

# Internal Ex-Post Evaluation for Technical Cooperation Project (SATREPS<sup>1</sup>)

Conducted by Gabon Field Office: March, 2022

Country Name	<b>Conservation of Biodiversity in Tropical Forest through Sustainable Coexistence between Human and Wild Animals</b>
Gabonese Republic	

## I. Project Outline

Background	Congo Basin, located in Central Africa, has the second largest tropical forest following Amazon in the world. In particular, Gabon has the high forest coverage in Congo Basin and has high level of biodiversity and many endemic species. The government of Gabon started to take measures for conservation of abundant ecosystem in the country through establishment and management of national parks and introduction of ecotourism based on the national parks. However, there have been issues to conduct effective conservation activities because of the insufficient collection and analysis of scientific data on tropical forest ecosystem. In addition, it was necessary to accumulate scientific knowledge for introduction of ecotourism in an appropriate manner, including countermeasures against amphiexenosis.												
Project Objectives	<p>Through development of ecological map of the Moukalaba-Doudou National Park (Parc National de Moukalaba-Doudou: PNMD), proposing safe contact with primates, development of scientific methodology for ecotourism and promotion of environmental education for the local communities, the project aimed at proposing methodology of sustainable management of biodiversity with participation of local people based on scientific data.</p> <ol style="list-style-type: none"> <li>Expected Overall Goal: None</li> <li>Project Purpose: Methodology of community based sustainable management of biodiversity with participation of local people is proposed based on scientific data.</li> </ol>												
Project Activities	<ol style="list-style-type: none"> <li>Project Site: National Park of Moukalaba Doudou (PNMD) and neighboring area (Doussala zone)</li> <li>Main Activities: 1) Development of ecological map of PNMD, 2) Proposing safe contact with larger mammals, in particular primates, 3) Development of scientific methodology for ecotourism aiming at observation of primates, 4) Promotion of environmental education and training of local specialist, so on.</li> <li>Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Japanese Side</td> <td style="width: 50%;">Gabonese Side</td> </tr> <tr> <td>1) Experts: 28 persons</td> <td>1) Staff allocated: 16 persons</td> </tr> <tr> <td>2) Trainees received: 14 persons</td> <td>2) Facilities and land: Office space and laboratory in the campus of Research Institute of Tropical Ecology (IRET)</td> </tr> <tr> <td>3) Equipment: Sensor cameras, autoclaves, vehicles, satellite telephones, etc.</td> <td>3) Local operation cost: Cost for utilities, travel expenses, cost for office appliance, and so on</td> </tr> <tr> <td>4) Local operation cost: Cost for construction consultant and constructor, cost for materials, and so on</td> <td></td> </tr> </table> </li> </ol>			Japanese Side	Gabonese Side	1) Experts: 28 persons	1) Staff allocated: 16 persons	2) Trainees received: 14 persons	2) Facilities and land: Office space and laboratory in the campus of Research Institute of Tropical Ecology (IRET)	3) Equipment: Sensor cameras, autoclaves, vehicles, satellite telephones, etc.	3) Local operation cost: Cost for utilities, travel expenses, cost for office appliance, and so on	4) Local operation cost: Cost for construction consultant and constructor, cost for materials, and so on	
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Project Period	September 2009 – September 2014	Project Cost	Ex-ante: 449 million yen Actual: 531 million yen										
Implementing Agencies	Research Institute of Tropical Ecology (Institut de Recherche en Écologie Tropicale: IRET), the National Center of Scientific Research and Technology (Centre National de la Recherche Scientifique et Technologique: CENAREST) of the Ministry of Higher Education and Scientific Research (Ministère de l'Enseignement Supérieur et de la Recherche Scientifique), National Agency of National Park (L'Agence Nationale de Parcs Nationaux: ANPN)												
Cooperation Agency in Japan	Kyoto University, Kagoshima University, Chubu Gakuin University, Yamaguchi University, Kyoto Prefectural University												

## II. Result of the Evaluation

1 Relevance
<p>&lt;Consistency with the Development Policy of Gabon at the Time of Ex-Ante Evaluation &gt;</p> <p>The Project was consistent with the Gabon's development policy. The President of Gabon expressed efforts for forest and biodiversity conservation through establishment of national park network and promotion of ecotourism at the World Summit on Sustainable Development (WSSD) in Johannesburg, Republic of South Africa in September 2001. No detail policy document on the forest and biodiversity conservation was not prepared but the policy directions was presented by the President's speeches.</p> <p>&lt;Consistency with the Development Needs of Gabon at the Time of Ex-Ante Evaluation&gt;</p> <p>The Project was consistent with Gabon's development needs for effective conservation activities of tropical rain forest in Congo basin in the country through establishment and management of national parks and introduction of ecotourism based on the national parks.</p> <p>&lt;Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation&gt;</p> <p>The Project was consistent with Japan's ODA Policy for Gabon prioritizing cooperation for environmental area as since the government of Gabon focused on environment<sup>2</sup>.</p> <p>&lt;Evaluation Result&gt;</p> <p>In light of the above, the relevance of the project is high.</p>

<sup>1</sup> SATREPS: Science and Technology Research Partnership for Sustainable Development

<sup>2</sup> Ministry of Foreign Affairs, "ODA Country Data book 2009"

## 2 Effectiveness/Impact

### <Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was achieved at the time of project completion. A document called “PROCOBHA Perspectives” was prepared to present the concept and long-term vision for ecotourism development and biodiversity conservation for PNMD. The draft of methodology of community based sustainable management of biodiversity based on the scientific data was prepared and presented to ANPN (Indicator 1).

