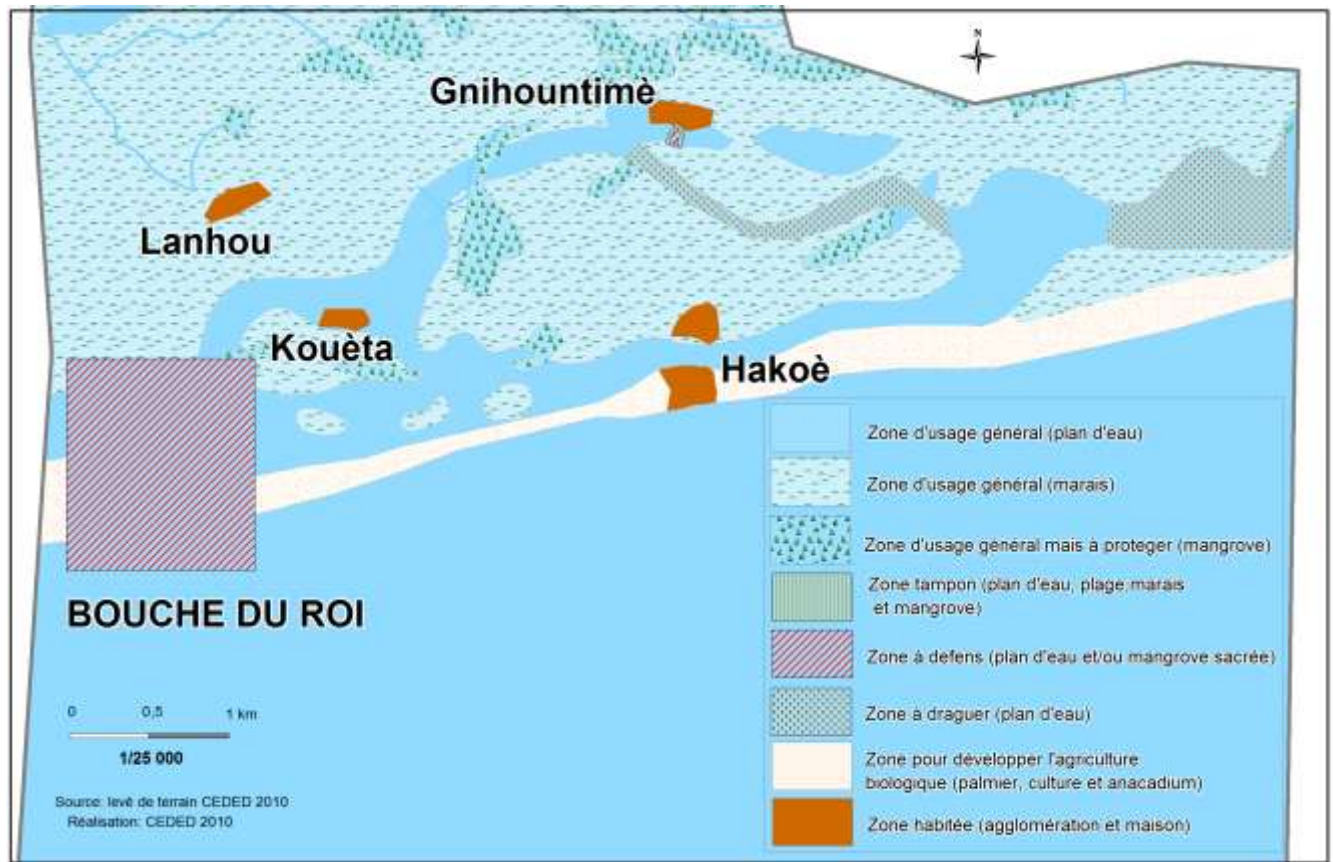
3.3.4.1 ZONING PLAN OF NAZOUME BOUCHE DU ROY SITE



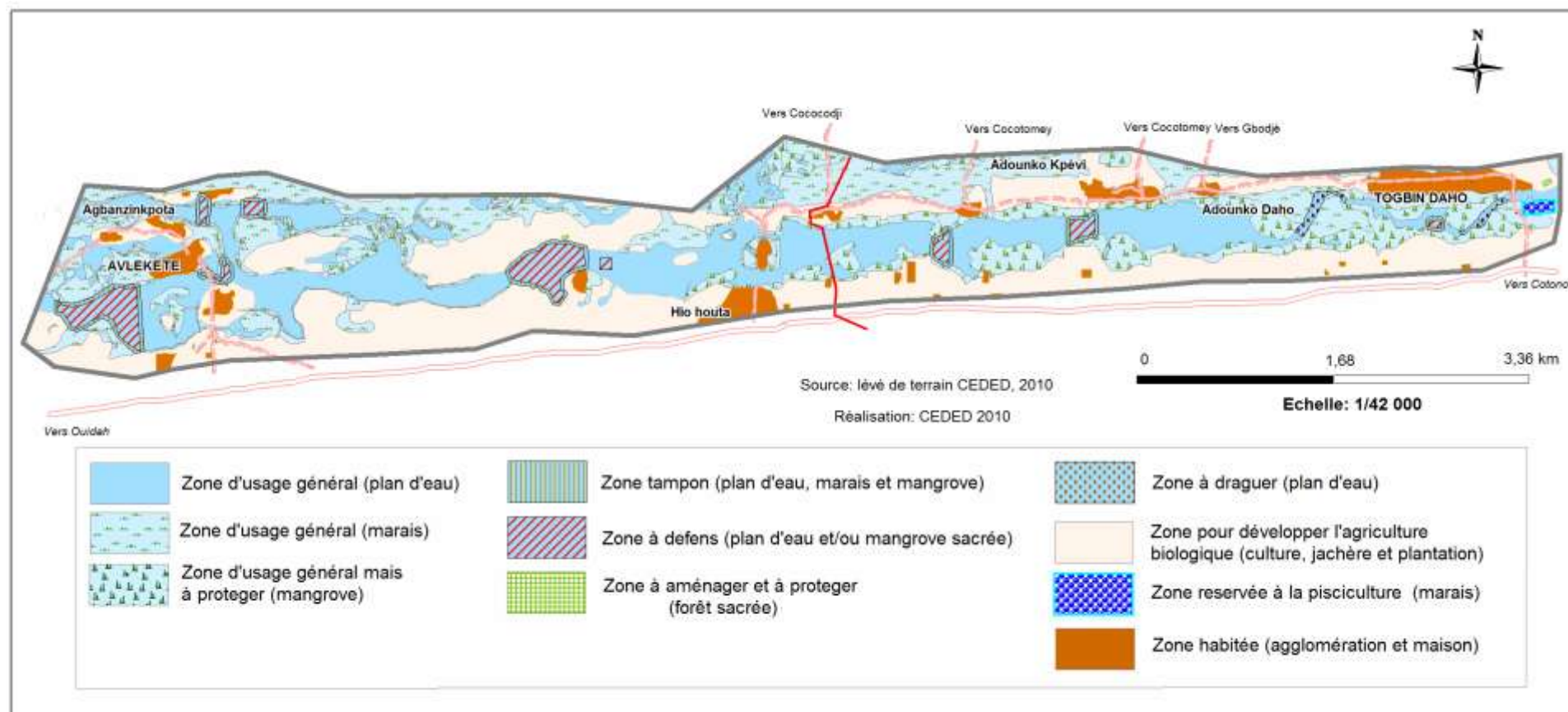
- ZONING PLAN OF NAZOUME BOUCHE DU ROY SITE: sector Nazoumè-Gbèzoumè



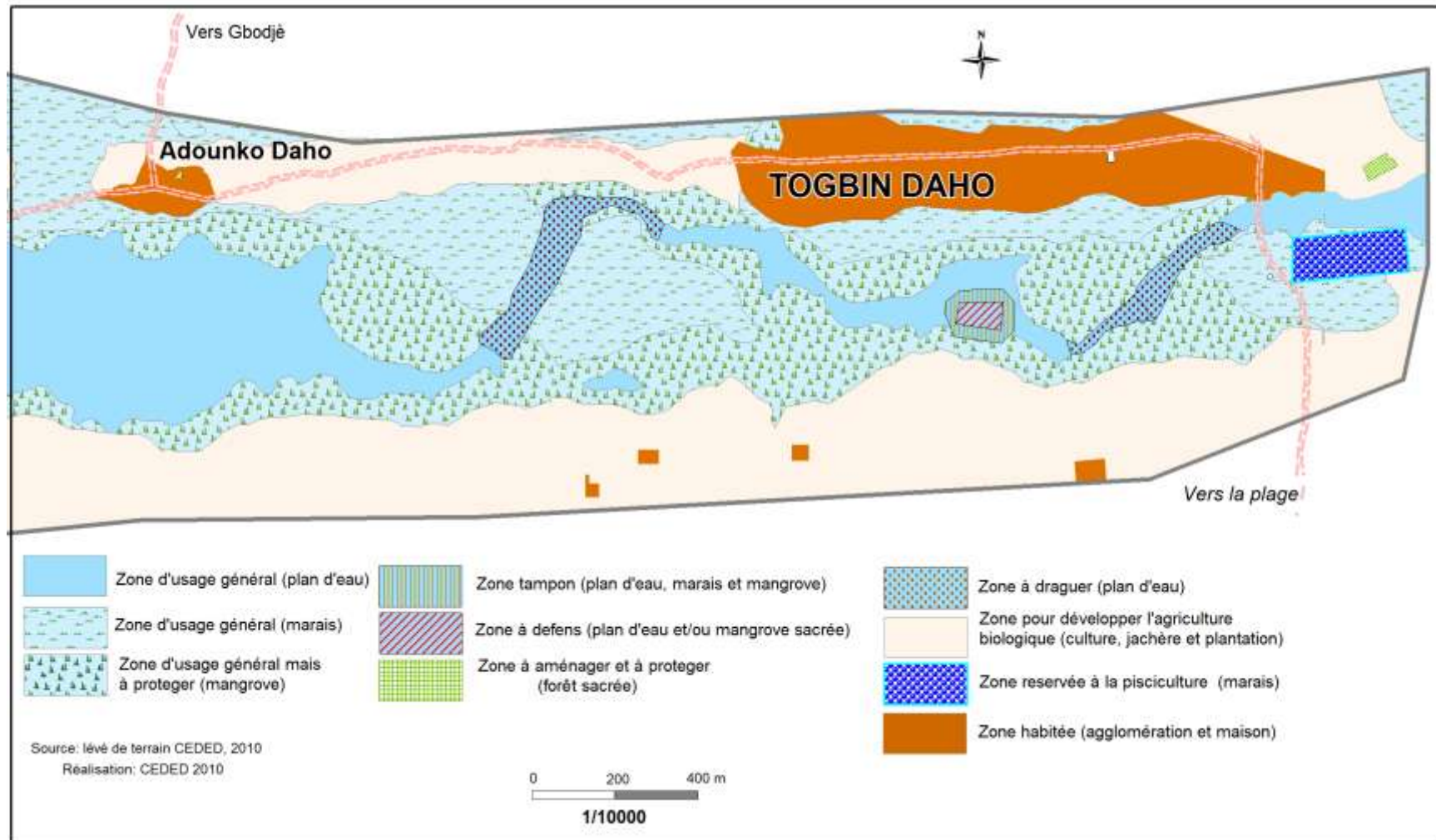
- ZONING PLAN OF NAZOUME BOUCHE DU ROY SITE: sector BOUCHE DU ROY



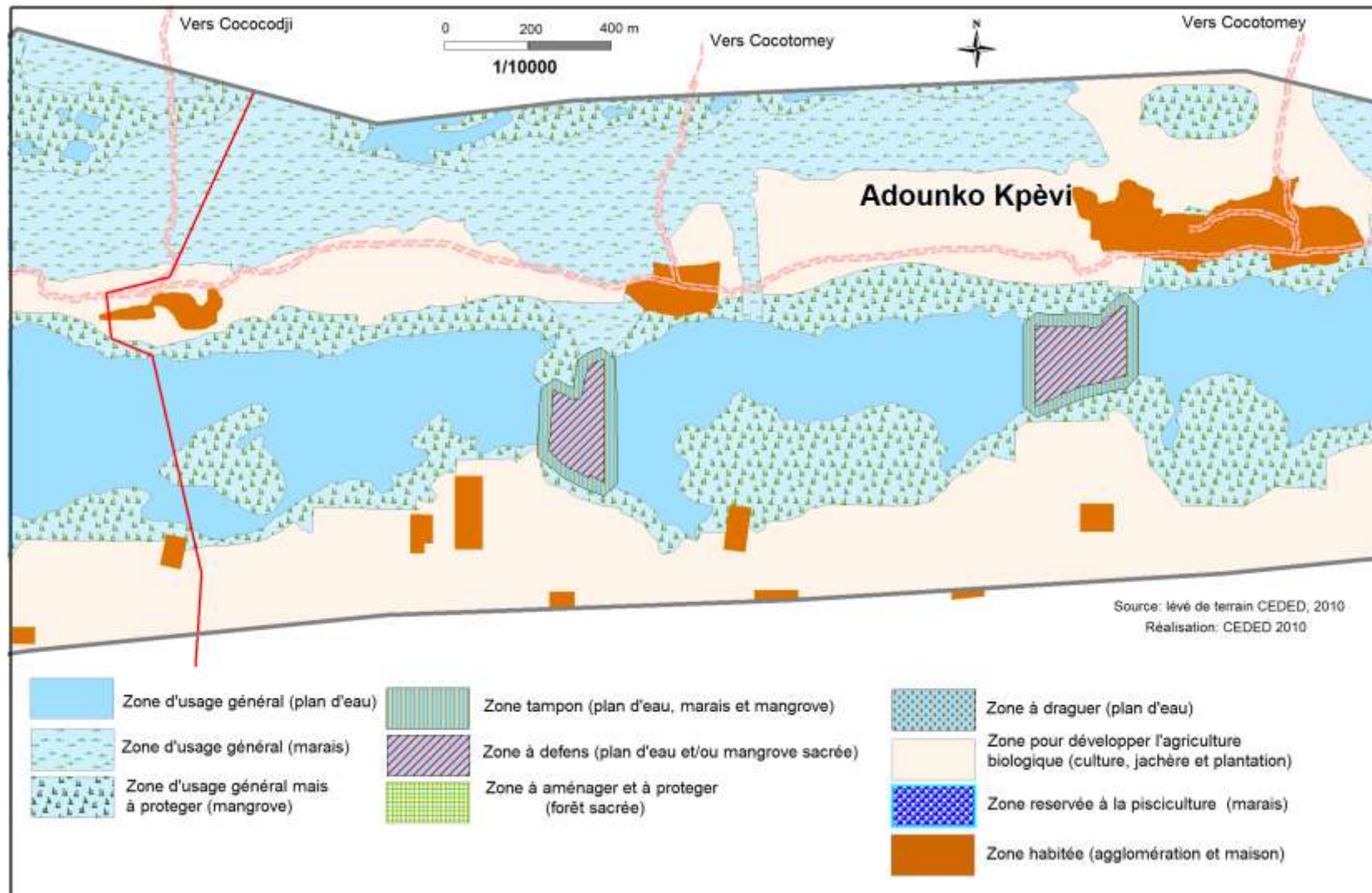
3.3.4.2: ZONING PLAN OF AVLEKETE TOGBIN SITE



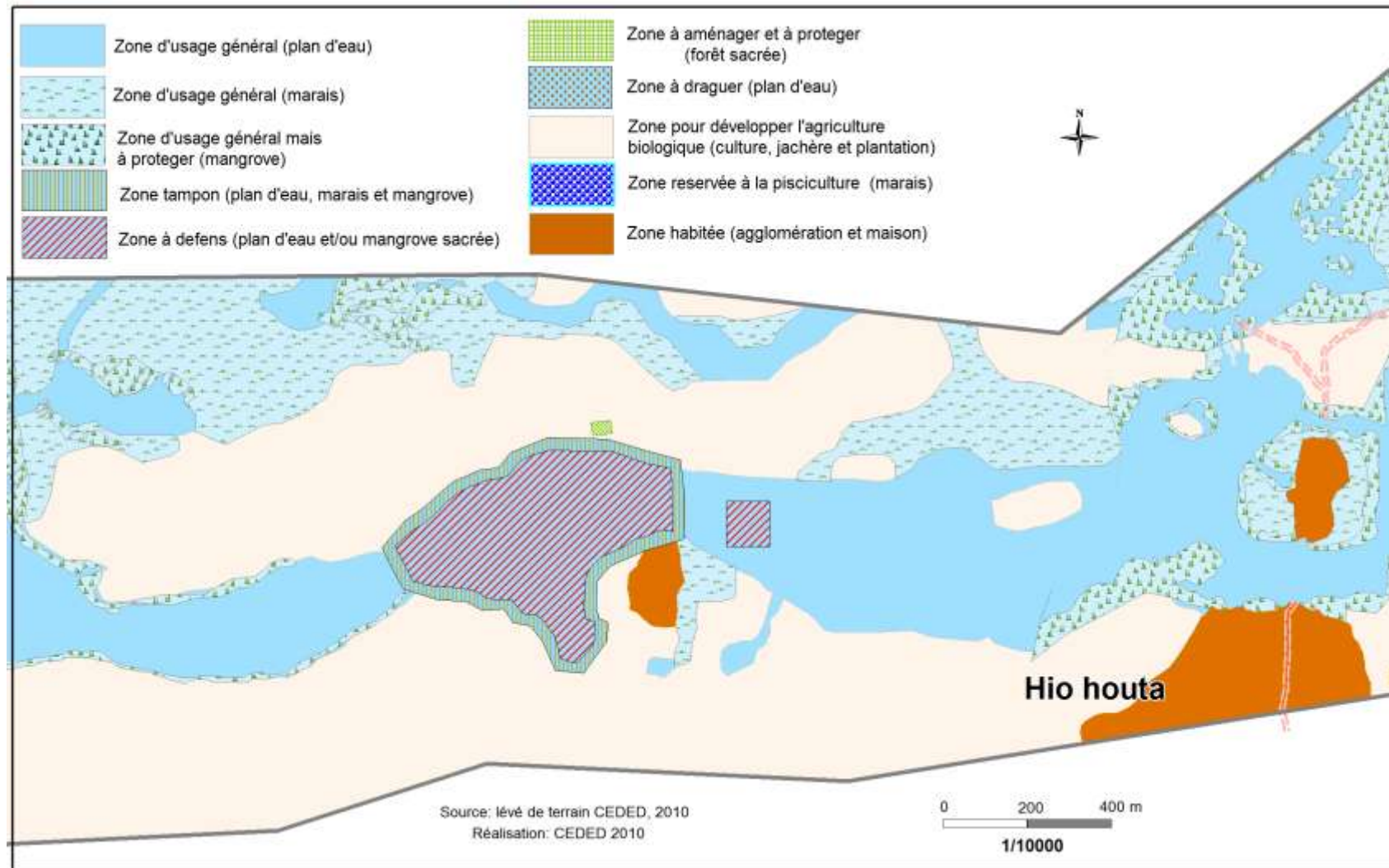
- ZONING PLAN OF AVLEKETE TOGBIN SITE: sector Togbin



