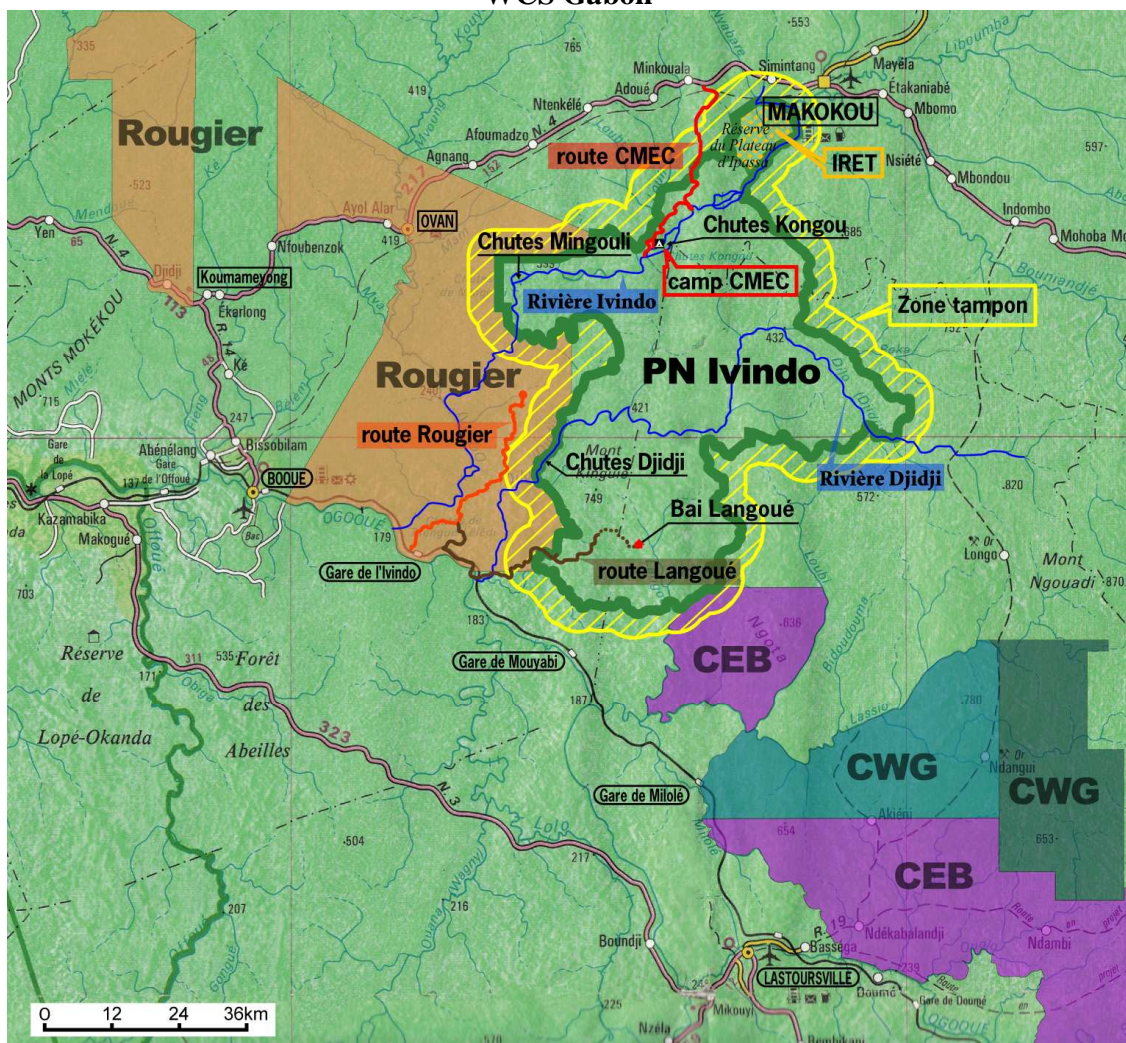


## PA, Ivindo National Park

### Draft Land Use Plan and Strategy Document

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The map shows Ivindo National Park and its buffer zone along with the adjacent logging concessions identified (Rougier, CEB and CWG). The key sites / rivers / roads / towns / villages / railway stations were named: IRET, Bai Langoué, Chutes Kougou, Chutes Mingouli, Chutes Djidji, Ivindo River, Djidji River, Langoué road, Rougier road, CMEC road and its camp. The surrounding towns and villages are mainly along the national road (Makokou – Ovan – Koumameyong, Booue) and at the railway stations (Booue – Ivindo – Mouyabi – Milole – Lastourville).