### <Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have continued since project completion. The fauna and flora map produced by the SATREPS project have been used by ANPN and IRET for gorillas mapping for example. Since 2018, a small and selective ecotourism in terms of gorilla observation<sup>3</sup> has been ongoing in order to finance for functionalizing the research station, which was planned to be constructed under the SATREPS project. All constructions for the research station have been completed except the installation of solar panels, which have still not been provided because of the insufficient remaining budget for purchase caused by repeated and unforeseen additional work expenditure and by the unexpected financial difficulties of Gabon as a result of the drop of oil price which prevented the country from paying its full financial contribution. Environmental education of the villagers has been continuously conducted through the grassroots technical cooperation project funded by JICA aiming at training of local tour guides for ecotourism development in the communities<sup>4</sup>. IRET plans to include it as a subject in the school program. Gabon Untouched, a Spanish NGO, plans to help reopen the primary school in Doussala village. Ecotourism handbooks and guidebooks have been used by IRET, ANPN and NGOs as reference. The Sciences Faculty of the University of Montpellier, France with IRET has been conducting a project, “Screening of fruit species ate by medium and large mammals”, financed by the Francophone University Agency (Agence Universitaire de le Francohonie: AUF) and supervised by Prof Bretagnole since 2017. IRET is also planning with an NGO, “Project of Bio monitoring of mammal diseases, using non-invasive methods”. It is expected that the collaboration with another ongoing SATREPS project, “The Project for Establishment of Laboratory Surveillance System for Viral Diseases of Public Health Concern” (SYMAV project) of Lambarébé will contribute to the development of medical kits for to better health monitoring results.

Although the research station constructed has been still used to some extent the laboratory equipped as a research station has been underused due to insufficient energy production one of the power generators and other lab equipment were damaged after the flood of the entire region in December, 2018. The vehicle provided by the SATREPS project is still in use. On the opposite, the IRET Laboratory is used a lot by different partners. For example, Health Sciences University (by research students) had sent student to use the facilities in order to analyze the effectiveness of meningitis vaccine on the strains present among children in Gabon. IRET has been using the facilities for bacteriological and microbiological screening of human and animal faecal samples; extraction of DNA from faecal samples and tissus; PDR amplification; visualization with electrophoresis (sequencing is then done in Lambaréné). ANPN has been using the laboratory for its efficient tracking of elephants through sampling of faecal, tissues and bones from which DNA is extracted for the genotype through real time PCR. The Research Institution of Agricultural and Forestry (L’Institut de Recherche Agricole et Forestière: IRAF), under the Ministry of Higher Education, has been using the laboratory for screening of viruses from animal tissue samples. The Institute of Pharmacopeia and Traditional Medecine (l’Institut de Pharmacopée et de Médecine Traditionnelle (IPHAMETRA), under the Ministry of Higher Education, also uses the laboratory for the analysis of antiparasitic activity on plants extracts.

### <Status of Achievement for Expected Overall Goal at the time of Ex-post Evaluation>

No expected Overall Goal was set at the time of project design. The outcomes of the SATREPS project have been used by IRET for the inventory of the regional fauna. In terms of environmental education, tourists have been the first beneficiaries.

According to ANPN, the SATREPS project has deepened the understanding on the resource (gorillas) and the sustainable ecotourism with the participation of local people, making the information available. However, there is currently no group of gorillas that are observable and accustomed to humans as the initial group leader has passed away and members of the family are now disseminated. Combined with the fact that there have been few travelers, local people may not necessarily benefit the expected outcome of the project if tourism activities do not increase.

### <Other Impacts at the time of Ex-Post Evaluation>

There are some positive impacts of the Project confirmed at the time of the ex-post evaluation. Through the participation of a female researcher in the SATREPS project gave an opportunity to encourage other female researchers to join an international joint research project in the context of Gabon where only a limited number of female researchers have participated in national and international research projects. Thanks to the availability of equipped laboratories combined with the training programs, the capacity of researchers has been improved. As for now, 7 national agents have obtained their doctorates, 4 of them are now senior researchers and 2 of them will apply for the position of associate professor. It has been observed that the government is being more interested in terms of biodiversity conservation questions. Still, it seems that some efforts are needed in terms of making known the results of scientific recherche in general to the public, ministries as that of tourism and to the Government itself. Dr. Ngomanda, the new CENAREST Commissioner, is working toward the creation of a team/organization dedicated solely to this objective. The SATREPS project has created some economic activities, such as some seasonal jobs for the villagers since a wood company have left the region.