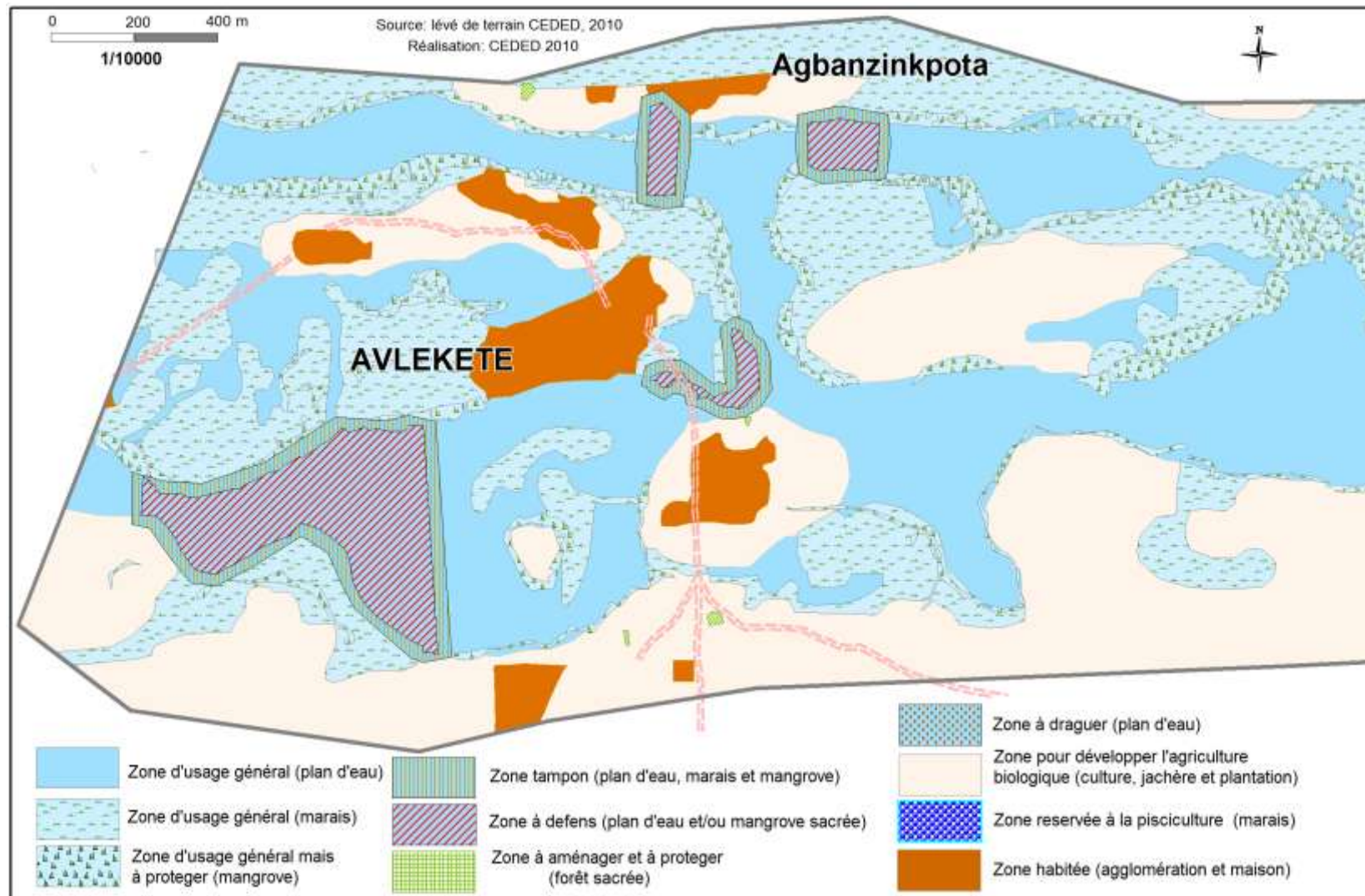
▪ ZONING PLAN OF AVLEKETE TOGBIN SITE: sector Adouanko



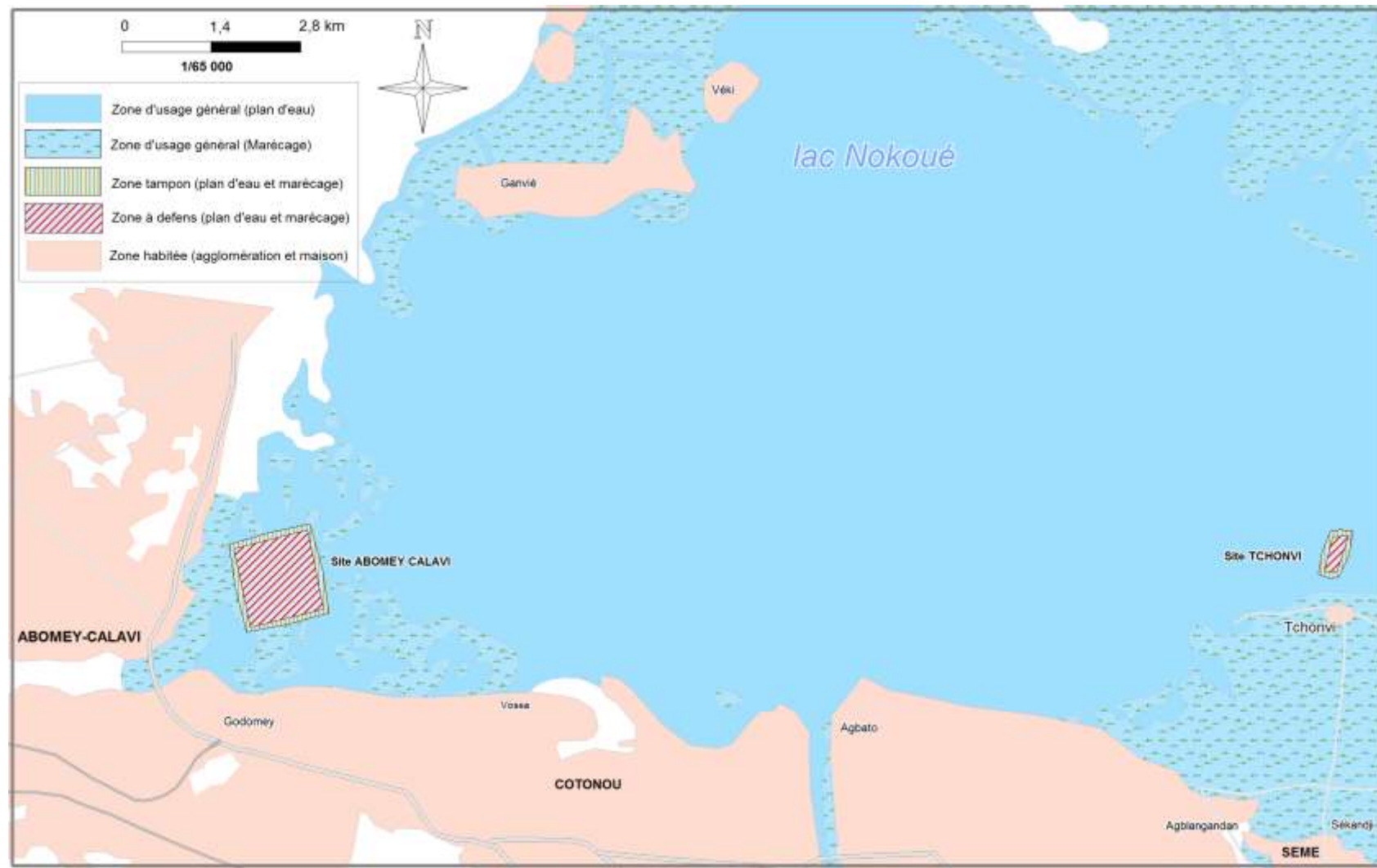
▪ ZONING PLAN OF AVLEKETE TOGBIN SITE: Hio houta



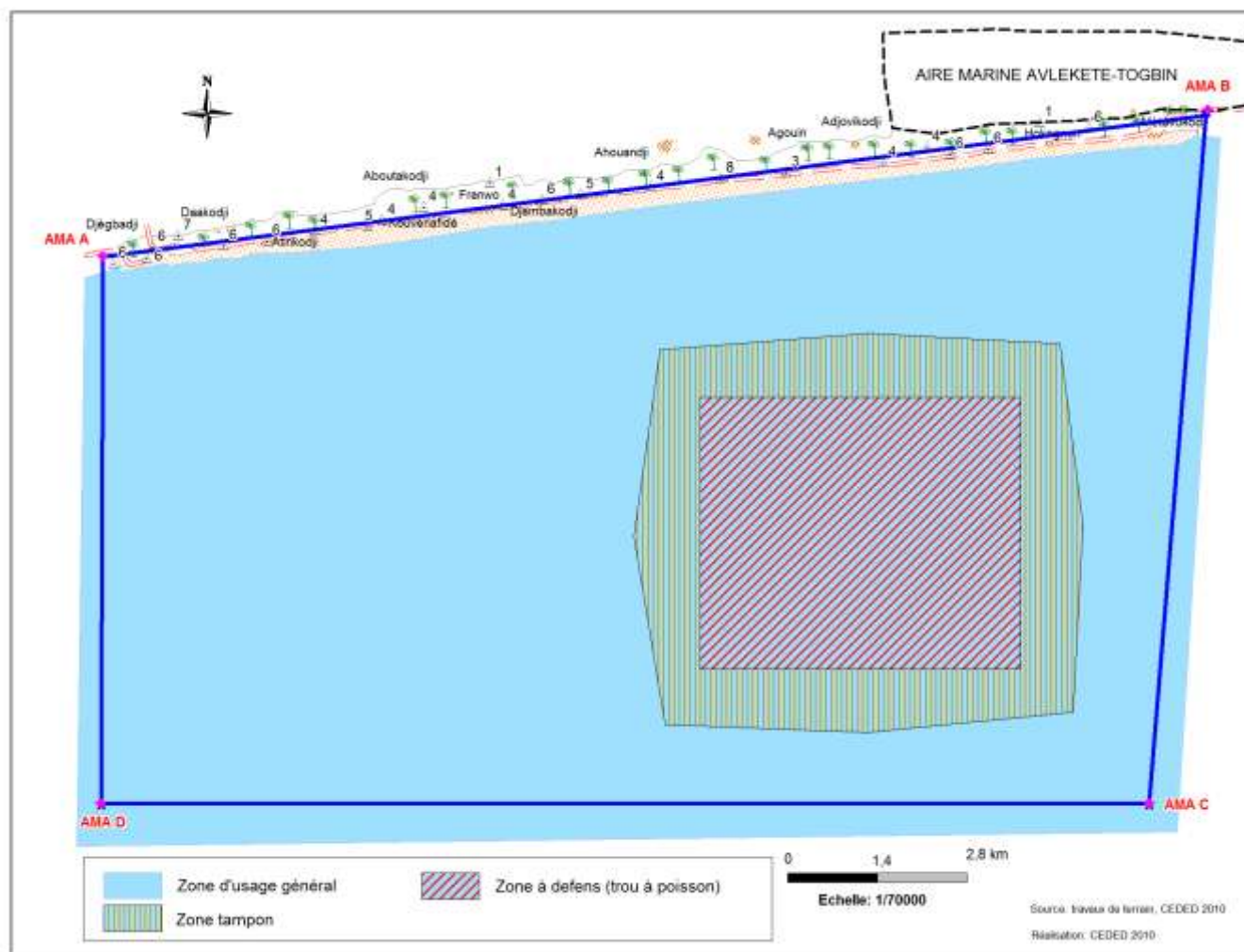
▪ ZONING PLAN OF AVLEKETE TOGBIN SITE: Avlékété



3.3.4.3 ZONING PLAN OF LAKE NOKOUE SITE



3.3.4.4 ZONING PLAN OF AVLEKETE MARINE AREA SITE



Phase N° 4

A large orange arrow pointing downwards, indicating the flow from the phase label to the main title.

3.4 PHYSICAL DEMARCATION AND DELIMITATION OF SITES

3.4.1 NAZOUMÈ-BOUCHE DU ROI SITE

3.4.1.1 Physical limit of Nazoumè-Bouche du Roi site

The geographical coordinates of the 36 points (boundary-marks) delimiting the AMP and the distances between these points are presented in the tables N°3 and 4. Besides, these points are represented on the Figure 1.

The area of the Marine Protected Area Nazoumè-Bouche du Roi is of 9138 hectares.

Tableau 3: Accurate geographical coordinates of the boundary-marks that delimit the site of Nazoumè-Bouche du Roi

Boundary-marks	Longitude	Latitude	Altitude (m)
NB 1	388114.87	702716.617	3.863
NB 2	387943.96	703253.815	7.254
NB 3	386001.69	704711.036	9.634
NB 4	386207.95	704991.588	27.541
NB 5	385626.76	704806.966	2.334
NB 6	385105.99	704858.961	5.615
NB 7	384423.09	704815.653	5.468
NB 8	383422.99	704613.685	3.733
NB 9	382644.79	704627.809	3.409
NB 10	382159.64	704000.343	3.427
NB 11	381601.27	703641.666	1.963
NB 12	380904.03	703398.64	0.15
NB 13	379907.85	702298.4	0.75
NB 14	379245.21	701592.96	0.84
NB 14i	379059.21	698157.505	0.872
NB 14ii	379187.49	696262.035	0.858
NB 14iii	379138.89	695593.47	1.672
NB 15	378852.92	691289.69	0
NB 16	386841.03	691376.54	0
NB 17	386936.3	697007.438	7.932
NB 18	386951.98	698000.42	6.798
NB 19	386260.13	698051.263	0.04
NB 19i	384936.18	697799.23	1.338
NB 20	383805.19	698153.01	2.12
NB 20i	383438.01	699501.697	2.663
NB 21	383527.69	700421.819	3.933
NB 22	383846.98	700442.947	3.44
NB 23	384215.24	700470.488	6.293
NB 24	384667.14	700499.976	5.772
NB 25	385112.35	700580.843	4.194
NB 26	385482.58	700694.143	4.302
NB 27	385817.79	700878.324	3.402
NB 28	386055.04	701205.935	10.496
NB 29	386369.31	701366.311	4.624
NB 30	386747.43	701698.207	7.974
NB 31	387939.18	702332.325	4.378

Tableau 4: Distances between the boundary-marks delimiting of Nazoumè-Bouche du Roi site

Interval between boundary-marks	Distances between boundary-marks (kilometers)
NB 1-NB 2	0.569
NB 2-NB 3	2.432
NB 3-NB 4	0.349
NB 4-NB 5	0.610
NB 5-NB 6	0.523
NB 6-NB 7	0.684
NB 7-NB 8	1.020
NB 8-NB 9	0.778
NB 9-NB 10	0.796
NB 10-NB 11	0.664
NB 11-NB 12	0.738
NB 12-NB 13	1.488
NB 13-NB 14	0.970
NB 14-NB 14i	3.460
NB 14i-NB 14ii	1.911
NB 14ii-NB 14iii	0.674
NB 14iii-NB 15	4.34
NB 15-NB 16	7.98
NB 16-NB 17	5.56
NB 17-NB 18	1.00
NB 18-NB 19	0.69
NB 19-NB 19i	1.35
NB 19i-NB 20	1.18
NB 20-NB 20i	1.405
NB 20i-NB 21	0.93
NB 21-NB 22	0.320
NB 22-NB 23	0.369
NB 23-NB 24	0.452
NB 24-NB 25	0.452
NB 25-NB 26	0.387
NB 26-NB 27	0.383
NB 27-NB 28	0.406
NB 28-NB 29	0.353
NB 29-NB 30	0.504
NB 30-NB 31	1.351
NB 31-NB 1	0.424

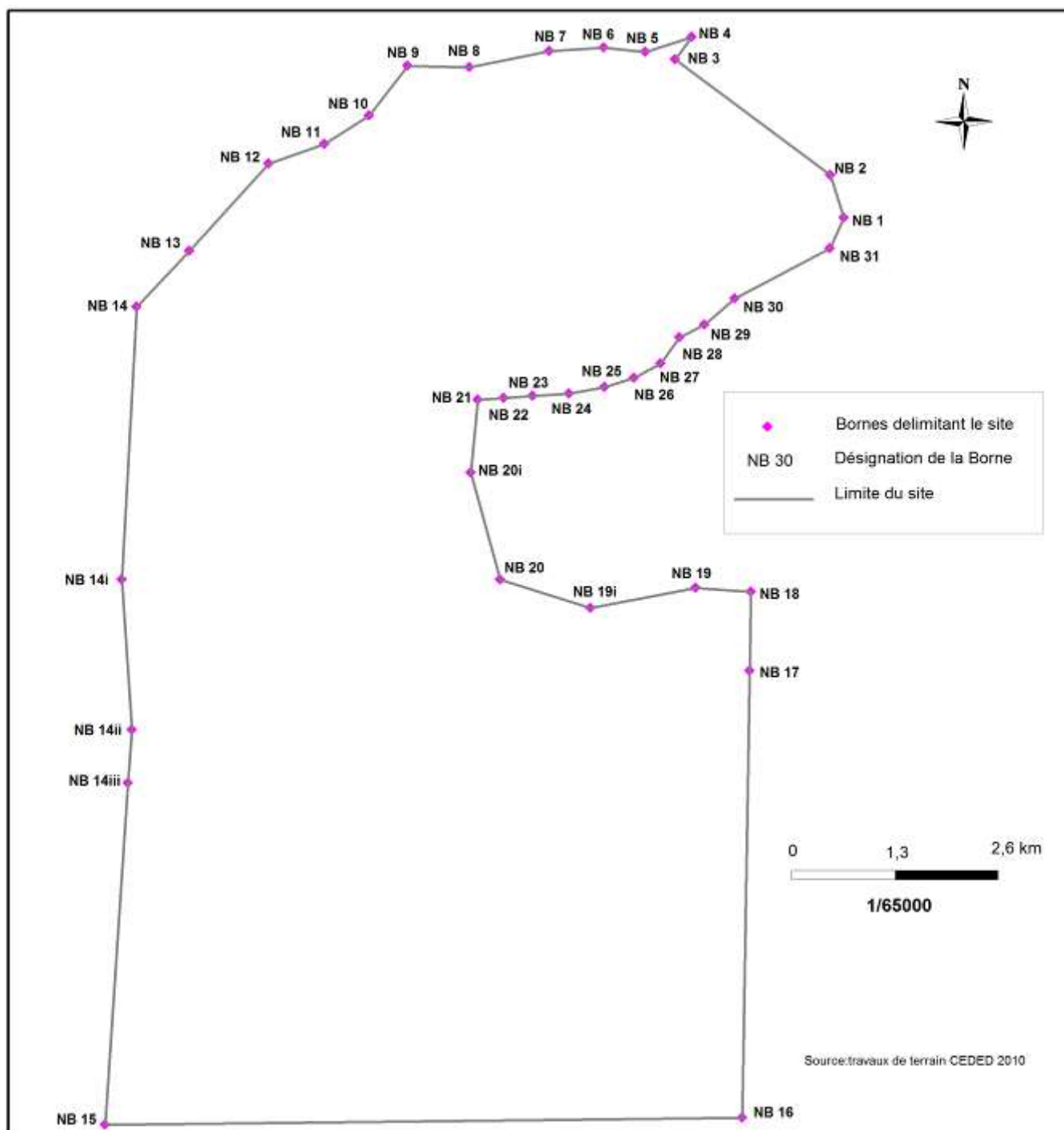


Figure 1: Presentation of the limit of the Nazoumè-Bouche du Roi Marine Protected Area

3.4.1.2 Cartography of Nazoumè-Bouche du Roi site

The site map and its accurate limit are presented in Figure 2.