## Draft Land Use Plan

It is a draft Land Use Plan and only 50% completed at this stage

### **Unique Value of the Protected Area**

Ivindo National Park is 300,000 ha in size and is located in the central area of Gabon. This PA has been nominated as a World Heritage site as a result of its unique features, and higher value as a protected area. The unique value of Ivindo includes, the presence of:

- ✓ Largest waterfalls in the Central Africa region with spectacular view
- ✓ Larger Bai “Langoue” with a high concentration of mammals, including western lowland gorillas
- ✓ Large tusked forest elephants that are rare to see in the Central Africa region
- ✓ Intact river with high diversity of aquatic species
- ✓ Wide range of pristine forest which has never been logged

### **Characteristics of the Protected Area**

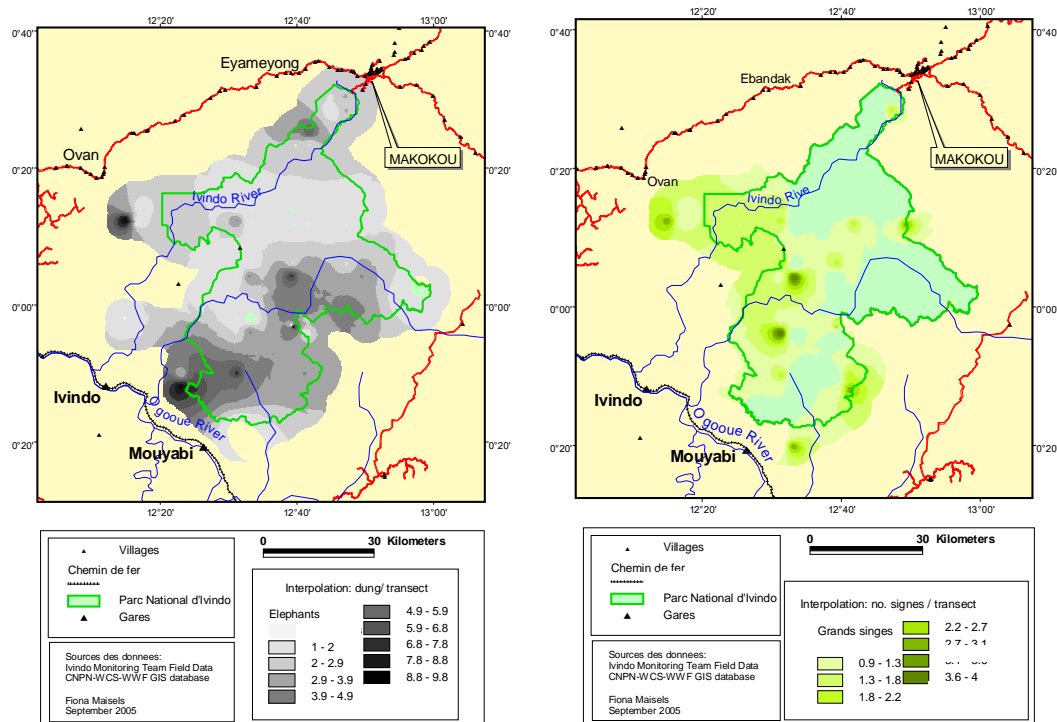
#### Physical features

The PA boundary was established mainly along rivers, but also taking into consideration existing logging concessions such as Rougier. There are two major rivers which cross the PA called Ivindo and Djidji (**see Map in the cover page**).

#### Ecological features

Key wildlife resources are elephants including large tuskers and western lowland gorillas (**Map 1**). There are at the higher density areas particularly in southwestern area of PA.

This area is at the same time zone of highest human activity area (**Map 2**). The other key wildlife resources include the high diversity of aquatic species in the rivers, particularly in Djidji River which is nearly intact from any human activities.