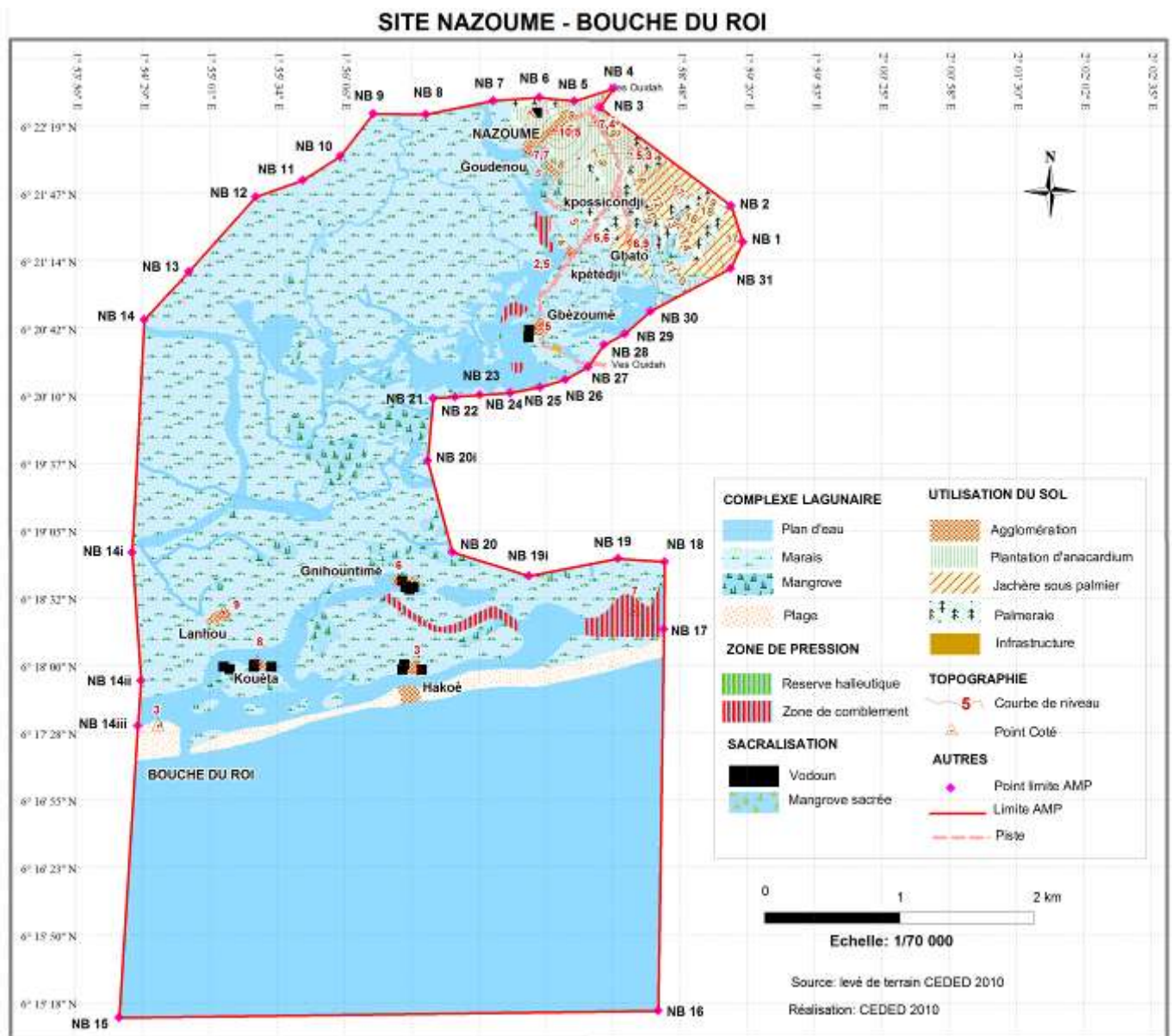


Figure 2: The Marine Protected Area of Nazoumè-Bouche du Roi with its accurate limit

3.4.2 AVLÉKÉTÉ-TOGBIN SITE

3.4.2.1 Physical limit of Avlékété - Togbin site

The geographical coordinates of the 34 points (boundary-marks) delimiting the AMP and the distances between these points are presented in the tables N°5 and 6. Besides, these points are represented on the Figure 3.

The area of the Marine Protected Area Avlékété-Togbin is 1576 hectares.

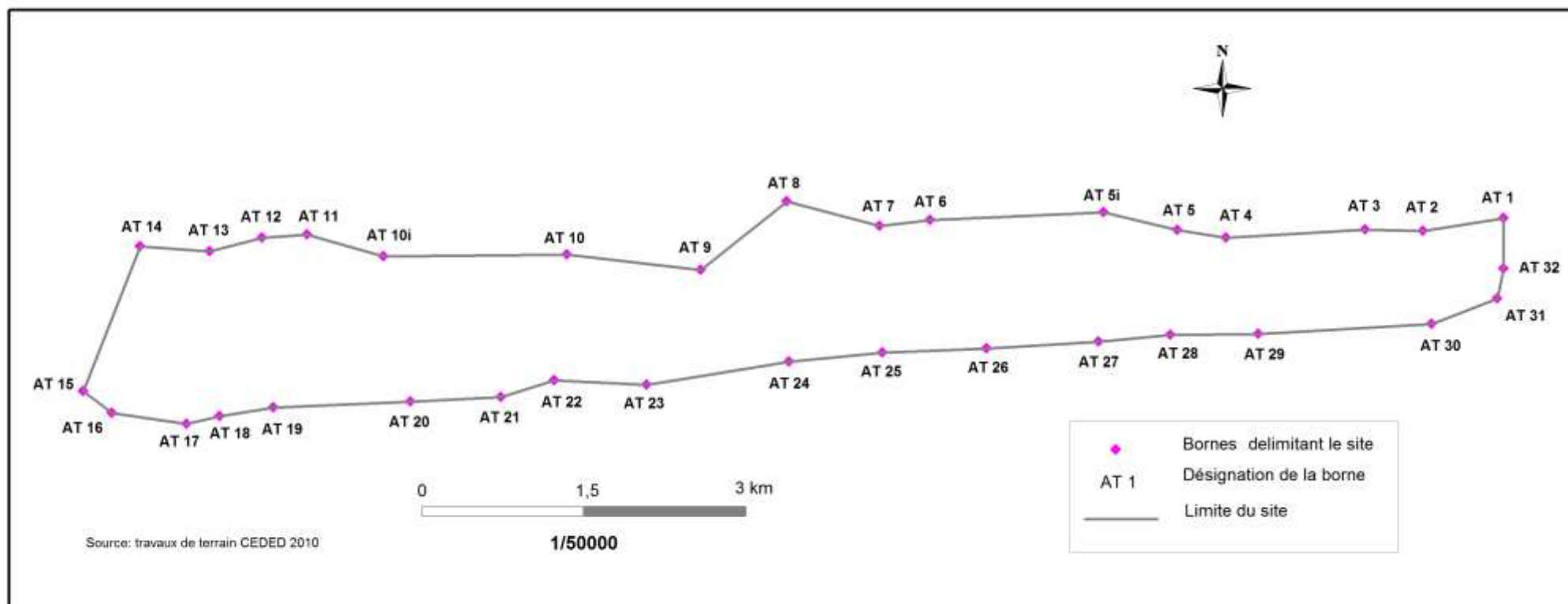
Tableau 5: Accurate geographical coordinates of the boundary-marks that delimit the site of Avlékété - Togbin

Points	Longitude	Latitude	Altitude
AT 1	423776.864	702683.708	6.623
AT 2	423030.844	702567.765	5.105
AT 3	422492.779	702581.817	6.267
AT 4	421197.427	702505.77	5.627
AT 5	420746.668	702576.28	5.277
AT 5i	420061.778	702742.797	2.139
AT 6	418448.036	702670.801	3.393
AT 7	417979.981	702615.528	4.119
AT 8	417115.421	702843.998	2.461
AT 9	416317.682	702205.151	3.004
AT 10	415073.433	702345.458	3.671
AT 10i	413369.905	702330.786	3.232
AT 11	412659.145	702535.464	5.916
AT 12	412240.067	702505.277	3.184
AT 13	411752.234	702378.112	5.309
AT 14	411105.978	702424.626	2.572
AT 15	410575.291	701074.675	3.746
AT 16	410844.232	700869.506	4.044
AT 17	411536.444	700770.101	9.173
AT 18	411847.413	700843.654	10.663
AT 19	412346.441	700922.742	9.974
AT 20	413618.369	700975.779	8.933
AT 21	414461.21	701018.147	7.717
AT 22	414956.572	701177.441	8.042
AT 23	415814.126	701135.477	6.951
AT 24	417137.785	701347.659	6.64
AT 25	418003.324	701433.892	6.832
AT 26	418973.498	701470.141	8.66
AT 27	420015.404	701533.531	11.18
AT 28	420681.282	701600.616	6.558
AT 29	421498.947	701607.725	4.744
AT 30	423109.04	701699.421	11.094
AT 31	423717.952	701938.318	11.878
AT 32	423777.157	702215.825	6.328

Tableau 6: Distances between the boundary-marks delimiting Avlékété-Togbin site

Interval between boundary-marks	Distances between boundary-marks (kilometers)
AT 1-AT 2	0.754
AT 2-AT 3	0.537
AT 3-AT 4	1.297
AT 4-AT 5	0.455
AT 5-AT 5i	0.704
AT 5i-AT 6	1.614
AT 6-AT 7	0.471
AT 7-AT 8	0.894
AT 8-AT 9	1.024
AT 9-AT 10	1.251
AT 10-AT 10i	1.702
AT 10i-AT 11	0.739
AT 11-AT 12	0.420
AT 12-AT 13	0.504
AT 13-AT 14	0.647
AT 14-AT 15	1.458
AT 15-AT 16	0.339
AT 16-AT 17	0.669
AT 17-AT 18	0.319
AT 18-AT 19	0.505
AT 19-AT 20	1.272
AT 20-AT 21	0.843
AT 21-AT 22	0.520
AT 22-AT 23	0.858
AT 23-AT 24	1.340
AT 24-AT 25	0.869
AT 25-AT 26	0.970
AT 26-AT 27	1.043
AT 27-AT 28	0.669
AT 28-AT 29	0.817
AT 29-AT 30	1.611
AT 30-AT 31	0.654
AT 31-AT 32	0.285
AT 32-AT 1	0.471

Figure 3: Presentation of the Marine Protected Area of Avlékété-Togbin's limit



3.4.2.2 Cartography of Avlékété-Togbin site

The map of the site and its limit are presented in Figure 4.

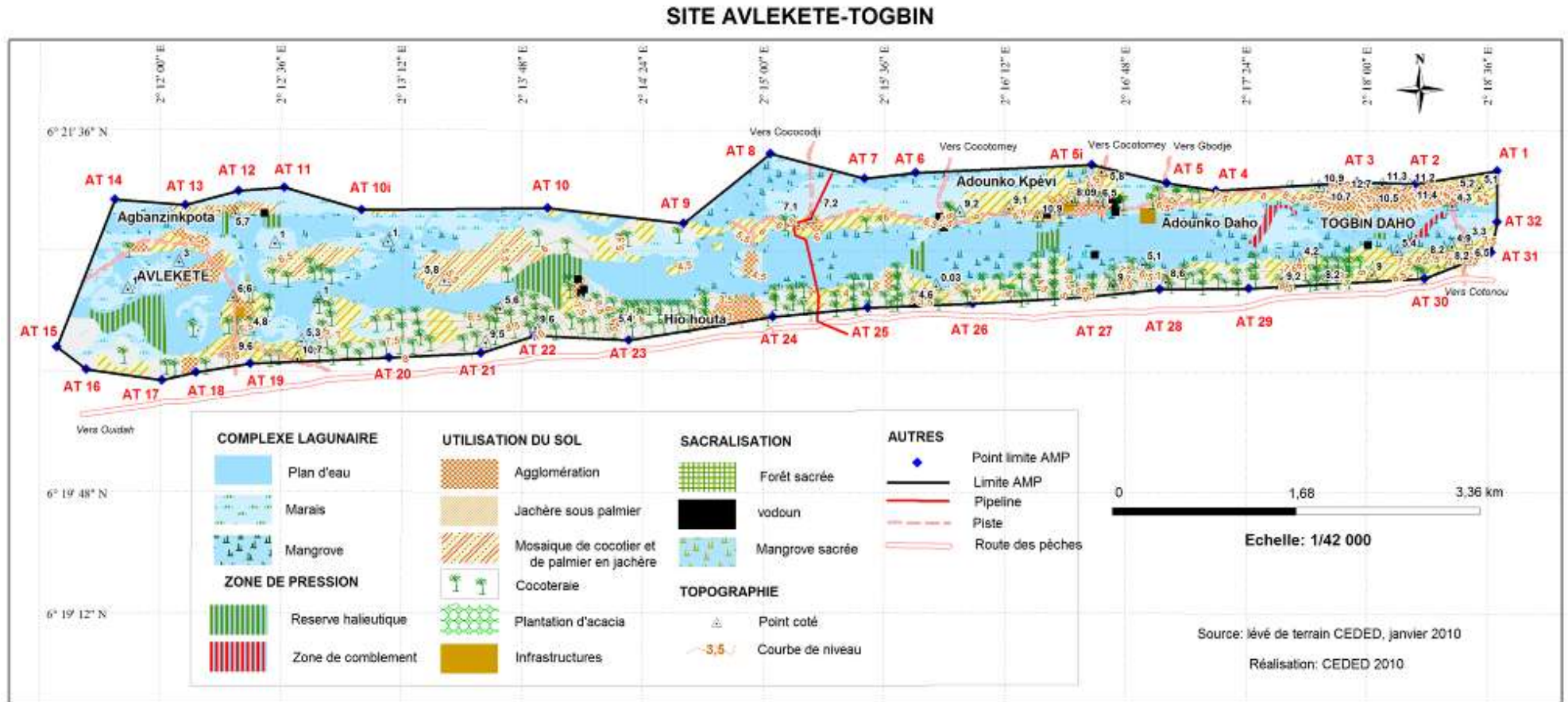


Figure 4: MPA Avlékété -Togbin showing its accurate limit

3.4.3 LAKE NOKOUE SITE

3.4.3.1 Lake Nokoué Site

Physical limit of Lake Nokoué site

The geographical coordinates of the 8 points (boundary-marks) delimiting the PMA and the distances between these points are presented in the tables 7 and 8.

The area of the Marine Protected Area of the lake Nokoué is 143.5 hectares for Godomey site and of 12.20 hectares for Tchonvi site.

Table 7: Accurate geographical coordinates of the boundary-marks that delimit the Lake Nokoué site

Points	Longitude	Latitude
Lake Nokoué : Godomey		
A	428579.97	709093.95
B	429687.03	709400.00
C	429931.02	708171.04
D	428794.01	707895.97
Lake Nokoué : Tchonvi		
E	445642.94	709274.01
F	445895.98	709285.05
G	445710.99	708738.01
H	445513.04	708733.00

Table 8: distances between boundary-marks that delimit the Lake Nokoué site

Interval between boundary-marks	Distances between boundary-marks (kilometers)
Lake Nokoué: Godomey	
A-B	1.149
B-C	1.260
C-D	1.169
D-E	1.224
Lake Nokoué: Tchonvi	
E-F	0.252
F-G	0.580
G-H	0.197
H-E	0.559

3.4.3.2. Cartography of the lake Nokoué site

The map of the site and the accurate limit are presented in figures 5 and 6.

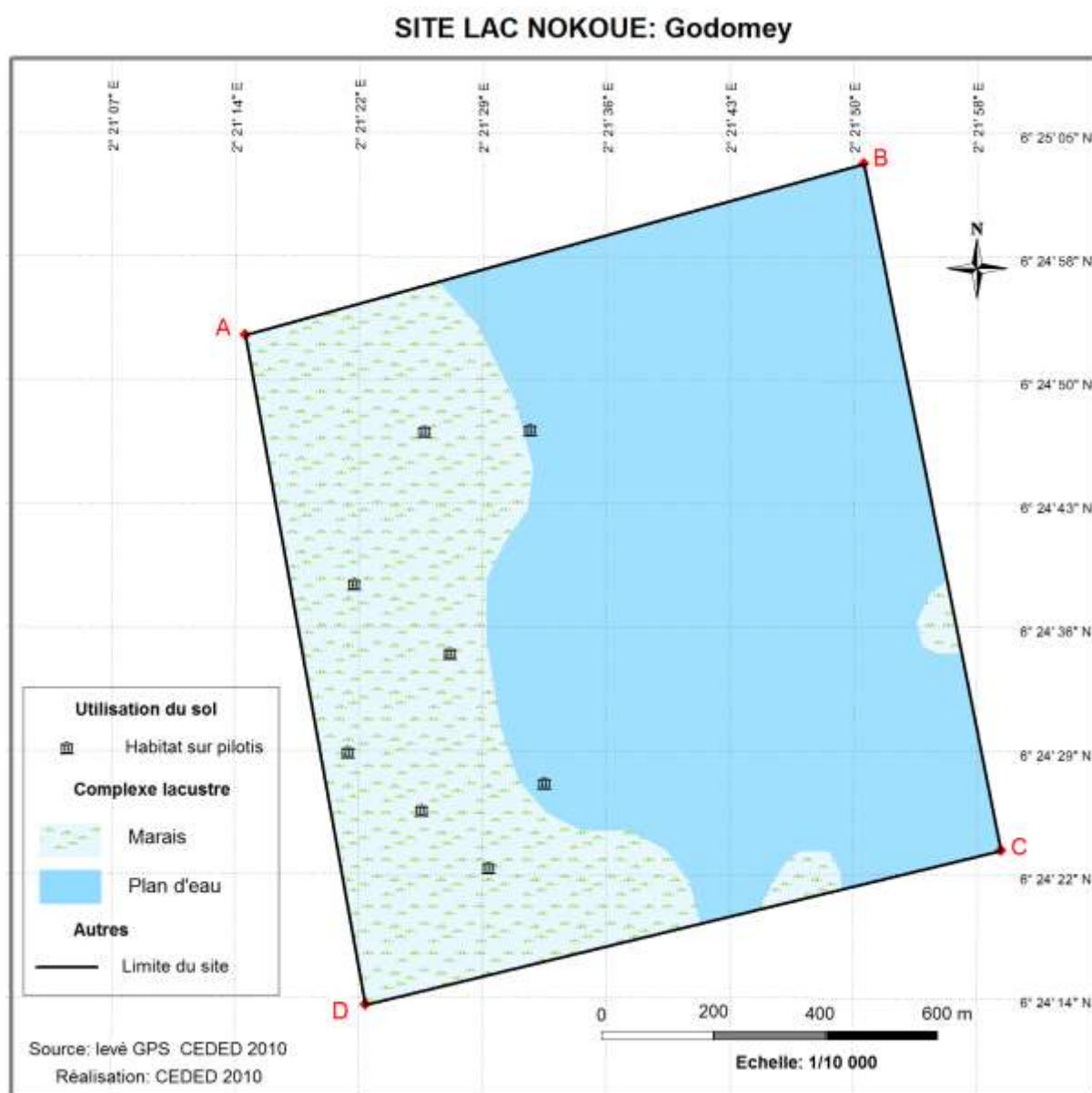


Figure 5: PMA Lake Nokoué: Godomey with the accurate limit

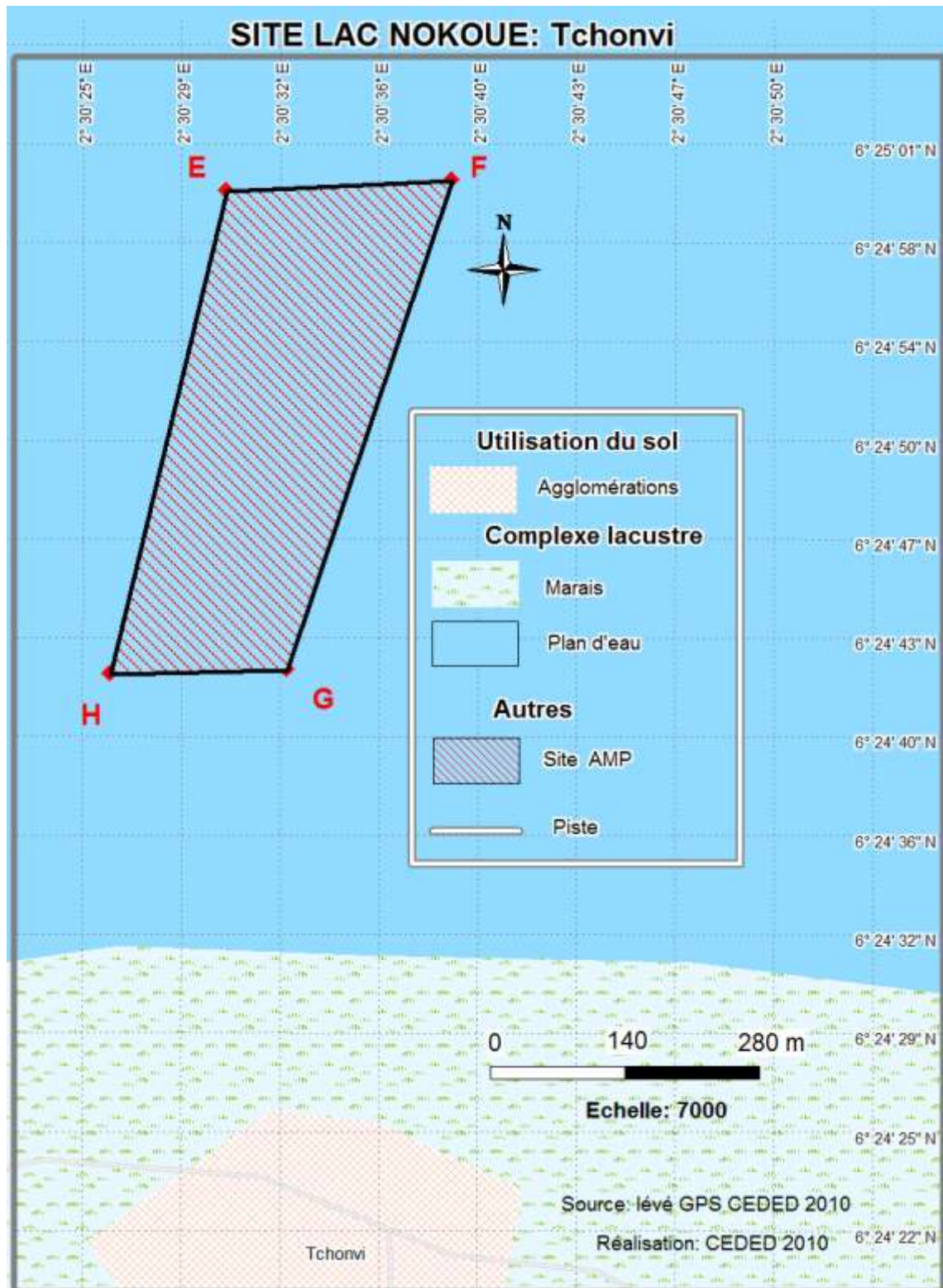


Figure 6: PMA Lake Nokoué - Tchonvi with the accurate limit

3.4.4 AVLEKETE MARINE AREA SITE

3.4.4.1 Avlékété Marine Area Site

Physical limit of Avlékété Marine Area site

The geographical coordinates of the 4 points (boundary-marks) delimiting the PMA and the distances between these points are presented in tables 9 and 10. Besides, these points are represented on figure 7.

The area of Avlékété Marine Area is **16010 hectares**.

Table 9: Accurate geographical coordinates of the boundary-marks that delimit Avlékété Marine Area site

Points	Longitude	Latitude	Altitude (m)
AMA A	398603.235	698861.311	5.383
AMA B	415714.37	701059.449	8.356
AMA C	414822.34	690380.41	0.00
AMA D	398564.25	690375.83	0.00

Table 10: distances between boundary-marks that delimit Avlékété Marine Area site

Interval between boundary-marks	Distances between boundary-marks (kilometers)
AMA A- AMA B	17.24
AMA B- AMA C	10.78
AMA C- AMA D	16.25
AMA D- AMA A	8.53

3.4.4.2. Cartography of the site Avlékété Marine Area

The map of the site and the accurate limit are presented in the figure 7.

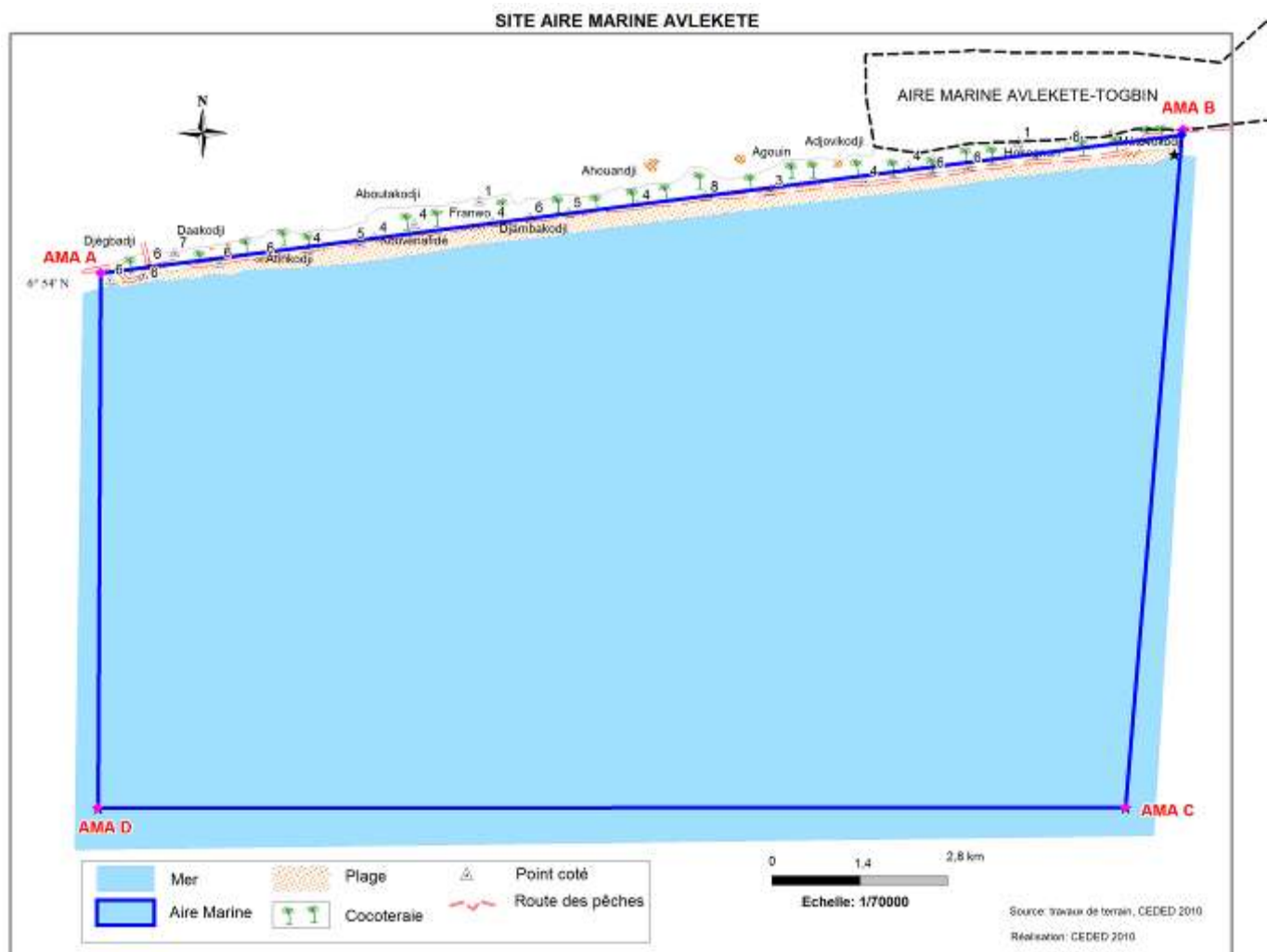


Figure 7: Avlékété Marine Area with the exact limit



Phase N° 5

**3.5 The Protected Marine Areas
actions plan in account of the
year 2011**

3.5.1. HUMAN COMMUNITIES DEVELOPMENT ACTIVITIES

3.5.1.1 NAZOUMÈ-BOUCHE DU ROI SITE

1. Village Avlo Management committee

N°.	ACTIVITIES	SUB-ACTIVITES	NATURE OF EXPENSES	UNITY	QUANTITY	UNIT PRICE	AMOUNT FCFA
1.1	PROTECTION OF FISH TRAP HOLES IN THREE VILLAGES (AVLO-PLAGE, AVLO VILLAGE AND HOKOUE)	Protection of a fish trap hole estimated to about 251.2m of perimeter in Avlo-Plage (Avlo Beach)					0
		Purchasing of 250 bamboos		bamboo	2000	250	500 000
		Transportation of bamboos (lading/unloading), vehicle renting, Purchase of fuel for boat	Transportation		Outright	100 000	100 000
		Purchasing of two cloths percales pieces (black and white for pickets marking)	Inputs		2	10 000	20 000
		Ritual "Ohitô" for information and sensitization of communities	Information, Education & Communication (IEC)		Outright	100 000	100 000
		Worker for the implantation of bamboos	Perdiem		Outright	100 000	100 000
		Protection of a fish trap hole estimated to about 250m of perimeter in Avlo-Plage					0
		Manual dredging of the selected perimeter (interview of 50 people during 3 days of work)	Perdiem	day	3	150 000	450 000
		Purchase of barbed wire for protection of the fish trap hole	Equipments	Roller	3	30 000	90 000
		Protection of a fish trap hole of 30m/15m i.e. 90m of perimeter in Hokouè (Gnihoutimè)			Outright	60 000	60 000
		Organization of a ritual of the activity' sensitization and starting	IEC		Outright	100 000	100 000
		Total sub activity 1.1					1520000

1.2	CREATION OF FISH PONDS IN THE 6 VILLAGES OF THE DISTRICT OF AVLO	Creation and running of 6 fish ponds of dimension (60m+30m) x 2 in the level of the six villages (Avlo-plage; Avlo-village, Hokouè; Allongo; Kouéta etc.)					0
		Maintenance charges of 20 workers per village and during 10 days of work for the construction of a pair of ponds		H/J	6	800 000	4 800 000
		Total sub-activity 1.2					4 800 000
1.3	AWARENESS ON THE GOOD PRACTICES IN FISHNING MATTER	Renting of small boats	Transportation		PM	PM	0
		Purchasing of 30 litres of fuel per session	Transportation		4	12 000	48 000
		Organization of a radio broadcast for an AMP per quarter	IEC		4	25 000	100 000
		Catering of participants (forfeit per session)	Perdiem		4	15 000	60 000
		Total sub-activity 1.3					208 000
1.4	CREATION AND PLANNING OF RECREATING AND TOURIST SPACES	Realization of a reference survey on the tourist marketing of the site	Survey		Forfeit	3 000000	3 000 000
		Organization of advocacies to support the development of the locality	Communication		Forfeit	Forfeit	500 000
		Total sub-activity 1.4					3 500 000
1.5	STABILIZATION OF THE MOUTH	Initiate some advocacy actions to the MEPN and to the diaspora for the organization of strategic reflections about the mouth	Workshop/meeti ng		Forfeit	300 000	600 000
		Total sub-activity 1.5					600 000
Sub-total 1: Management Committee of Avlo							10 028 000

2. Village Nazoumè Management Committee

2.1	FIGHT AGAINST THE OVER-FISHING IN THE LAGOON BY THE PROMOTION OF THE GARDENING AT THE LEVEL OF FOUR LOCAL GROUPS	Boring (purchase of hoses + splice) and facilities at the level of each group			4	470000	1880000
		Purchase of two motor-pumps per group	Equipment		8	190000	1520000
		Purchases of 1000 specific input bags/ha (dung of cows, herbs, ash...) per group	Inputs		4	100000	400000
		four (4) watering-cans per group	Equipment		8	3000	24000
		Purchase of six (6) rakes per group	Equipment		24	3000	72000
		Purchase of six (6) machetes per group	Equipment		24	3000	72000
		Purchase of six (6) wheels per group	Equipment		24	1500	36000
		Purchase of two (2) sprayers per group	Equipment		8	45000	360000
		Purchase of two (2) wheelbarrows per group	Equipment		8	20000	160000
		Total sub-activity 2.1					4524000
2.2	SUPPORT TO THREE GROUPS FOR THE LOCAL SOAP PRODUCTION	Purchase of 4 plastic bowls for each group	Equipment		12	120000	120000
		(Litres of oil for 1000 pieces of soap for every selected group) x 3	Inputs		200	480000	480000
		Provision in sodium carbonate for 1000 soap pieces	Inputs	kg	4,5	90000	90000
		(Products HCH for 200L)			3	1000	3000
		6 pans at the rate of two for every group	Equipment		6	15000	90000
		12 empty cans at the rate of four per group	Equipment		12	300	3600
		12 rackets at the rate of four per group	Equipment		12	1000	12000
		Total sub -activity 2.2					798600

2.3	PROTECTION OF ZONES IN DEFENCE	Protection of the zone Vénavinou in Avlékété						
		Purchase of 800 bamboos	Buoying		800	300	240000	
		Transportation of bamboos	Transportation		forfeit	40000	40000	
		Purchase of 10 kg of tips	Equipment	kg	10	800	8000	
		Hand work	Perdiem		forfeit	60000	60000	
		Making sacred of the defense zone	Protection		forfeit	125000	125000	
		Total sub -activity 2.3						473000
2.4	FISH BREEDING IN FRESH WATER (CREATION OF 4 PONDS BY REASON OF TWO IN NAZOUME AND ONE FOR EACH OF THE TWO HAMLETS	Construction of the product (20m x 7m) x 4			4	70000	280000	
		Purchase of 300 alevins for every village	Inputs		1200	120000	120000	
2.5		Total sub activity 2.4						400000
		Training of the groups in cooperative management	Training		forfeit	forfeit	50000	
		Sub-total 2: Management committee of Nazoumè						6 245 600