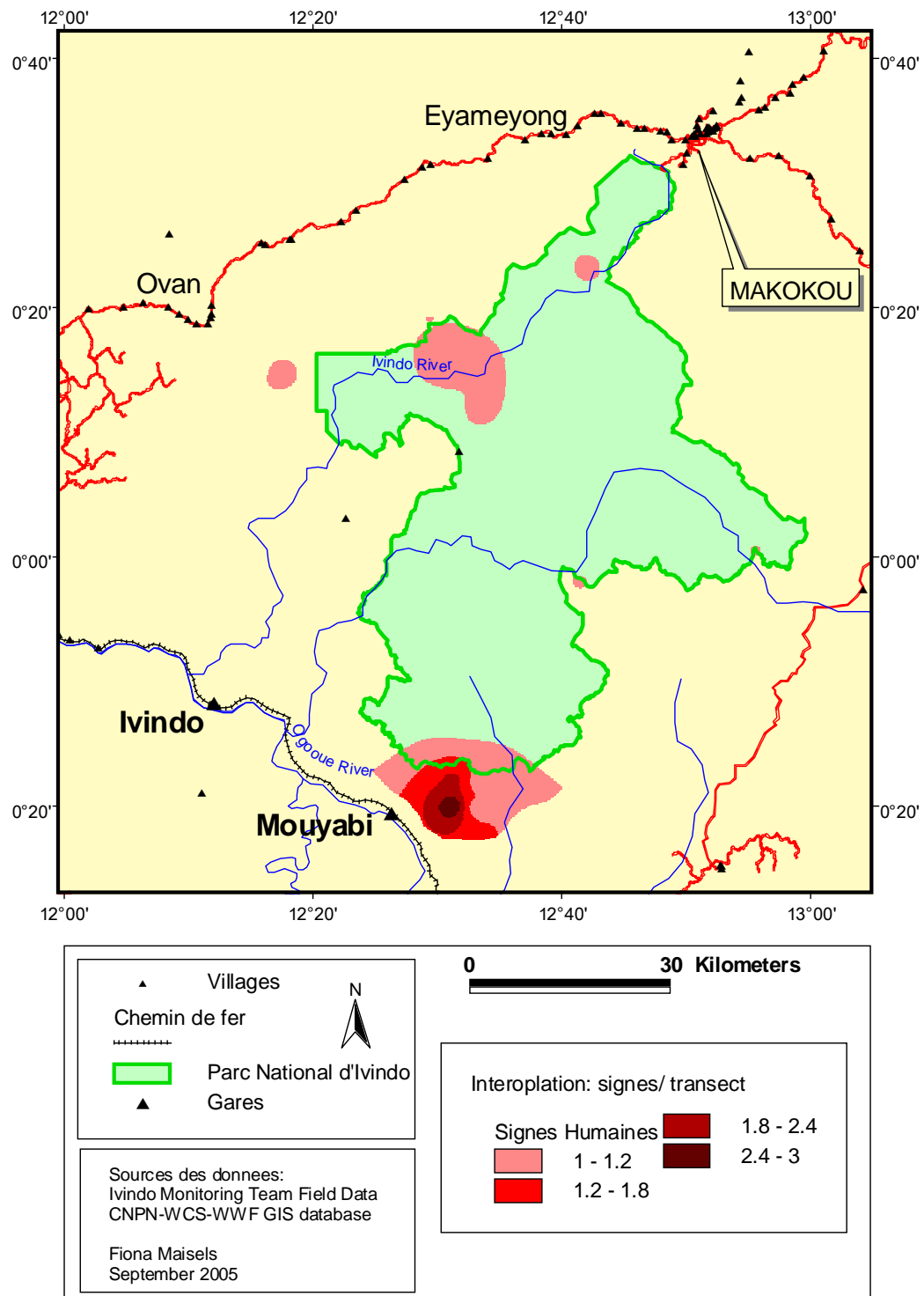


**Map 1 : Show distribution of elephants (left) and apes (right) in Ivindo National Park and its buffer zone (F. Maisels, 2005 : bio-diversity and human impact monitoring results showing the major mammal distributions which were in more southern and easter parts)**

## Socio-economic features

### *Human Presence*

Around the PA, most people are found in the villages along the national roads (Makokou – Ovan – Koumameyong – Booué) around the railway stations (Booué – Mouyabi – Milolé – Lastourville) and in the neighboring logging camps. Those are outside the PA and its buffer zone (see **Map in the cover page**).



*Map 2: Show human signs in Ivindo National Park and its buffer zone (F. Maisels, 2005)*

The exceptions are:

In the PA,

There are seasonal (1) and permanent human presence [(2), (3) and (4)] areas:

- (1) Seasonal community fishing zone along Ivindo River (partly in the buffer zone);
- (2) CMEC (*China National Machinery & Equipment Import & Export Corporation*: Chinese dam construction project company) road, camp and their activity area around Kongou Waterfalls, where FIGET (*Fondation Internationale de Gabon Ecotourisme*: Italian tour operator) manages ecotourism focusing on visits of the waterfalls;
- (3) Langoue Bai where WCS manages mammal monitoring and ecotourism and maintains the road toward the camp site;
- (4) IRET (*Institute de Recherche de l'Ecologie Tropicale*: National Research Institute), which existed prior to the creation of the National Parks and is located at the northeastern edge of the PA.

In the buffer zone of PA, the following natural resource extracting activities are on-going:

- (1) The Rougier (logging) concession on the eastern side of the park border;
- (2) CEB (*Compagne Equatoriale du Bois*: logging company) on the southeastern side of the park border;
- (3) SETRAG (*Société d'Exploitation de Transgabonais*: railway company) on the southern side of the park border where stations are close to the park;
- (4) Unidentified logging companies, villages and camps particularly outside the southern part of the PA.

#### Stakeholders

- ✓ ANPN (conservateur of the PA): *Agence National des Parcs Nationaux*
- ✓ Ministère des Eaux et Forêts
- ✓ Ministère de l'Environnement
- ✓ IRET
- ✓ Rougier
- ✓ CEB
- ✓ Other logging companies
- ✓ SETRAG
- ✓ CMEC
- ✓ FIGET
- ✓ Fishing community (for Ivindo River)

#### Threats

Large scale existing threats:

Bushmeat hunting in the southern area outside the PA. Hunters supposedly use the logging road network and then transport the bushmeat on the SETRAG railway.

Potentially larger scale threat:

Ecological impact of CMEC dam activities.

Excessive fishing along Ivindo River and illegal hunting in the associated area.

Potentially smaller scale threat:

## Tourism impact at Langoue Bai

### Future Challenge

- ✓ To support the ANPN in carrying out frequent anti-poaching patrols on the area of “large scale existing threat”;
- ✓ To provide additional training to ANPN ecoguards (particularly field navigation with GPS, GIS data management and reporting);
- ✓ Law Enforcement Monitoring (LEM) to the government through MIST (Management Information System) methods which will be introduced by WCS;
- ✓ Basic socioeconomic study using BNS (Basic Necessities Survey) method which will be introduced by WCS;
- ✓ Reinforcement of sustainable fisheries management on the Ivindo River through the creation of a local fishing association;
- ✓ Develop collaborations with logging companies not only in order to stop illegal activities but also for sustainable logging management;
- ✓ Develop an environmental and social management plan for CMEC dam construction through a proper EIA;
- ✓ Evaluation of tourism impact at Langoue Bai including an analysis of the mammal monitoring data and financial assessment of tourism.

### **Desired Conditions**

- ✓ The principal desired condition for the PA is bio-diversity conservation in the pristine forest ecosystem without illegal activities having an impact on wildlife in the PA. This includes maintaining the large tusked forest elephants and rich aquatic diversity in the intact river system.
- ✓ Human extractive activities in the PA such as seasonal local fishing and the CMEC dam project should be controlled by respective management plan in order to mitigate for environmental impact.
- ✓ Logging activities in the PA’s buffer zone should be sustainably managed and ensure that there is no illegal hunting of wildlife going on within the concession.