3. Village Gbèzoumè management Commitee

3.1	IMPLEMENT OF A SPAWNING-GROUND IN AVLEKETE "AVLEKETETI"	Purchase of bamboos of dyes	Equipment		300	1000	300000
		Transportation of bamboos	Transportation		forfeit	75000	75000
		Purchase of tips of 10 kg	Equipment	kg	10	850	85000
		Hand work (maintenance of workers)	Perdiem		forfeit	50000	50000
		Total sub-activity 3.1					
3.2	BARRICADE OF THE FETISH FOREST OF LOKODJI	Purchase of bamboos of dyes	Equipment		150	1000	150000
		Transportation of bamboos	Transportation		forfeit	40000	40000
		Purchase of tips of 8 kg	Equipment	kg	8	850	68000
		Hand work (maintenance of workers)	Perdiem		forfeit	30000	30000
		Total sub-activity 3.2					
3.3	ESTABLISHMENT OF PISCICULTURAL PONDS	Construction of 5 fish breeding basins of 6m/3m of which 2 in Gbèzoumè center and 1 for each hamlet: Kpétédji, Cogbo, Covidji			forfeit	100000	500000
		Purchase of 60 hoes "dabas"	Equipment		60	5000	300000
		Maintenance of workers			forfeit	100000	500000
		Total sub-activity 3.3					
3.4	AGR (PRODUCTION OF GARI) FOR THE GROUP OF GBEZOUME CENTRE	Purchase of 10 "canti" of cassava		canti	20000	10	200000
		Purchase of a pressure machine	Equipment		forfeit	150000	150000
		Purchase of 4 pots	Equipment		4	4000	16000
		Total sub-activity 3.4					
3.5	ACTIVITIES OF MARKET GARDENING	Purchase of two motor-pumps	Equipment		2	800000	160000
		Installation of two boring			forfeit	100000	200000
		Purchase of 20 hoses PVC	Equipment		20	4000	80000
		Purchase of organic manure	Inputs		forfeit	100000	100000
		Purchase of three carts	Equipment		3	20000	60000
		Total sub-activity 3.5					
	Total 3: Management committee of Gbèzoumè						2 926 300

4. Village Djondji Management committee								
4.1	AWARENESS OF THE POPULATIONS FROM ABOUT TEN VILLAGES FOR THE OBSERVANCE OF THE RULES ESTABLISHED IN THE FISHING CONTEXT PER QUARTER	Purchase of a dugout canoe				120000	120000	
		Maintenance of the boat driver per awareness session	Perdiem		forfeit	5000	15000	
		Production of awareness sketches about good habits concerning fishing	IEC		forfeit	100000	100000	
		Production of a VCD awareness	IEC		forfeit	100000	100000	
		Implementation of popular sessions of visualization per quarter	IEC		forfeit	50000	200000	
		Maintenance of the village committee members including the customary chiefs and the chief of village	Perdiem		forfeit	35000	105000	
		Total sub-activity 4.1			forfeit		640000	
4.2	PROTECTION OF THE SACRED FORESTS	Purchase and transportation of saplings	Transportation		forfeit	80000	80000	
		Clearing of the forest surroundings			forfeit	40000	40000	
		Setting in earth of saplings and maintenance of the workers			forfeit	30000	30000	
		Monitoring and maintenance of saplings	Perdiem	Quarterly	forfeit	50000	150000	
		Total sub-activity 4.2					300000	
4.3	FIGHT AGAINST COASTAL EROSION AT THE LOCAL LEVEL	Purchase of a small boat provided with motor	Equipment			2500000	2500000	
		Periodic opening of the mouth (renting of machines, purchase of materials: shovels...)				PM	0	
		Maintenance of the workers (forfeit each semester)	Perdiem	Semi-annual	2	150000	300000	
		Total sub-activity 4.3						2800000
		Sub Total 4: Management committee of Djondji						3 740 000
	Total PMA NAZOUME-BOUCHE DU ROY						22 939 900	
	10% TOTAL BUDGET (representing the unforeseen and the non estimable expenses)						25 223 890	
	Total PMA NAZOUME-BOUCHE DU ROY (including 10% of unexpected expenses)						25 233 890	

3.5.1.2 AVLEKETE- TOGBIN SITE

1. Village Avlékété management Commitee

N°.	ACTIVITY	SUB-ACTIVITIES	NATURE OF EXPENSES	UNITY	QUAN-TITY	UNIT PRICE	AMOUNT FCFA
1.1	SUPPORT TOTHE SALT GROUPS FROM 12 ZONES OF PRODUCTION	Weeding of the sites that will be exploited					
		Purchase of rakes at the rate of 10 per site	Equipment		120	4 000	480 000
		Purchase of hoe at the rate of 10 per site	Equipment		120	3 000	360 000
		Purchase of bowl at the rate of 6 per site	Equipment		36	6 000	216 000
		Purchase of wood for the installation of the heating device	Provision in Input		100	2 500	250 000
		Purchase of clay for the manufacture of the fireplace for a 5000 of forfeit per zone of production	Provision in Input		forfeit	50 000	600 000
		Purchase of heating wood for a 15000 of forfeit per zone of production	Provision in Input		forfeit	15 000	180 000
		Total sub-activity 1.1					2 086 000
1.2	SUPPORT TO THE MERCHANDISING OF FISH	Purchase of the darling cockles	Provision in Input	lot	10	6 000	60 000
		Purchase of fire-chamber woodpile	Provision in Input	lot	10	8 000	80 000
		Purchase of braised fish	Provision in Input	bowl	10	30 000	300 000
		Total sub-activity 1.2					440 000
1.3	ZONES IN DEFENCE (CONSTRUCTION OF SPAWNING-GROUNDS)	Purchase of teak wood	Provision in Input		500	1 000	500 000
		Woods transportation	Transportation		forfeit	50 000	50 000

		Workers maintenance	Perdiem		forfeit	100 000	100 000
		Making the places sacred (Purchase of white cloth)	Making sacred		forfeit	80 000	80 000
		Total sub-activity 1.3					730 000
1.4	ORGANIZATION OF QUARTERLY AWARENESS CAMANAGEMENT COMMITTEEIGNS	Maintenance of the bawler at the rate of 5000F CFA per session (quarter)	Perdiem		forfeit	20 000	20 000
		Subsistence of the participants and trainers per session (quarter)	Perdiem		forfeit	50 000	200 000
		Total sub -activity 1.4					220 000
1.5	TRAINING IN TECHNICHS OF THE COOPERATIVES MANAGEMENT	Recruitment of a consultant and organization of the training			forfeit	500 000	500 000
		Total sub-activity 1.5					500 000
Sub-total 1: Management committee of Avlékété							3 976 000

2. Village Hiyo Management committee

2.1	AWARENESS OF COMMUNITIES ON THE GOOD FISHING PRACTICES	Implementation of an awareness committee composed of two people designated per hamlet (Adjahindji, Hiyo Houta, Ahloboé, Houmassè, Hiyo-houégbo) per quarter.	IEC				
		Perdiem of committee members for 10 days for a forfeit of 20000F per day in a village and per quarter	perdiem		forfeit	20000	800 000
		Recruitment of a public bawler to inform populations in the beginning of every session	IEC		forfeit	5000	20 000
		Moving (renting of boat + fuel) per session	Transportation		forfeit	10000	40 000
		Participant subsistence at the awareness sessions for 4 Management committees a year	perdiem		forfeit	40000	160 000
		Total sub-activity 2.1					1 020 000
2.2	PROTECTION OF THE ZONES IN DEFENCE "VODOUNTO"	Purchase of pickets (wood) to implant all 5 m for 2000 m of perimeter	Inputs		400	2000	800 000
		Transportation of woods	Transportation		forfeit	50000	50 000
		Purchase of 10 packets	Inputs		10	9000	90 000
		Purchase of 3 wire rollers	Inputs		3	700	2 100
		Making sacred "Vodounto"	Making sacred		forfeit	100000	100 000
		Libation's ceremony of the sacred forest	Makin sacred		forfeit	20000	20 000
		Worker's subsistence	Perdiem		forfeit	60000	60 000
		Total sub-activity 2.2					1122100
2.3	PURIFICATION OF THE BANKS OF THE LAGOON BY THE CONSTRUCTION OF 3 TRASH CANS	Purchase of 1 ton of cement (20 packets)	Material		1 tonne	90000	90 000
		Transportation	Transportation		forfeit	10000	10 000
		Provision in sand	Material		PM	PM	0
		Recruitment of a bricklayer in the locality	Worker's subsistence		Forfeit	25000	25 000
		Total sub-activity 2.3					125 000

2.4	TRAINING IN MODERN TECHNIQUE OF MARKET GARDENING	Recruitment of a consultant and organization of the training	Formation		forfeit	500000	500 000
		Total sub-activity 2.4					500 000
	Sub-total 2: Management Committee of Hiyo						2 767 100

3. Village Agbanzin kpota management Committee

3.1	ORGANIZATION OF AWARENESS CAMANAGEMENT COMMITTEEIGNS ON THE GOOD FISHING PRACTICES	Subsistence of a public bawler for 4 sessions			4	5000	20000
		Organization of a popular session per quarter			4	10000	40000
		Total sub-activity 3.1					60000
3.2	CONSTRUCTION DES ZONES A DEFENS (FRAYERES)	Purchase of pickets (wood of teak)			160	1000	160 000
		Purchase of pickets (rattan)			250	1500	375 000
		Purchase of rope rollers			5	1000	5 000
		Purchase of packets of tips of 12			3	1000	3 000
		Purchase of machetes			4	2500	10 000
		Purchase of lamp torchlights			6	1000	6 000
		Transportation and handling of the teak woods			forfeit	30000	30 000
		Transportation et handing of rattan			forfeit	60000	60 000
		Workers subsistence			forfeit	50000	50 000
		Monitoring of resource during 4 quarters			forfeit	20000	80 000
		Total sub-activity 3.2					779 000
3.3	APPUI A LA FABRICATION DE SEL AU NIVEAU DE TROIS GROUPS (INSTALLATION OF 6 FIREPLACES TO THE PROFIT OF 3 GROUPS	Preparation (clearing/weeding) of 6 selected sites of 50m² at the rate of two per group for a 20000 of forfeit			6	20000	120 000
		Installation of 6 filters by groups (18 in total)			18	4000	72 000

		Purchase of 6 hoes per group (18 in total)			18	1000	18 000
		Purchase of 6 bowls by group (18 in total)			18	5000	90 000
		Implement of fireplaces supports for 3 groups			3	4000	24 000
		Implement of 3 devices of filtering (iron)			3	7000	21 000
		Provision in fire-wood per quarter and for 3 groups at the rate of 4 lots per campaign		lot	48	30000	1 440 000
		Confection of storage baskets (purchase of simple baskets covered by sand and cements mixed for the 3 groups for a 5000F of forfeit			6	5000	30 000
		Total sub-activity 3.3					1 815 000
	Total 3: Management Committee of Agbanzin - kpota						2 654 000

4. Village Adoungo Daho Management committee

4.1	DELIMITATION OF THE HALIEUTIC ZONE OF ADOUKO DAHO	Purchase of 50 woods (rattan)			50	2000	100 000
		Transportation of woods			forfeit	30000	30 000
		Purchase of coconut tree trunks			2	5000	10 000
		Cracking of trunks			forfeit	4500	9 000
		Production of awareness panels and signs			2	10000	20 000
		Hand work for the delimitation of 30 peoples.			30	2000	60 000

4.2		Dugout canoe renting for the materials transportation and the people travelling			forfeit	5000	5 000
		Rituals of the resource protection			forfeit	40000	40 000
		Total Sub-activity 4.1					274 000
	REHABILITATION OF SOME SACRED FORESTS	Planning of the forests surroundings					0
		Subsistence of 20 people during 10 days for 40000 of forfeit			10	40000	400 000
		Rituals of the fetishes preparation (Oro, Dèhouin, and Assonzou) for the surveillance of the sacred forests			forfeit	100000	100 000
		Total Sub-activity 4.2					
4.3	SUPPORT TO THE MARKET GARDENING DEVELOPMENT	Earth renting (1 ha)		ha	1	150000	150 000
		Weeding and preparation (recruitment of 25 people for 10 days)		days	25	375000	375 000
		Purchase of tree nurseries			20	5000	100 000
		Purchase of a motor-pump			1	85000	85 000
		Purchase of watering-can			12	3000	36 000
		Purchase of adjusting hoses			forfeit	50000	50 000
		Purchase of chickens' droppings		bag	20	1300	2 600
		Total sub-activity 4.3					
	Total 4: Management committee of Adounko-Daho						1 572 600

5. Village Adoungo kpevi Management Committee							
5.1	IMPLEMENTATION OF A PUBLIC SPAWNING-GROUND	Purchase of bamboos			100	1000	100000
		Renting of trucks for the bamboos transportation			1	60000	60000
		Recruitment of local work hand (10 people) for the installation of the spawning-ground			10	2000	20000
		Renting of boats for the bamboos transportation to the site			1	3000	3000
		Total sub-activity 5.1					183000
5.2	DEVELOPMENT OF THE FISH BREEDING (CONSTRUCTION OF 6 FISH PONDS)	Planning of the sites implantation			6	12000	72000
		Subsistence of 20 workers per ponds during three days for 60000 of forfeit per team and per ponds		days	18	60000	1080000
		Purchase / provision in alevins for the 6 hamlets for 100000 of forfeit			6	600000	600000
		Purchase of the contraptions of fishing (nets, lead, ropes) for the 6 beneficiary hamlets for 150000 of forfeit			6	900000	900 000
		Total sub-activity 5.2					2 652 000
5.3	MANUAL COLLECTING OF CONTINENTAL SAND	Purchase of boats for the moving on site			4	150000	600 000
		Purchase of bucket to sand collect			20	2000	40 000
		Purchase of hoe/daba for the sand collect			10	2500	25 000
		Total sub activity 5.3					665 000
5.4	CONSTRUCTION OF GARBAGE DEPOSIT	Purchase of cement tons		tonnes	6	87500	525 000
		Productions of bricks		tonnes	3	21000	63 000

		Hand work of a bricklayer				60000	60 000
		Manufacture of wood doors			3	6000	18 000
		Total sub-activity 5.4					666 000
5.5	SUPPORT IN PURIFICATION FACILITIES FOR THE MANAGEMENT OF GARBAGE	Hoes			60	1000	60 000
		Sweep supplied with stem			60	500	30 000
		Shovel			60	1500	90 000
		Rakes			60	1000	60 000
		Shopping basket			60	600	36 000
		Machetes			60	1500	90 000
		Weelbarrows			30	15000	450 000
		Rackets			120	300	36 000
		Cover nose			60	300	18 000
		Boots			120	3000	360 000
		Total sub-activity 5.5					1 230 000
5.6	SUPPORT IN STORAGE AND CONSERVATION EQUIPMENT OF THE HALIEUTIC PRODUCTS	Purchase of bowls			60	5000	300000
		Purchase of stoves			60	3000	180000
		Purchase of knives			60	2000	120000
		Cylindrical oven purchase			30	40000	1200000
		Skimmer			forfeit	20000	20000
		Purchase of baskets			60	1000	60000
		Purchase of drier			30	15000	450000
		Total sub activity 5.6					2330000
Total 5: Village Adoungo- kpevi Management committee						7 726 000	
	Total PMA AVLEKETE-TOGBIN						18 695 700
	10% OF BUDGET (representing the unforeseen and the non estimable costs)						1 869 570
	Total PMA AVLEKETE-TOGBIN (including the unforeseen)						20 565 270

3.5.1.3 AVLEKETE MARINE AREA SITE

Avlékété Marine Area Site
YEAR : 2011
Village management Committee of the Area

N°.	ACTIVITIES	SUB - ACTIVITIES	NATURE OF EXPENSES	UNITY	QUAN-TITY	UNIT PRICE	AMOUNT FCFA
1	AWARENESS OF VARIOUS ACTORS ON THE STAKES OF THE SITE PROTECTION	Information Session with the groups of maritime fishers	IEC	forfeit	forfeit	50 000	50 000
		Awareness Session of the craftsmen fishers owners of boats and coming from Adoungo, hio, Avlékété, Ahoundji and Ouidah beach	IEC		forfeit	100 000	100 000
		Awareness Session with the Fishery Office and the marine military	IEC		forfeit	100 000	100 000
		Total sub -activity 1					250 000
2	MARKING OF SURROUNDINGS SIGNALING OF THE SITE PANELS OF SURROUNDINGS SIGNALING (BEACONS OF PROTECTION)	Session with the underwater specialist sailors of the beacons pose	Meeting				0
		Installation of 12 beacons and 6 luminous signs			12	pm	0
		Installation of 6 luminous signs			6	pm	0
		Maintenance of the underwaters					0
		Protective ritual (solicitation of the zangbéto and vodoun "Agoué")			forfeit	500 000	0
		Total sub -activity 2					
3	INSTALLATION OF THE FISH CONCENTRATION DEVICES	Purchase of bamboos to attach to the ropes that immobilize the protective beacons	Inputs		100	1 000	100 000
		Transportation of bamboos	Transportation		forfeit	60 000	60 000
		Purchase of stabilization rope	Material		forfeit	50 000	50 000
		Subsistence of workers for one week	Perdiem		forfeit	100 000	100 000
		Total sub-activity 3					310 000

4	SURVEILLANCE OF THE ZONE TO BE PROTECTED BETWEEN OCTOBER TO FEBRUARY (5 MONTHS)	Purchase of a motor-driven boat	Equipment		1	3 500 000	3 500 000
		Purchase of paddles	Equipment		12	2 000	24 000
		Purchase of guide	Equipment		2	30 000	60 000
		Stabilization's hook of the boat	Equipment		2	25 000	50 000
		Rope of 18 of 100m	Equipment		2	75 000	150 000
		Subsistence of 8 agents of surveillance during 5 months at the rate of 40 sessions the year and 2 Management committees / week	Perdiem		8	3 200 000	3 200 000
		Purchase of specific uniforms for the surveillance	Equipment	dozen	24	5 000	120 000
		Marking of uniforms to the project and the sea divinity effigy	Equipment	dozen	24	2 000	48 000
		Purchase of raincoats	Equipment	dozen	2	5 000	120 000
		Endowment in fuel for the season (50L x 40 campaigns) at the rate of 2 sessions a week	Inputs		forfeit	1 040 000	1 040 000
		Total sub-activity 4					
Sub-total : Management Committee of the MPA Avlékété Marine Area						8 872 000	

	Total Site Marine Area of Avlékété	8 872 000
	10% TOTAL BUDGET (representing the unforeseen and the non estimable expenses)	887 200
	Total Site Marine Area of Avlékété (including the 10% of unforeseen)	9 759 200

3.5.1.4 LAKE NOKOUE SITE

Site MPA: Lake Nokoué	YEAR : 2011
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1. Village Tchonvi Management Committee

ACTIVITY	SUB-ACTIVITIES	NATURE OF EXPENSES	UNITY	QUAN-TITY	UNIT PRICE	AMOUNT FCFA
INSTALLATION OF A SPAWNING-GROUND OF ABOUT A SURFACE OF 1500m ²	Purchase of 1580 pickets for the edge			1580	3 000	4 740 000
	Purchase of 1580 pickets for inside			2500	3 000	7 500 000
	Transportation of the pickets at the rate of 800 pickets for 100000 FCFA		forfeit	4080	500 000	500 000
	Subsistence of 20 workers during 12 days		days	12	30 000	600 000
	Location de deux barques pour les 12 jours		days	12	48 000	48 000
	Purchase of machetes			10	2 500	250 000
	Purchase of reeds			630	2 000	1 260 000
	Purchase of wire rollers			5	3 500	17 500
	Total sub-activity 1.1					14 915 500
MODERNIZATION OF PIG BREEDING PRACTICES	Installation of modern device of pigs breeding			pm	pm	0
	Purchase of porcines			pm	pm	0
	Training in cooperative management			pm	pm	0
	Total sub-activity 1.2					0
AWARENESS ON THE PROTECTION STAKES OF THE AMP	Renting of two boats		day	2	3 000	6 000
	Purchase of 30 liters of fuel per session			4	15 600	62 400
	Organization of a broadcast radio for the MPA per quarter			4	50 000	200 000
	Subsistence of the participants (forfeit per session)			4	50 000	200 000

	Total sub- activity 1.3	468 400
Sub-total 1: Tchonvi Management committee		15 383 900

2. Village Godomey Xlacomè Committee

UNBLOCKING OF THE LAKE BY THE ABDUCTION OF PARKS OF ACADJA	To undertake some negotiations with the Town hall, the fishing's Direction and the Government	forfeit		pm	pm	0
INITIATE A MECHANISM OF THE COMMUNITIES INCITEMENT AND MAINTENANCE FOR THE PARKS ABDUCTION	To install a found for the participants' subsistence	forfeit		1	500000	500000
Total sub-activity 2.1						0
ORGANIZATION OF A PUBLIC DIALOGUE SESSION ON THE FISHING BAD PRACTICES TO BE AVOIDED EVERY QUARTER	Recruitment of a public bawler for announcement for 2 information's sessions		day	2	5000	40000
	Renting of awnings			4	100000	400000
	Chairs renting			4	120000	120000
	Organization of sessions			0	0	0
	Refreshment of the participants			forfeit	200000	800000
	Total sub-activity 2.2					1360000
BEACONING OF THE DEFENCE ZONE	Purchase of woods			1532	3000	4596000
	Transportation of woods by boat		travel	3	2500	75000
	Transportation of woods by trucks		travel	6	75000	450000
	Subsistence of the 15 packers at the rate of 3000 FCFA / days during 10 days		day	10	45000	450000
	Purchase of painting pots		pots	4	12000	48000
	Purchase of eight (8) machetes			8	8000	24000

	Purchase of a line roller			2	6000	12000
	Setting up of a limps to pharmacy			forfeit	100000	100000
	Making of 4 plates of site's identifications			4	30000	120000
	Total sub-activity 2.3					5 875 000
Sous total 2: Godomey Wlacodji Committee						8 350 000

Total MPA LAKE NOKOUE	23 118 900
10%(representing the unforeseen and the inestimable costs)	2 311 890
Total PMA LAKE NOKOUE	25 430 790

3.5.2 MANAGEMENT AND COORDINATION ACTIVITIES

N°.	ACTIVITY	SUB-ACTIVITIES	NATURE OF EXPENSES	UNITY	QUAN-TITY	UNIT PRICE	AMOUNT FCFA
1	TO TRAIN ACTORS TO THE CO-MANAGEMENT OF THE DIVERT-TOURIST SPACES	To prepare the management Committees members to the activity (popularization of the action plans content)	Training				0
		To recruit a consultant specialized in management of the tourist spaces and cultural heritages	Training		forfeit	3 000 000	3 000 000
		To write and to validate the training modules	Training		forfeit	500 000	500 000
		Organize the training	Training			500 000	500 000
		Total sub-activity 1					4 000 000
2	TO ORGANIZE THE EXCHANGE VISITS, SHARING OF EXPERIENCES AND CAPITALIZATION BETWEEN AMP OR WITH OTHER COUNTRIES	Prepare the visit (writing of references term and various contacts)	Visit of exchange		forfeit	300 000	300 000
		Identify the MPA to be visited	Visit of exchange				0
		Identify the MPA or the beneficiaries MPA	Visit of exchange				0
		Elaborate the plan of visit	Visit of exchange				0
		Organize the visit	Visit of exchange			Invaluable	0
		Total sub-activity 2					300 000
3	TO WRITE AND TO POPULARIZE THE LEGAL TOOLS OF MANAGEMENT AND WORKING OF THE AMP	To organize meetings about exchange and information on the starting of the MPA's activities	IEC		forfeit	200 000	200 000
		Write the statutes and interior regulations of the committee by a consultant	IEC		forfeit	500 000	500 000
		To organize a public session of texts and arrangement's validation and appropriation proposed in the legal tools	IEC				0

		Prepare some supports (information's tablets, posters, gadgets... on the interior regulations and the statutes)	IEC		forfeit	Unvaluable	0
		Total sub-activity 3					700 000
4	TO ASSURE A MEDIA COVER OF SOME AMP' KEY ACTIVITIES	Define awareness' keywords on the MPA' activities	IEC				0
		To contact with the local or communal radios for the signature of the partnership contract	IEC				0
		To organize some broadcasts interactive radios and sensitization sketches on the MPA's management	IEC				0
		Total sub-activity 4					0
5	TO ACHIEVE SPOTLIGHTS AND DOCUMENTARY ON THE PROTECTION SPECIFICITIES OF EVERY AMP	To organize some contacts sessions with the actors of the press of the concerned regions	IEC				0
		To elaborate the reference terms on the specific needs of every zone	IEC		forfeit	500 000	500 000
		To recruit a specialized consultant	IEC			3 000 000	3 000 000
		To validate the proposed models	IEC				0
		To achieve and to publish the documentaries	IEC			PM	0
		Total sub-activity 5					3 500 000
6	TO START LEARNING OF THE PERIODIC MEETINGS WITH COMMITTEES AND ORGANS OF MANAGEMENT IN VARIOUS LEVELS IN ACCORDANCE WITH THE TEXTS	To define the thematics of the meeting	Meeting				
		To invite the participants	Meeting			PM	
		To organize the work's sessions	Meeting			PM	
		To return and to implement the consequent recommendations	Meeting				

		Total sub-activity 6						
7	DEVELOPMENT OF COMMUNICATION AND AWARENESS SUPPORTS OF THE AMP (GADGETS, TABLETS OF INFORMATION, TEE-SHIRTS, VARIOUS POSTERS)	To write the references terms bound to the types of wished supports	IEC		forfeit	500 000	500 000	
		To recruit a specialized consultant on the subject	IEC			3 000 000	3 000 000	
		To validate the proposed models	IEC				0	
		To achieve the types of retained supports	IEC				0	
		To popularize at the level of all MPA	IEC			PM	0	
		Total sub-activity 7						PM
8	TO INITIATE THE MEETINGS WITH THE EDUCATIONAL AND SCIENTIFIC COMMUNITY	To initiate contacts with requisite resources people in the scientific and academic world	IEC				0	
		To elaborate the information tablets on the activities of the management Committees	IEC			PM	0	
		To organize restitution meetings on the obtained results and the drawn lessons	IEC		forfeit	forfeit	200 000	
		To initiate a mechanism of training and continuous and reciprocal improvement of the obtained results	IEC				0	
		Total sub-activity 8						PM
9	TO IDENTIFY THE POTENTIAL SOURCES OF FINANCING TO UNDERTAKE ABOUT THE PROTECTION ACTIONS	To organize an information and awareness session with the diaspora and the Tours Operators on the activities to be led	Mobilization of resources		forfeit	500 000		
		To enliven some advocacies in the direction of the governmental and local authorities	Mobilization of resources			PM	PM	
		To endow the commission of resources mobilization of the MPA by necessary means of working	Resources mobilization			PM	PM	

		To organize the broadcasts TV in order to show the MPA and the assets of the site	Resources mobilization				PM	PM
		To participate in sub-regional meetings to show the MPA and its specificities	Resources mobilization				PM	PM
		Total sub-activity 9						PM
10	TO ENDOW THE MANAGEMENT COMMITTEES BY NECESSARY MEANS AND RESOURCE FOR THEIR WORKING	To endow the committees of management of an office for the management and the monitoring of the daily activities	Equipment				PM	PM
		To equip the management committees of rolling means (means of two)	Equipment				PM	PM
		To plan for the management committees a modest working budget to incentive title	Equipment				PM	PM
		To endow the committees by automation office facilities and consumables	Equipment				PM	PM
		To train the committees animators in accountant and financial management	Training				PM	PM
		Total sub-activity 10						PM
		Total coordination and management activities / MPA						

Phase N° 6



**3.6 PLAN DE
SUIVI&EVALUATION DES
ACTIVITES AU TITRE DE
L'ANNEE 2011**

3.6.1 Framework and justification of the follow-up

First of all, the follow-up, is considered in the execution of the project's managing and establishment of the AMP as a participative process which reinforces the capacities as well as the understanding and the application of the teachings drawn from the experiences of one another since the conception of the project till its execution.

In order then, to be assured of the effectiveness of the measures of spatial managing applied to the protected marines, a particular attention should be given to their follow-up. These follow-up help by following the progress of the effects and the impacts of the measures of managing and protection of the natural heritage, to get useful information for the execution of the outstanding benefits and to carry out corrective measures in order to maximize the benefits, by allowing therefore an adaptive managing since it is a started experience.

This follow-up method will answer the need of taking into account the state of the living resources and the level of its increase, another one about the settings of human activities due to the numerous interactions existing already between the different components.

The aim here is to be able to estimate the state of advancement of the project and the realisation of the results and to promote at the same time the appropriation of the process in general and in the beneficiary community. This approach is also inserted in the whole cycle of the project, and helps to assure the success and the timelessness of the initiatives of development.

In a specific way, the process of follow-up of this project which lies upon the document of the operational activities at the local level and the activities of managing and coordination at the strategic level should help for many purposes:

- Making easy the identification and the resolution of the problems deriving from the execution of the elaborated action plans ;
- Increasing the performance of the material used and being sure of the concordance of the actions with the objectives of the project ;
- Reinforcing the local capacities to execute and carry out with success such initiatives after the project ;
- Promoting the identification and the spread of the teachings by the users at different levels.

Moreover, due the complexity of coastal marine, the follow-up of the activities of action plans needs a great number of data. Therefore, some convenient indicators must be used in a table that will show the important necessary quantities of data about the report of the appreciation of the evolutions.

3.6.2 Determination of the the follow-up frames

For the use of the follow-up method of this project establishing and managing of the AMP, four (4) categories of parameters described in the indicators have been accepted. We then have biological, physical, socio-economical, sociocultural and touristic parameters.

3.6.2.1 Biological settings

The biological indicators allow in one hand, to appreciate the state and the trends of animal and vegetable popularisations (biomass and specific riches of important species or targeted species). In the other hand, it allows to evaluate the expansion of the disasters from anthropic origin and from natural origin so as to say the general focus. They are determined from the measures of the following parameters :

- The level of rebuilding of the collapsed shelters ;
- The increase of the fishing equipments seizure ;
- The development of fishing pools ;
- The number, the high (biomass) the composition and the structure of the populations of fish ;
- The abundance of young species targeted, the population of animal of specific interest ;
- etc.

3.6.2.2 Physical settings

The physical indicators give information about the physical environment of the site and allow to follow the temporal evolution of this latter.

In this condition, as regarding the basic diagnosis, the physical parameters, are not predominant for the simple reason that these one have very often made use of the considerations: temperature, turbidity of the waters, the visibility, la saltiness, which are not predominant in the actual situation. However, the focus aspects of the coastal trait evolution, the construction of buildings or methods of concentration of fish, the building some touristic and entertainment infrastructures have been considered.

3.6.2.3 Socio-economical settings

The socio-economical indicators retained, should allow to conclude on the effects of executing of the AMP on the social, organisational and economical life, the local concerned populations by the use of the resources. They allow to estimate the benefits drawn from the executing of the AMP of the ecosystems both inside and outside the protected spaces..

The most important are :

- The diversification of the sources of income of the local population ;
- The reorganisation and the development of the fishing pools ;
- The statistics of captures and the price of the forestry products ;
- The system of decision making at the level of the local community ;
- The perception of the managing of the ecosystems by the population ;
- The communication and the adhesion of beneficiaries.

These types of indicators could allow to appreciate the level of effectiveness and the efficiency to fulfill in the managing of the resources and the general strategies of the expected results.

3.6.2.4 Sociocultural and touristic settings

Here, the sociocultural considerations have prevailed in number of which, we have the protection/rehabilitation of some sacred forests.

Synthetic table of the groups of indicators, settings and fixed indicators

Group of indicators	Settings	Retained indicators	Level zero in 2010
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BIOLOGICAL SETTINGS	Level of restoration of the collapsed shelters	<ul style="list-style-type: none"> - State of conservation of the ecologic shelters in the zones of defence - State of ecologic repopulation of the concerned sites (number, high, populations) 	-
	Augmentation of fishing	<ul style="list-style-type: none"> - Diversification of the fishing areas - Statistics and price of the fishing products 	-
	Development fishing methods	<ul style="list-style-type: none"> - Reduction of the overfishing methods on the rivers - Multiplication of the fish-breeding pools 	-
	Number, high, composition and structure of the populations	Ecologic repopulation in the area (number, high, composition and structure of the populations of fishes)	-
	Abundance of the focused species, population of animals of specific interest	Increasing of the fishing tools seizure around the sites	
PHYSICAL SETTINGS	Evolution of the coastal trait	<ul style="list-style-type: none"> - Frequency of the movement of the river's mouth per year - Identification and better knowledge of the issues - Good visibility of the area/zone and recognition of the limitation per users 	1/year
	Construction buildings and dispositives of de concentration of the fish	Availability of the fish-breeding pools	-
	Building infrastructures for tourism entertainment	-	-
SOCIO-ECONOMICAL SETTINGS	Diversification of sources of revenue of the local population	<ul style="list-style-type: none"> - State of improving the incomes of the groups - Increasing the conditions of producing and selling of the fish - Knowledge and appropriation of the modern methods of truck farming - Possibility of diversification of the sources incomes 	-
	Reorganisation and developement of the fishing methods	<ul style="list-style-type: none"> - Increasing of the methods of fishing - State of autonomy of the committees of managing when executing the activities - Using the experiences used and practised elsewhere 	-
	Statistics of capture and of the price the products of water like fish and others	Adequate repopulation of water plans	-
	Decision system making with the local community	<ul style="list-style-type: none"> - Efficiency in executing the activities - Concerted gouvernance and experience 	-

		share	
	Perception of the ecosystems managing by the populations	<ul style="list-style-type: none"> - Increase of the environmental conscience of the populations - River sides cleansed and better kept - Good managing of the domestic refuses 	-
	Communication and appropriation by the beneficiaries	<ul style="list-style-type: none"> - Good knowledge by the users of the tools by instruments of existing managing - Better knowledge by the population of the activities of the AMP - Degree of participation of the populations in the managing of the spatial tourism of entertainment 	-
SOCIOCULTURAL AND TOURISTIC SETTINGS	Protection of sacred sites	<ul style="list-style-type: none"> - Level of limitation of the access around the sacred forests - Observation by the populations the measures of the initiated protection 	-
	Protection / rehabilitation of the sacred forests	Sacrality level of the protected forest	-
	Development of the tourism	<ul style="list-style-type: none"> - Level of tourism frequentation - Appropriation of the culture of the area by the strangers /tourists 	-

NOTES : Since there is no starting information, it's very important to mention that the appreciation of the situation at the basic level for the elaboration of this follow-up planning of the indicators, except for some exceptions.

3.6.3 FOMMOW-UP PLANNING : OPERATIONAL ACTIVITIES

3.6.3.1 AMP NAZOUME - BOUCHE DU ROY

Follow-up planning of the activities of AMP NAZOUME - BOUCHE DU ROY, 1st year

Beneficiary	Villagese Committee of the managing of Avlo								
Specific objectives/ General activities	Influencing indicators	Data of departure <u>Year 2010</u>	Results				Sources of verification	Frequency of the dat	Institutions in charge of execution and follow- up
			1 st quart er	2nd quart er	3 rd quart er	4 th quart er			
Specific objective 1 : Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters									
1. Stabilisation of the rivers mouth	Frequency of the movement of the rivers mouth per year	1					Report of the follow- up of the coastal trait evolution	Quarterly	Committee of managing AMP
	Ecologic repopulation of the domain (number, high, composition and structure of the populations Of the fish)	-					Report of ecologic inventory realised	Quarterly/ Half	MEPN/ON G (to be clarified) Direction of Fighting against the Coastal Erosion Committee of Orientation and follow- up
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
2. Protection of the holes	Increase of the fishing	-					Statistics of	Quarterly/H	Committee

of fish in the three villages (Avlo-beach, Avlo village and Hokouè)	pools and the surrounding sites						fishing Report of activities committee of managing AMP Report Direction of fishing	alf	of managing AMP MEPN/ONG (to be clarified) Committee of orientation and follow-up
3. Creation of fish-breeding pools in the 6 villages of the zone of Avlo	Increase of the fishing pools and the surrounding sites Diversification of the areas of fishing	08 0					Statistics of fishing Report of activities committee of managing AMP Report Direction of fishing	Quarterly/Half	Committee of managing AMP MEPN/ONG (to be clarified) Committee of Orientation and follow-up
4. Sensitisation the better methods of fishing	Improving the methods of the fishing	0					Reports de sensitization	Quarterly/Half	Committee of managing AMP MEPN/ONG

									G (to be clarified) Committee of Orientation et de Suivi
Specific objective 3 : Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect									
No proposed activities									
Specific objective 4: Promoting the local culture and the touristic initiatives within the AMP									
5. Creation and arrangement of the spaces of tourism and entertainment	Increase of the touristic frequencies in the area Appropriation of culture of the area by the strangers//tourists	0 0						Quarterly/Half Quarterly/Half	Comité de gestion AMP MEPN/ONG (to be clarified) Committee of Orientation and follow-up

Beneficiary		Committee of the village for managing in Nazoumè							
Specific objective 1 : Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters									
General activities	Indicatàrs Of impacts	Data of departure Year <u>2010</u>	Results				Sources de verification	Frequency of data	Institutions in chargé of the execution and the follow-up
			Trim 1	Trim 2	Trim 3	Trim 4			
1. Protection of the zones of defence	Conservation of the ecologic of the zones of defence	0					Visite Rapport de terrain Rapport MEPN	Half	MEPN/ONG (to be clarified) Committee of Orientation and follow-up
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
2. Lutte contre la surpêche dans la lagune par la promotion du jardinage au niveau de quatre groupements locaux	Réduction de la surpêche	0					Superficies exploitée pour le jardinage Rapport d’activité Direction des pêches	Quarterly/Half	MEPN/ONG (to be clarified) Committee of Orientation and follow-up
3. Développement de la pisciculture en eau douce (création de 4 étangs à raison de deux à Nazoumè et un pour chacun des deux hameaux)	Multiplication des étangs piscicoles	0					Nombre d’étangs piscicoles créés Rapport d’activité Direction des pêches	Quarterly/Half	MEPN/ONG (to be clarified) Committee of Orientation and follow-up