### **Objectives**

The objectives are listed in order of priority as follows:

#### 1. Habitat and species conservation in the PA

*Challenges and opportunities:*

- ✓ Frequent anti-poaching patrols on the “large scale existing threat” area above mainly by ANPN team, particularly protecting large tusker elephants
- ✓ Develop collaborations with logging companies not only in order to stop illegal activities but also for sustainable logging management in order to mitigate impact from outside the PA
- ✓ Develop an environmental and social management plan for CMEC dam construction through a proper EIA

2. Community participation toward sustainable fishing management in the PA  
*Challenges and opportunities:*
  - ✓ Reinforcement of sustainable fisheries management on Ivindo River through creation of local fishing association
3. Training for field patrols and LEM  
*Challenges and opportunities:*
  - ✓ Additional training for ANPN ecoguards (particularly field navigation with GPS, GIS data management and reporting);
  - ✓ LEM through MIST (Management Information System) method which will be introduced by WCS
4. Community and ecotourism development  
*Challenges and opportunities:*
  - ✓ Basic socioeconomic study through BNS (Basic Necessities Survey) method which will be introduced by WCS in order to find out potential benefit of local communities
  - ✓ Creation of local employment through future ecotourism development at Langoue Bai and at Kongou Waterfalls (under the environment-mitigated operations by CMEC)

### **Guidelines**

- ✓ National Park law  
 “Loi 003/2007 Relative aux Parcs Nationaux” established by the Gabonese President and related Ministers on Sep 11<sup>th</sup>, 2007.
- ✓ Hunting rule  
 In “Code Forestière”
- ✓ Fishing rule  
 In “Code des Pêches et de l’Aquaculture Loi 015/2005”
- ✓ Environmental rule  
 In “Code de l’Environnement Loi 016/1993 du 26 août 1993 relative à la protection et à l’amélioration de l’environnement”
- ✓ PGES (Plan de Gestion Environnementale et Sociale)  
 “CERTIFICAT DE CONFORMITE DE L’EIE des travaux de sismique 2D dans le bloc lotus de la société Sinopec Overseas Oil & Gas Limited N /345.07/PM-MEPNV/SG/DGEPN (May 09<sup>th</sup>, 2007). This has been created uniquely for oil exploration activity by the Chinese company (SINOPEC) in Loango National Park under Ministry of Environment in order to mitigate for environmental and social impact on the PA. A similar document should be applied to CMEC dam construction project in Ivindo National Park.
- ✓ Règlement Interieur du Parc National de l’Ivindo  
 The draft document for this was written by the Conservateur of Ivindo NP in May 2008, but it has not been official yet. This should outline the procedures if anybody needs to create new infrastructure (buildings, roads etc) as well as rules of any vehicles in the PA.
- ✓ Cahier de Charge

This document should be established between the Park administration and tour operators in the Park. The draft document for this was written by the Conservateur of Ivindo NP in May 2008, but it has not been made official yet.

- ✓ Research permission  
Any research permission is given by CENAREST (*Centre Nationale de Recherche Scientifique et Technologique*). If research happens in the PA, the Conservateur of ANPN gives “PA entry” permission to researchers who are authorized by CENAREST.
- ✓ Community rights for subsistence fishing  
Traditional and seasonal fishing along Ivindo River in the PA is a special case for subsistence of local communities, but the fishing rules should be established.

### **Micro-Zones**

There are two important Micro-zones in the PA.

#### **(1) CMEC Kongou Waterfalls dam project zone**

This zone includes the road, the camp site and the active zone (in the river and the forest around the waterfalls). Through lobbying the Gabonese government by regular surveys and reports, the priority is to push the government to conduct an environmental impact study and then establish PGES (see the above) in order to mitigate for environmental and social impact.

#### **(2) Ivindo River sustainable fishing zone**

This zone has already been identified as the CBNRM Ivindo River. The objective is to establish sustainable management with traditional fishing by local communities through creating its rules and local fishing association for long term management mechanism.

### **Implementation Schedule**

See the Work Plan matrix FY09. Below is timeline implementation plans (see the Table below).

### **Monitoring**

Monitoring measures are in order of priority as follows. MIST, which will newly be introduced by WCS, is a very useful tool to evaluate efforts of patrols and surveys and to show what will be necessary to achieve to the following “Desired Conditions”.