4. Formation des groupements en gestion des coopératives	Efficienne dans la mise en œuvre des activités à exécuter	0					Rapports de formation	Quarterly/Half	Comité de gestion AMP MEPN/ONG (to be clarified) Committee of Orientation and follow-
Specific objective 3 : Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect									
Activités générales									
5. Appui à trois groupements pour la fabrication de savon local	Amélioration du revenu des groupements	0					Quantité de savon fabriqués et commercialisés par campagne	Quarterly/Half	Committee of managing AMP MEPN/ONG (to be clarified)
	Possibilité de diversification des sources de revenus	0					Rapport d'activités des groupements	Quarterly/Half	Committee of Orientation and follow-up
Specific objective 4 : Promoting the local culture and the touristic initiatives within the AMP									
No proposed activities									

Bénéficiaire	Comité villageois de gestion de Gbèzoumè								
Specific objective 1 :	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de verification	Fréquence de recueil de données	Institutions chargées de l'exécution et du Suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
1. Installation d'une frayère dite « Avlékététi »	Importance des prises de pêche (nombre, taille, composition et structure des populations de poissons)	0					Présence de la frayère mise en place	Quarterly	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi
2. Installation d'un barrage autour de la forêt fétiche de Lokodji	Limitation effective des accès aux alentours de la forêt	0					Existence effective du barrage Comportement sociologique des communautés vis-à-vis du barrage	Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
3. Création d'étangs piscicoles	Disponibilité des étangs piscicoles	-					Nombre d'étangs piscicoles créés	Trimestrielle/semestrielle	Comité de gestion AMP

							Rapport d'activité Direction des pêches		MEPN/ONG (à définir) Comité d'Orienta- tion et de Suivi
Specific objective 3 : Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect									
4. Fabrication de gari pour le groupement de Gbèzoumè centre	Amélioration du revenu du groupement bénéficiaire	-						Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orienta- tion et de Suivi
5. Promotion du maraîchage	Diversification des sources de revenu de la communauté	-					Superficie exploitée pour le maraîchage Rapport d'activité	Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orienta- tion et de Suivi
Specific objective 4 : Promoting the local culture and the touristic initiatives within the AMP									
No proposed activities									

Comité villageois	Comité villageois de gestion de Djondji								
Specific objective 1 : Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters									
Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du Suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
1. Lutte contre l'érosion côtière au niveau local	Identification et meilleure connaissance des enjeux	0					Rapports de séances Comptes rendu de réunion	Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
2. Sensibilisation des populations d'une dizaine de villages à l'observance des règles établies en matière de pêche par trimestre	Amélioration des pratiques de pêches	0					Rapports de sensibilisation	Quarterly/Half	- Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi
Specific objective 3 : Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect									
No proposed activities	-	-					-	-	-
Specific objective 4 : Promoting the local culture and the touristic initiatives within the AMP									
3. Protectionof the sacred forests	Niveau de sacralité de la forêt protégée	-					Rapport enquête de terrain	Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi

3.6.3.2 AMP AVLEKETE - TOGBIN

Bénéficiaire	Comité villageois de gestion de Avlékété								
Objectifs spécifiques/ Activités générales	Indicateurs d’impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l’exécution et du suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
Specific objective 1 : Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters									
1. Construction de frayères pour les zones à défens	Repeuplement conséquent du plan d’eau	-					Présence effective des frayères	Quarterly	Comité de gestion AMP
	Repeuplement écologique du milieu (nombre, taille, composition et structure des populations de poissons)	-					Statistiques Direction des pêches	Quarterly/H alf	MEPN/ON G (à définir) Comité d’Orientatio n et de Suivi
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
2. Organisation de campagnes trimestrielles de sensibilisation	Accroissement de la conscience environnementale des populations	-					Rapports d’activité	Quarterly	Comité de gestion AMP MEPN/ON G (à définir) Comité d’Orientatio n et de Suivi
3. Formation en technique	Effcience dans la	0					Rapports de	Quarterly/H	idem

Bénéficiaire		Comité villageois de gestion de Hiyo							
Specific objective 1 : Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters									
Activités générales	Indicateurs d'impacts	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
1. Protection des zones à défens « Vodounto »	Repeuplement conséquent du « Vodounto »	-					Présence effective des frayères	Quarterly	Comité de gestion AMP
	Importance des prises de pêche aux alentours du site	-					Statistiques de pêche	Quarterly/Half	MEPN/ONG (à définir) Comité d'Orientation et de Suivi
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
2. Sensibilisation des communautés sur les bonnes pratiques de pêche	Amélioration des pratiques de pêches	-					Rapports de sensibilisation	Quarterly/Half	Idem
3. Assainissement des berges de la lagune par la construction de 3 poubelles	Berges assainies et mieux entretenues	-					Présence effective des poubelles Rapport de visite de terrain	Quarterly/Half	Idem
4. Formation en technique moderne de maraichage	Connaissance et appropriation des techniques	0					Rapport de formation	Quarterly/Half	Idem

	modernes de maraîchage								
Specific objective 3 : Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect									
No proposed activities									-
Specific objective 4 : Promoting the local culture and the touristic initiatives within the AMP									
No proposed activities									

Bénéficiaire	Comité villageois de gestion de Agbanzin kpota								
Specific objective 1:	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du Suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
1. Construction des zones à défens (frayères)	Repeuplement conséquent du plan d'eau Importance des prises de pêche aux alentours du site	0 -					Présence effective des frayères Statistiques de pêche	Quarterly Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi
Specific objective 2 : Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities									
2. Organisation de campagnes de sensibilisation sur les bonnes pratiques de pêche	Respect par les populations des pratiques recommandées en la matière	-					Rapport de séance de sensibilisation Rapport d'enquête sociologique	Quarterly/Half	Idem
Specific objective 3 : Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect									

3. Appui à la fabrication du sel au niveau de trois groupements (installation de 6 foyers au profit de 3 groupements)	Amélioration des capacités de production des groupements (en termes de quantité et de qualité)	0					Présence effective des nouveaux foyers	Quarterly/Half	Idem
Specific objective 4 : Promoting the local culture and the touristic initiatives within the AMP									
No proposed activities									

Bénéficiaire	Comité villageois de gestion d'Adoungo Daho								
Specific objective 1 :	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du Suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
No proposed activities									
Specific objective 2 :	Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities								
1. Délimitation de la zone halieutique d'Adoungo Daho	Bonne visibilité de la zone et reconnaissance de ses limites par les usagers	0					Existence des limitrophes et matériels de délimitation	Quarterly/Half	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientation et de Suivi
Specific objective 3 :	Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect								
2. Appui au développement du maraîchage	Maraîchage est considéré comme une	0					Nombre de personnes	Quarterly/Half	Idem

	activité alternative à la pratique de la pêche						orientées vers le maraîchage		
Specific objective 4 :	Promoting the local culture and the touristic initiatives within the AMP								
3. Réhabilitation de quelques forêts sacrées		0					Rapport enquête de terrain	Quarterly/Half	Idem

Bénéficiaire	Comité villageois de gestion de Adounko kpèvi								
Specific objective 1:	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de verification	Frequency of dat	Institutions in charge of the execution and the follow-up
			Trim 1	Trim 2	Trim 3	Trim 4			
1. Installation d'une frayère publique	Repeuplement conséquent du plan d'eau	-					Effective existence of the foot path	Quarterly/Half	MEPN/ONG (to be clarified) Committee of Orientation and follow-up
Specific objective 2 :	Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities								
2. Construction d'un dépôt d'ordures ménagères	Better manging of the domestic refuses	-					Effectiveness of the deposit	Quarterly/Half	Idem
3. Appui en fourniture d'équipements d'assainissement pour la gestion des ordures	Improvement of the managing of refuses	0					Availability of the cleansing equipments	Quarterly/Half	Committee of managing AMP MEPN/ONG (to be clarified)

3.6.3.3 SPATIAL MARINE OF AVLEKETE

Committee of village	Committee of village for the managing of the AMP								
Objectives/ General activities	Indicators Of impact	Data of the departure <u>Year 2010</u>	Résultats				Sources de verification	Frequency of data	Institutions in charge of the execution and the follow-up
			Quart er 1	Quar ter 2	Quar ter 3	Quarte r			
Specific objective 1:	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
1. Installation des dispositifs de concentration de poissons (DCP)	Augmentation du peuplement halieutique dans le milieu	-					Statistics of the fishing methods Statistics of the Direction fishing	Half	Committee of managing AMP MEPN/ONG (to be clarified) Committee of orientation and follow-up
2. Marquage par des panneaux de signalisation des alentours du site (balises de protection)	Limitation accrue des accès au site et à ses alentours	-					Visit of the land Report of ecologic survey	Half	Idem +Direction of the marchandise marine
Specific objective 2 :	Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities								
3. Sensitisation of divers users on the issues of the site protection	Increase of the environnement al conscience of the populations and the inhabitants of the site	-					Reports de sensitisation Report of survey on the land	Quarterly	Committee of managing AMP MEPN/ONG (to be clarified) Committee of Orientation and follow-up

[illegible]

3.6.3.4 AMP OF LAKE NOKOUE

Comité villageois	Comité villageois de gestion de Tchonvi								
Objectifs/ Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du Suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
Specific objective 1:	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
Installation d'une frayère de 15 ha de superficie	Augmentation du peuplement halieutique du lac	-					Statistiques des prises de pêche Statistiques Direction des pêches	Semestrielle	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orienta-tion et de Suivi)
Specific objective 2 :	Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities								
2. Sensibilisation sur les enjeux de protection des RN de l'AMP	Meilleure observance des pratiques de pêche recommandées	-					Rapports de séance Enquête de terrain	Trimestrielle	Idem
Specific objective 3 :	Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect								
3. Construction d'infrastructures modernes pour l'élevage de porcs	Modernisation des conditions d'élevage de porcs Amélioration des revenus des éleveurs	0					Infrastructures construites Conditions de vie des populations	Trimestriel/semestriel	Idem

Specific objective 4 :	Promoting the local culture and the touristic initiatives within the AMP
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Comité villageois	Comité villageois de gestion de Godomey								
Specific objective 1:	Preserving marine and coastal biodiversity of Protected Spatial Marines by rebuilding the collapsing shelters								
	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du Suivi
			Trim 1	Trim 2	Trim 3	Trim 4			
Balises de la zone en défens	Limitation des accès au site de reproduction	-					Dispositif de balises mis en place	Semestrielle/ Trimestrielle	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientatation et de Suivi
Specific objective 2 :	Sustaining the areas of fishing by promoting a participative management of water plans for the benefits of the communities								
Désengorgement du lac par l'enlèvement des parcs à acadja	Amélioration de la praticabilité du lac	0					Enquête de terrain	Semestrielle/ Trimestrielle	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientatation et de Suivi
Organisation d'une séance de dialogue public sur les mauvaises pratiques de pêche à éviter	Meilleure observance des pratiques de pêche recommandées	0					Rapports de séance Enquête de terrain	Trimestrielle	Comité de gestion AMP MEPN/ONG (à définir)

									Comité d’Orientation et de Suivi
Specific objective 3 :	Promoting the fund raising activities in order to reduce the anthropic pressure on the sites to protect								
No proposed activities		-							
Specific objective 4 :	Promoting the local culture and the touristic initiatives within the AMP								
No proposed activities									

Il importe de rappeler que la synthèse des diagnostics établis au niveau des quatre sites retenus en vue de l'expression des besoins a permis de dégager quatre (4) objectifs fondamentaux et partagés par les communautés des quatre (4) sites. Il s'agit de :

Objectif 1 : Préserver la biodiversité marine et côtière des Aires Marines Protégées en restaurant les habitats dégradés ;

Objectif 2 : Soutenir les zones de pêche par la promotion d'une gestion participative des plans d'eau au profit des communautés ;

Objectifs 3 : Promouvoir des activités génératrices de revenus en vue de réduire la pression anthropique sur les sites à protéger ;

Objectif 4 : Promouvoir la culture locale et les initiatives à caractère touristique au sein des AMP

De ces différents objectifs, ont découlés donc les activités proposées. La nécessité d'amener les communautés elles-mêmes à proposer des activités qu'elles seront en mesure effectivement de mener a guidé beaucoup plus, les différentes propositions en termes d'activités, faites dans le plan de suivi-évaluation des activités dites opérationnelles.

Comme constat, il se trouve par endroits dans les plans proposés que, pour certains objectifs, il n'y a pas d'activité proposée ; ce qui explique la mention « pas d'activité proposée ». Ceci, pour la simple raison que les populations de certains sites n'ont pas estimées, pertinentes, prioritaires ou réalisables certaines activités certaines activités pour certaines spécificités qui leur sont propres contrairement à d'autres. C'est le cas par exemple pour des objectifs 3 et 4 pour l'aire marine de Avlékété et le site du lac Nokoué. Les activités mentionnées et qui sont rapport avec certains objectifs viennent exclusivement des communautés bénéficiaires et considérées comme les priorités à prendre en compte.

3.6.4 FOLLOW-UP PLANNING : ACTIVITIES OF MANAGEMENT AND COORDINATION

Bénin	Follow-up planning of the activities of management and coordination, 1st year								
Clients	AMP (Nazoumè-Bouche du Roy ; Avlékété-togbin ; Aire Marine d'Avlékété ; Lac Nokoué)								
Objectif spécifique	Mettre en place un mécanisme global de gestion et de coordination des activités au niveau des comités villageois de gestion								
Activités générales	Indicateurs d'impact	Données de départ <u>Année 2010</u>	Résultats				Sources de vérification	Fréquence de recueil de données	Institutions chargées de l'exécution et du suivi
			Tri m 1	Tri m 2	Tri m 3	Tri m 4			
1. Rédiger et vulgariser les outils juridiques de gestion et de fonctionnement des AMP (statuts et règlement intérieur)	Bonne connaissance par les acteurs des outils et instruments de gestion existant	0					Affiches et supports disponibles	Trimestrielle/semestrielle	MEPN/ONG (à définir) Presse Comité d'Orientation et de Suivi
2. Initier des réunions périodiques avec les comités et organes de gestion à divers niveaux conformément aux textes	Gestion efficiente de la communication ente les divers acteurs et organes	0					Rapports de réunions et de séances de travail	Trimestrielle/semestrielle	MEPN/ONG (à définir) Comité d'Orientation et de Suivi
3. Réaliser des spots et documentaires sur les spécificités de protection de chaque AMP	Meilleure connaissance par la population des activités des AMP,	0					Supports des émissions réalisées et/ou diffusées	Semestrielle	Comité de gestion AMP MEPN/ONG (à définir) Presse Comité d'Orientation et de Suivi

4. Elaboration de supports de communication et de sensibilisation sur les AMP (gadgets, plaquettes d'information, tee-shirts, affiches divers)	Niveau d'information et de connaissance des populations sur les AMP	0					Disponibilité des supports de communication confectionnés	Trimestrielle/semestrielle	Comité de gestion AMP MEPN/ONG (à définir) Presse Comité d'Orientation et de Suivi
5. Initier des rencontres avec la communauté éducative et scientifiques	Gouvernance concertée et partage d'expérience au niveau des acteurs	0					Comptes rendus de séances et de réunions	Trimestrielle/semestrielle	MEPN/ONG (à définir) Comité d'Orientation et de Suivi
6. Identifier les sources de financement potentielles des actions de protection à entreprendre	Contribution effective des comités de gestion à l'identification des sources de financement des activités planifiées	0					Diverses institutions disponibles et acquises à appuyer les AMP	Trimestrielle/semestrielle	MEPN/ONG (à définir) Comité d'Orientation et de Suivi
7. Doter les comités de gestion de moyens et des ressources nécessaires pour leur fonctionnement	Niveau d'autonomie des comités de gestion dans la mise en œuvre technique et financière des activités	0					Budget disponible et moyens logistiques	Trimestrielle/semestrielle	MEPN/ONG (à définir) Comité d'Orientation et de Suivi Partenaires Techniques et Financiers

8. Former les acteurs à la cogestion des espaces récréo-touristiques	Développement de l'approche participative dans la gestion des espaces récréo-touristiques	0					Rapport de formation	Trimestrielle	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientat ion et de Suivi
9. Organiser des visites d'échange, de partage d'expériences et de capitalisation entre AMP ou avec d'autres pays	Mise en pratique des expériences faites et réussies ailleurs	0					Rapports de visites	Trimestrielle/ semestrielle	Comité de gestion AMP MEPN/ONG (à définir) Comité d'Orientat ion et de Suivi
10. Assurer une couverture médiatique des activités clés des AMP	Meilleure connaissance de la population des activités des AMP	0					Supports des émissions réalisées et/ou diffusées	Trimestrielle/ semestrielle	Comité de gestion AMP MEPN/ONG (à définir) Presse Comité d'Orientat ion et de Suivi

3.6.5 PLAN DE SUIVI&EVALUATION : ORGANISATION POUR LA MISE EN ŒUVRE DES ACTIVITÉS

3.6.5.1 Technical Coordination of the project

▪ Skill of the institution in charge of the coordination and of the management of the project

La coordination pourrait être assurée par le Ministère de l'Environnement et de la Protection de la Nature en raison de son statut d'institution étatique et de Ministère de tutelle.

Toutefois, par souci d'efficacité et d'efficience, il est souhaitable que la gestion du projet soit confiée par le MEPN à une Organisation Non Gouvernementale (ONG) comme le Centre pour l'Environnement et de le Développement Durable (CEDED-ONG) compétente en la matière et ayant l'expérience requise et nécessaire dans la gestion des AMP. Le centre devra être responsable de la conduite de l'ensemble des activités du projet au niveau: coordination, animation institutionnelle et capitalisation en relation avec toutes les parties prenantes nécessaires. Ceci devra être fait suite à la signature d'un protocole d'accord et d'un contrat d'activités entre les deux parties. A défaut de cette option, il est souhaitable que le CEDED de par sa position de maître d'œuvre technique du présent projet, soit représenté au sein de l'organe de coordination et de gestion afin de garantir une meilleure assurance-qualité de l'implémentation du présent dispositif.

Pour mener à bien la tâche de coordination et de gestion, la structure en charge de la gestion et de la coordination du processus devra mettre en place une équipe composée d'un directeur de projet et de 4 personnes à plein temps dont un coordonnateur, un spécialiste des aires protégées, un chargé de communication et une assistante administrative. Tout le travail se fera en synergie avec les membres des bureaux (comité de gestion) mis en place au niveau de chaque AMP et sous la direction administrative et institutionnelle du Comité d'Orientation et de Suivi.

▪ Roles and assignments

L'équipe de coordination du projet aura pour tâches entre autres de :

- Identifier sélectionner et appuyer les acteurs locaux qui auront la charge de la réalisation des différentes composantes des plans d'action (bien entendu, en commun accord avec les communautés bénéficiaires) ;
- assurer le contrôle et l'exécution technique des activités et de rendre compte de l'état d'avancement du projet, au Ministre de l'Environnement et de la Protection de la Nature et au PTF impliqués.

Il s'agira d'une unité de gestion légère et souple qui aura pour objectif de fournir en temps réel de l'information sur l'évolution des activités du projet et les difficultés rencontrées. La structure de coordination devra en ce sens, être en contact et en concertation permanents avec les instances de relais comme décrites en amont.

Elle aura aussi pour mission : (i) l'organisation des sessions du Comité d'Orientation et de Suivi qui pourront se tenir une fois l'an pour ce qui est du démarrage de l'expérience pilote ; (ii) la préparation des ateliers de validation des plans de gestion ; (iii) l'intermédiation entre les bailleurs, les experts et les prestataires impliqués ; (iv) la gestion des données produites du projet et leur dissémination et (v) le suivi- évaluation des activités du projet.

3.6.5.2 Committee of orientation and follow-up

▪ Structuration

Il s'agit là de l'instance chargée de l'arbitrage pour la mise en œuvre cohérente des activités du projet et la validation des extrants. C'est le forum des acteurs directement responsables et de toutes les institutions pouvant apporter un soutien direct à la mobilisation des ressources.

Ce comité pourra être composé de membres venant des instances ci-après :

❖ Instances étatiques

- ✓ l'Agence Béninoise pour l'Environnement ;
- ✓ la Direction Générale de l'Environnement (MEPN) ;
- ✓ la Direction des pêches ;
- ✓ le Centre National de Gestion des Réserves et Faunes

❖ **Concerned Communes** représentées essentiellement par les chefs d'arrondissement des aires retenues pour raison de déconcentration des interventions au profit de la base.

❖ **Bailleurs de fonds** du projet et/ ou de tous autres partenaires au développement (bilatéraux et / ou multilatéraux) qui financent tout ou partie des activités du projet.

❖ **Civil society and research institutions**: il s'agit des Représentants des Organisations Non Gouvernementales et Représentants de la communauté scientifique. Leur présence répond au souci de promotion de l'aspect recherche - développement à travers le renforcement des relations théorie-pratique et la valorisation des données produites à tous les niveaux. Il s'agit entre autres de :

- ✓ Centre de Recherche Halieutique et Océanographique du Bénin (Chercheurs) ;
- ✓ l'Association des pêcheurs continentaux ;
- ✓ l'Association des pêcheurs marins.

▪ Roles and assignments

Ce comité de pilotage aura la responsabilité de veiller à la cohérence des plans d'actions, en lien avec les politiques nationales et communales de gestion et de protection des aires marines protégées, de discuter et d'approuver les budgets annuels et les programmes d'action élaborés. Cette synergie devra se faire en rapport avec les ressources mobilisables. En outre, il sera question pour le comité de discuter sur, et d'approuver les rapports annuels, et enfin, d'informer les autorités gouvernementales et les bailleurs de fonds, de l'état d'avancement du projet.

Par ailleurs, le Comité d'Orientation et de Suivi du projet, devra se réunir au moins une fois par an et aura la responsabilité de :

- vérifier la bonne exécution du projet et la cohérence des activités avec les autres programmes d'actions ;
- contribuer à définir les orientations et à s'adapter aux imprévus ;
- discuter et approuver les budgets et les programmes de travail annuels des AMP en cohérence avec les ressources mobilisables ;
- informer les autorités nationales et les bailleurs de fonds, de l'état d'avancement du projet.

3.6.5.3 Content and use of the reports

▪ Reports of activities by AMP and by component

Les rapports d'activités doivent contenir les éléments suivants :

- les activités réalisées et les travaux en cours ;
- les bénéficiaires touchés par rapport aux objectifs ;
- les problèmes et les propositions de solution ;
- le plan de travail à court terme.

▪ The follow-up reports

Pour suivre les activités, les rapports doivent contenir les éléments suivants :

- les données concernant les réalisations effectives ;
- les données concernant les réalisations prévues ;
- les données sur les écarts sensibles par rapport au plan ;
- l'identification des problèmes intervenus dans la mise en œuvre des activités ;
- les mesures ou solutions alternatives envisageables pour corriger les écarts enregistrés.

▪ Presentation of the report

Il sera conçu un canevas unique en guise de fiche synthétique au moyen duquel devra être produit un rapport clair et bref mettant en relief sur deux ou trois pages maximum:

- les objectifs visés par l'activité ;
- les résultats attendus et les réalisations faites ;
- les problèmes rencontrés ;
- la ou les suite(s) à donner.

Use of the follow-up report

- **Pour l'Equipe de coordination du Projet** : les indicateurs étant fonction des objectifs globaux du projet, les rapports de suivi serviront au Coordonnateur d'éléments de décision et de recadrage aux besoins de certaines activités.
- **Pour le Comité d'Orientation et de Suivi** : il effectuera des suivis sur le terrain, évaluera périodiquement les activités en fonction des critères simples et viables, et synthétisera les données émanant des composantes pour en faire un rapport homogène au niveau du projet. Le but est de faire un rapport mettant en exergue les propositions de solutions aux problèmes identifiés afin de réorienter si besoin, les interventions du projet.

3.6.6 Evaluation

- Le projet lancera un essai d'évaluation interne des impacts du projet avec des indicateurs simples et vérifiables. Mais il faut noter que la contrainte fondamentale reste l'option d'annualité retenue surtout en phase de démarrage. En effet, pour une bonne appréciation des impacts et des effets, il faudrait que la durée du projet soit au moins de 3 à 5 ans. Mais il semblerait plus prudent, ne serait-ce qu'au démarrage, de faire des plans d'action annuels quitte à opérer les ajustements nécessaires pour la révision de la durée, au regard des leçons et expériences qui auraient été tirées de l'expérience pilote de mise en œuvre.
- Les réalisations pourraient faire l'objet d'évaluations externes de la part du Ministère de l'Environnement et de la Protection de la Nature et de missions de supervision et/ou d'évaluation à mi-parcours par les PTF ou bailleurs de fonds du processus.

4. LESSONS LEARNED AND WEAKNESSES NOTED DURING THE STUDY

The execution of the project "establishment and management of the MPA" engaged in Benin since 2009, wants to be to be an unique and enriching experience. The device in its whole put in relief a certain number of strong points or good practices and of weak points or insufficiencies to consider in a perspective of improvement of the device in construction

4.1- Essential lessons and good performances

- Dynamic consisting in saving the marine and coastal biodiversity, in the circumstances, the halieutic resources and of other basic species, main food sources of the populations frankly poor;
- Enthusiasm displayed by some populations to see the project taking body;
- Very participative process since identification and the description of the marine areas to be protected, consultations with the different national, departmental and local structures concerned by the management of the MPA, having allowed all local actors to appropriate the project and the activities to lead;
- Large information and communication process : meetings of sensitization and awareness, meeting / workshops of exchange to all interested actors: institutional actors (MEPN, ABE) professional of the fishing (UNAPEMAB, UNAPECAB), Researchers, Academic, Authorities and local populations;
- Flexibility of the process to adapt to the various modifications, iterative methodological approach observed in the data collection and processing ;
- Importance of the regional coordination unit. Advice, technical supports, and various observations on the stage reports.

It is to note that these multiple efforts that led to the present results suffered somewhat of some insufficiencies even though they remain surmountable.

4.2- Weaknesses noted

- Process insufficiently appropriated by the institutional actors who are not often available to some stages;
- Weak capacity of the Management Committees and even of the ministerial actors to do activities of follow-up-assessment in the setting of the setting in work of the process in construction;
- To the technical plan, some insufficient results of the to technical data (for example the installation of the beacons to the level maritime);
- Political recuperation tentative by the policies to the local level at the time of the setting up of the sites management committees;

- The illiteracy of most actors at the level communal and certain confusions on information provided by the different sources and the cards of data collection on the field. It is especially owed to the incomprehension, of the used concepts and terminologies. It brought us to review and to clarify the used terminology.

Conclusion and recommandations

Le projet d'établissement et de gestion des aires marines protégées au Bénin est une initiative qui a démarré depuis environ une dizaine de mois et qui a consisté à mettre en place un dispositif qui devra servir de référence pour l'exécution et la conduite à moyen et à long termes des activités identifiées et planifiées conformément aux objectifs de l'UNIDO. Rappelons que cette institution travaille à l'émergence et la promotion de plusieurs projets transfrontaliers des eaux internationales couvrant les grands écosystèmes marins et cuvettes de rivière dans plusieurs régions du monde.

L'expérience du Bénin comme à l'instar de celle que mènent actuellement les cinq autres pays concernés par la mise en œuvre de projets pilote à consister à la mise en place d'un projet de démonstration qui a pour objectif d'impulser une gestion harmonieuse, communautaire et durable des ressources halieutiques et de le faire animer plus tard par les communautés bénéficiaires elles-mêmes. Au total, la mise en place du dispositif pilote au Bénin a connu six grandes étapes qu'il importe de rappeler brièvement. Il s'agit de: la sensibilisation aussi large que possible des acteurs au niveau local et institutionnel, la cartographie à grandes échelles et détaillées des sites, l'élaboration des plans de gestion, la démarcation et la délimitation physique des sites, l'élaboration des plans d'action et enfin l'élaboration d'un plan de suivi-évaluation pour chacune des AMP.

La mise en place du dispositif a duré une dizaine de mois (novembre 2009 - octobre 2010) et a connu une forte participation des acteurs au niveau local, même si au plan institutionnel la participation

souhaitée des acteurs n'a pas toujours été effective en raison de la non disponibilité de ces derniers. Toutefois, leur contribution du reste a été très déterminante et capitale pour le succès du processus et les résultats enregistrés.

Par ailleurs, au-delà des enseignements et bonnes pratiques qui découlent de cette expérience, le processus dans sa conduite a révélé un certain nombre d'insuffisances qui ont pour noms : (i) l'analphabétisme des acteurs au niveau local, ce qui accroît leur dépendance vis-à-vis des services d'appui-conseils extérieurs pour la mise en œuvre des activités ; (ii) la difficulté de concrétiser dans les faits, certaines options techniques en ce qui concerne la protection et la délimitation des zones sensibles notamment celles localisées en mer (par exemple la pose des balises au niveau maritimes) ; (iii) la tentative de récupération politique du processus par certains élus locaux au niveau communal lors de la mise en place des comités de gestion des sites.

En outre, il importe de faire mention de ce que, toute la démarche technique et administrative qui a conduit à l'élaboration des différentes phases du projet y compris les plans d'action des AMP, a été impulsée par la volonté de l'équipe de réalisation des activités de privilégier les étapes de concertation et d'apprentissage dans une optique d'appropriation du processus autant que faire se peut.

Au plan technique donc, au travers des séries de concertations et d'activités de préparation, la phase de planification et de budgétisation a été précédée d'un atelier de mise en place des organes de gestion, notamment le comité de suivi et d'orientation dans une démarche purement stratégique.

Les différentes activités et sous-activités planifiées pour une annualité (soit pour l'an 2011) émanent essentiellement des plans de gestion antérieurement établis par village et au niveau de chaque AMP concernée.

De manière spécifique, on distingue dans le document, notamment pour ce qui est de l'étape N° 5, un plan d'action pour les activités de développement des communautés par AMP et un autre pour les activités de gestion et de coordination.

Les coûts totaux des activités des plans d'action, y compris une prévision de 10% des estimations totales sont estimés pour la plupart, à plus d'une vingtaine de millions de francs CFA sauf pour l'Aire Marine d'Avlékété pour laquelle on n'a pu faire une évaluation vraiment exacte en raison de l'absence de donnée fiable pour l'estimation de certaines activités. Ceci fait que parfois, les totaux mentionnés pour certains cas, sont restés encore partiels. C'est par exemple, le cas de l'activité n°2 de l'Aire Marine d'Avlékété portant sur le marquage des alentours du site par la pose de balises de protection et celui de la sous-activité 1.2 portant sur l'élevage du port dans le village de Tchonvi /site du lac Nokoué.

Il faudrait faire remarquer que pour un début de l'expérience, la vision de CEDED-ONG est l'élaboration d'un plan d'action annuel qui pourra être révisé et actualisé chaque année après une évaluation annuelle de la mise en œuvre.

Par ailleurs, un autre acquis non négligeable de cette démarche a été l'élaboration d'un plan de Suivi Evaluation qui devra permettre de mesurer les progrès accomplis à chaque étape d'exécution des activités et d'identifier les ajustements nécessaires afin de maximiser les chances de réussite et d'atteinte des objectifs visés. Cette étape de l'étude a décrit comment les objectifs de performance seront mesurés, quand seront élaborés les rapports sanctionnant le suivi et comment les évaluations seront faites. Il devra servir d'outil de gestion stratégique pour la conduite du projet en permettant un

suivi continu de l'exécution des activités et un cadre d'identification des problèmes et d'ajustement à apporter durant la mise en œuvre.

Par ailleurs, selon la vision du projet, ce plan devra servir de guide pour la mise en œuvre des activités et la gestion du programme en vue de permettre aux membres du Comité de pilotage, du Conseil Consultatif, au Ministère de l'Environnement et de la Protection de la Nature et aux différents acteurs qui vont être impliqués dans le processus y compris les bénéficiaires de mieux s'approprier les objectifs du projet et les groupes cibles à atteindre.

Enfin, il faudra mentionner que la poursuite du processus va être bien entendu, après un exercice de priorisation sur la base de critères bien définis, de retenir deux des sites objet de la présente étude (un sur le milieu continental et un autre sur le milieu marin) comme précédemment annoncer dans le rapport d'étape N° 4 pour initier l'expérience pilote de mise en œuvre des activités planifiées.

The project of establishment and management of the MPA in Benin is an initiative that started since about ten months, and that consisted to put a device that should act as reference for the execution and the conduct, at short and long terms, the identified and planned activities in accordance with the objectives of the UNIDO. Recall that this institution works to the emergence and the promotion of several cross-border projects of the international waters covering the Large Marine Ecosystems in several regions within the world.

The experience of Benin as like the one that lead the five other countries concerned by the setting pilot projects has consisted to the setting up of a demonstration project that has for objective to promote a harmonious, communal and sustainable management of the halieutic resources, and to make enliven it later by the beneficiary communities themselves. In concrete terms, the setting up of the pilot device in Benin knew six big stages that it imports to recall briefly. It is about of: the sensitization as large as possible of the actors to the local and institutional level, the cartography of the sites at large and detailed scales, the development of the management plans, the demarcation and the physical delimitation of the sites, the development of action plans, and finally the development of a follow-up-assessment plan for each AMP.

The setting up of the device lasted about ten months (from November 2009 to October 2010) and knew a strong involvement of main actors at the local level, even though on an institutional level the wished involvement by the local actors was not always efficient because these people are not often available. However, their contribution was very determining and fundamental for the success of the process and the recorded results.

Otherwise, beyond lessons and good practices from this experience, the process, within its conduct, revealed a certain number of insufficiencies that has for names: (i) the illiteracy of many actors at the local level, what deludes their dependence opposite the services of outside support-advice for the setting in work of the activities,; (ii) the difficulty to concretize in the facts, some technical options with regard to the protection and the delimitation of the sensitive zones notably some of those are located in sea (for example the installation of the beacon in the open sea); (iii) the tentative of political recuperation of the process by some elected local to the local level at the time of the setting up of the committees of management of the sites.

Besides, he/it imports to make mention of that that, the whole technical and administrative gait that drove to the development of the different phase of the project including the plans of action of the MPA, was promoted by the will of the team of realization of the activities to privilege the stages of dialogue and training in an optics of appropriation of the process as much that to make can itself.

On a technical level therefore, through the sets of dialogues and activities of preparation, the phase of scheduling and budgeting has been preceded of a shop of setting up of the management organs, notably the committee of follow-up and orientation in a merely strategic gait.

The different activities and under-activities planned for an annualité (either for the year 2011) emanate essentially early of the management plans workbenches by village and to the level of every MPA concerned.

In a specific manner, one distinguishes in the document, notably for what is the stage N° 5, a plan of action for the activities of development of the communities by MPA and another for the activities of management and coordination.

The total costs of the activities of the plans of action, including a forecasting of 10% of the total evaluations are estimated for most, to more of about twenty millions (20 000 000) F CFA for the Navy area of Avlékété for which one could not make a really exact assessment because of the reliable data absence for the evaluation of some activities. It makes than sometimes, the totals mentioned for some cases, remained even partial. It is for example, the case of the activity n°2 of the Navy area of structural Avlékété on the marking of the surroundings of the site by the protective beacon pose and the one of the under structural activity 1.2 on the raising of the port in the village of Tchonvi / Nokoué Lake site.

It would be necessary to make notice that for a beginning of the experience, the vision of CEDED-NGO is the development of a yearly action plan that will be able to be reviewed and actualized every year after a yearly assessment of the setting in work.

Otherwise, another non negligible acquirement of this gait was the development of a Follow-up Assessment plan that should permit to measure the progress accomplished to every stage of execution of the activities and to identify the necessary adjustments in order to maximize the odds of success and attack of the objectives aimed. This stage of the survey described how the objectives of performance will be measured, when will be elaborated the reports punishing the follow-up and how the assessments will be made. He/it should act as strategic management tool for the conduct of the project while allowing a continuous follow-up of the execution of the activities and a setting of identification of the problems and adjustment to bring during the setting in work.

Otherwise, according to the vision of the project, this plan should act as guide for the setting in work of the activities and the management of the program in order to allow the members of the piloting Committee, of the Council Consultatif, in the Ministry of the environment and the Nature conservation and to the different actors who are going to be implied in the process including the recipients to appropriate the objectives of the project and the groups targets better to reach.

Finally, it will be necessary to mention that the pursuit of the process goes to really be sensible, after an exercise of priorisation on the basis of well definite criterias, to keep two of

the sites object of the present survey (one on the continental environment and another on the marine environment) as previously to announce in the report of stage N° 4 to initiate the pilot experience of setting in work of the activities planned.