- ✓ Producing LEM reports through MIST
- ✓ Monitor decreasing amount of bushmeat at each railway station
- ✓ Monitor decreasing amount of illegal / non-sustainable logging
- ✓ Repeating BNS survey in terms of reducing amount of bushmeat demand



		FY09			
	trimester	1st	2nd	3rd	4th
anti-poaching patrol		X	X	X	X
ecoguard training		X	X		
LEM (through MIST)		X	X	X	X
socioeconomic survey (through BNS)		X	X	X	X
biodiversity and human impact monitoring		X	X	X	X
sustainable fishery management of Ivindo River	assessment of fish diversity	X			
	agreement of fishing rules with local community	X			
	establishment of fisheries association	X			
	monitoring fishing activities	X	X	X	X
collaboration with logging companies	collection of GIS information	X	X		
	establishment of MOU with logging companies	X	X		
	monitoring activities in logging concessions		X	X	X
management plan for CMEC	survey, reporting and lobbying	X			
	establishment of management plan	X	X		
	monitoring CMEC activities		X	X	X
ecotourism evaluation of Langoue	reporting and evaluation	X			
	new stage of ecotourism		X	X	X

## STRATEGY DOCUMENT

### **Identify and Define Roles of Planning Team:**

- ✓ WCS Gabon country director, WCS Ivindo technical advisor and WCS Ivindo responsible  
Role: carry out the CARPE tasks in the field and make Land Use Plan with the following authorities
- ✓ ANPN (conservateur of the PA)  
Role: carry out law enforcement through patrols and surveillance as well as establish *Règlement Interieur* and *Cahier de Charge*
- ✓ Ministère des Eaux et Forêts  
Role: carry out legal and sustainable logging activities in the forest concessions around Ivindo NP
- ✓ Ministère de l'Environnement  
Role: create “environmental and social management plan” for CMEC in the NP

### **Information/Data Gathering:**

#### Mammal data at Langoue Bai

WCS has been doing mammal monitoring since 2001 and ecotourism since 2005 at Langoue Bai, but as yet there has been no data analysis carried out. In FY08, the Langoue camp manager started to analyze all data to find out:

- Annual and seasonal change of mammal observation at the Bai
- Population dynamics of mammal species at the Bai
- Potential tourism impact on mammal presence at the Bai
- Fruiting plant species availability to mammals around the Bai

The preliminary reports will be available before end FY08 (Sep 30th 2008).

#### Socioeconomic data

At the villages around Ivindo National Park (along the road between Makokou and Ovan), socioeconomic study had happened in 2005 and 2006 as one of the “Park & People” program of WCS Gabon, but no data analysis has happened. We will initiate data analysis with David Wilkie before end of FY08 period.

#### Other information useful for management plan for Ivindo National Park:

- Biodiversity and human impact monitoring data for a whole Ivindo National Park and its buffer zone, which training program is currently going on in FY08 and actual monitoring can be accomplished in FY09.

- Patrol data based on MIST (Management Information System) established by WCS for Law Reinforcement, which training program will be done before end FY08.
- Socioeconomic data on BNS (Basic Necessities Survey) established by WCS on the villages along the national road (between Makokou, Ovan, Koumameyong, and Booue) – see MOV of ERZ Ivindo-Minkebe Interzone.
- Environmental and social management plan which should be adopted to CMEC Kongou dam project in order to mitigate environmental and social impact – see MOV of ERZ Belinga.
- Sustainable fishery management plan at Ivindo River with agreement of local fishermen – see the strategy document of CBNRM Ivindo River.
- Establishment of MOU between WCS and Rougier in order to reinforce their sustainable RIL (Reduced-Impact-Logging) management – see MOV of ERZ Rougier Ivindo.
- Watershed management at Djidji River and protection reinforcement around southern area outside Ivindo National Park with GIS information logging concessions and their road system – see the strategy document of ERZ Djidji River.

### **Creation of a Public Participation Strategy**

The presence of the Ivindo National Park along with WCS project presence has not been familiar to the public around the Park. This is because most of activities of WCS Ivindo for the National Park have been focused on mammal monitoring and tourism at the WCS Langoue camp.

In FY08, the WCS team initiated stakeholder meetings at Makokou in January and between March and April at southern towns (Booue and Lastourville) as well as at logging companies (Rougier and CEB) in order to explain the geographic location of Ivindo National Park and the presence of WCS project for the National Park. **See three reports attached (Annex I, II and III).**

One of the most important community-based management plans in Ivindo National Park has been subsistence fishery activity management on Ivindo river in participation with local fishermen. Some village stakeholder meetings had been carried in FY08 and a draft agreement with fishermen will be completed before end of FY08.

For the purpose of public announce of Langoue Bai, we have accommodated the American TV crew “Survivor” at the Bai who has huge audience in the world (**see the attached doc describing about Survivor: Annex IV**) while we could not invite Gabonese TV crews. The second

mission of Survivor crew at Langoue will be completed before end of FY08.

### **Creation of Strategy for Formal Recognition of Plan**

Stakeholder meetings have been done led by Lee White (WCS Director of Conservation Strategy, Ogooué & Congo Basins) with the aim of discussing the management plan and also the inscription of Ivindo on World Heritage Site list. Before end of FY08, White will finalize management plan from these meetings along with the stakeholder meetings organized by WCS Ivindo team.

The following reports should be attached in this management plan::

- Biodiversity and human impact monitoring and its second mission strategy
- Annual and seasonal change of mammal observation at the Langoue Bai
- Population dynamics of mammal species at the Langoue Bai
- Potential tourism impact on mammal presence at the Langoue Bai
- Fruiting plant species availability to mammals around the Langoue Bai
- Initial data analysis of socioeconomic study in 2005 and 2006 as one of the “Park & People” program.

In FY09, the Land Use Plan will be shared with the following authorities and exploitation companies to be recognized and to launch discussion toward its proper adoption:

- ANPN
- Ministère des Eaux et Forêts
- Ministère de l’Environnement
- Rougier
- CEB
- Other logging companies
- CMEC
- FIGET

### **Creation of Vision and Objectives for the Macrozone**

The creation of a vision and objectives for the entire Ivindo National Park Macrozone has not been done properly in the past. This has been because the WCS Ivindo project had mostly focused on Langoue Bai. In FY09, the restructuring of WCS Ivindo project will include the identification of a clear vision and objectives for each Macrozone (**see Land Use Plan above**). On this process, all stakeholders listed above as well as local communities should be involved.

### **Identify Management Micro-Zones and Associated Objectives and Guidelines**

Based on the previous monitoring information (2005) for the whole Ivindo National Park, the greatest threats to Ivindo National Park protection can be classified into the key Microzones in order:

- a. Illegal hunting and illegal wildlife trade micro-zone around the southern part of the National Park, particularly in the logging concessions and along the railway stations
- b. The area around the CMEC Chinese dam project at Kongou Waterfalls
- c. The community fishing zone along Ivindo River (where there is inappropriate community fishing activities and illegal hunting)

Objectives for each Microzone will be:

- a. Reduce illegal activities around the southern part of outside of the National Park
- b. Reduce the potential environmental impact of the Chinese dam project in the National Park
- c. Reduce the impact of fishing and the other illegal activities along the Ivindo river in the National Park

### **Elaboration of Implementation Plan for Macrozone**

Identification of activities to achieve to each objective, we have carried out in FY08:

- ✧ Training ecoguards of ANPN on biodiversity and human impact monitoring and MIST and sending them to the missions under WCS financial and logistic supports
- ✧ Training course of biodiversity and human impact monitoring mission has been started in Lope
- ✧ Continuing monitoring larger mammals at Langoue Bai and protecting larger population of elephants in and around the Bai
- ✧ Monitoring forestry company activities during the visit of Rougier and CEB concessions close to the National Park limits.

These will be continued toward end of FY08. Patrol reports including their training progress by ecoguards will be done by end of FY08.

We have not pursued logging road ecological restoration project on old logging roads located within the National Park. Among a series of discussions between Rougier and WCS for elaboration MOU, this item has not been identified as a priority. The progress report on this issue will be done by end FY08.

Then the following implementation plans will be realized in FY09:

- a. Frequent anti-poaching patrols in the southern part of Ivindo National Park based on info of repeating mammal and human monitoring as well as reinforced collaborations with the surrounded logging companies
- b. Continuous survey, patrol, reporting and lobbying of the Chinese dam project activities
- c. Establishment of local fishery association and management plan for Ivindo river through stakeholder meetings and regular patrol

#### **Creation of Monitoring Plan for Macrozone**

Monitoring measures are in order of priority as follows. MIST, which will newly be introduced by WCS, is a very useful tool to evaluate efforts of patrols and surveys and to show what will be necessary to monitor Land Use Plan.