No negative impact by the SATREPS project was confirmed at the time of ex-post evaluation.

### <Evaluation Result>

Therefore, both the effectiveness and impact of the project is high.

### Achievement of Project Purpose

Aim	Indicators	Results
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<sup>3</sup> As one of the research outputs of the SATREPS project, the researchers of Kyoto University conducted observations of a gorilla groups for habituation to human through a long-term observation without feeding, which enables gorillas to naturally behave in front of observers, in order to introduce ecotourism based on the gorilla observation and developed a scientific method and manual for ecotourism.

<sup>4</sup> “Training of community guides for ecotourism development in Mukaraba area”. ECOLOGIC, a Japanese general incorporated association is an implementing agency for the project.

<p>(Project Purpose) Methodology of community based sustainable management of biodiversity with participation of local people is proposed based on scientific data.</p>	<p>Indicator 1: Methodology of community based sustainable management of biodiversity scientific data is presented in report and proposed to related organizations such as the National Agency of National Park (L'Agence Nationale des Parcs Nationaux: ANPN)</p>	<p>Achievement Status: Achieved (Continued) (Project Completion)  <ul style="list-style-type: none"> <li>● A document called “PROCOBHA Perspectives” was prepared to preset the concept and long-term vision for ecotourism development and biodiversity conservation for PNMD.</li> <li>● The draft of methodology of community based sustainable management of biodiversity based on the scientific data was prepared and presented to ANPN.</li> </ul>  (Ex-Post Evaluation)  <ul style="list-style-type: none"> <li>● The key research outputs have been used for introduction of the ecotourism in the target region.</li> </ul> </p>
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Source : Terminal Evaluation Report, JST Terminal Report, Questionnaires survey with project coordinators.

### 3 Efficiency

Although the project period was as planned (the ratio against the planned: 100%), the project cost exceeded the plan (the ratios against the plan: 118%). The project outputs were produced as planned.

Therefore, the efficiency of the project is fair.

### 4 Sustainability

#### <Policy Aspects>

One of the three pillars within the “Emerging Gabon Strategic Plan”, which is a long-term vision for the period up to 2025, published in 2012, is Green Gabon. It describes an integrated approach to environmental conservation and sustainable development. Within this document, there is a mention of pursuing biodiversity conservation, which supports the activities of this project. The research is recognized as one of the various activities for environmental conservation, and priorities on its content and budget allocation are left up to each ministry.

#### <Institutional/Organizational Aspects>

The positions of head of the research station and head of laboratory have been created as a result of this SATREPS project. Around 50 persons (staffs and researchers) have participated in the SATREPS project. Among them 8 trackers are employed on a part-time basis and are divided in two shifts. 6 researchers are permanently working on sites (Doussala and IRET) and are also divided in shifts. A scientific committee reuniting all partners and institutions concerned<sup>5</sup> has been put in place about the following topics: “Monitoring of biodiversity in Moukalaba-Doudou Park”; “Biomonitoring (health monitoring) of biodiversity”; and “Human versus animal conflicts resolution and sustainable coexistence between man and animal in and the hereabouts of Moukalab-Doudou Park”.

For an efficient operation of the facilities and equipment installed by the SATREPS project, IRET has assigned a head of the research station and 3 other staff (all four are researchers), and they work on a shift basis for the operation of the research station. In addition, one technician is in charge of the maintenance of generator and electricity supply of the station. For the laboratory, a head of laboratory and 1 assistant work permanently for the operation of the laboratory of Libreville. For the technical maintenance of all technical laboratory equipment, a private company named ESTTM has been hired by IRET.

#### <Technical Aspects>

Since the researchers have equipped facilities and equipment to develop research program, their capacities have improved through participation in national and international scientific seminars. Also, housing of researchers at the station makes it easier for them to conduct biological and microbiological analysis on site, isolate bacteria strains, genetic studies up to genotyping with real time PCR. Thanks to the ECOLOGIC project, the capacity of the local specialists and trackers have greatly improved. Their level of literacy in terms of ecotourism is without doubting among the highest in the country.

On the other hand, the scientific literacy of the government has not been much improved due to a lack of communication from the Ministry of Research.

After the SARTREPS project, the training for the maintenance of the equipment, mainly the power generator, could not be completed. For the maintenance of laboratory equipment installed in IRET, no staff has been trained or hired but the private company has been hired by IRET.

#### <Financial Aspects>

The funds for the research activities related to the SATREPS project are mainly coming from NGOs and other institutions than the Ministry of Research and extra activities organized by IRET. No permanent financing has been secured. The facilities/equipment expenses are to be borne by the Ministry of Research which has not secured a budget for this specific use. Due to the deteriorating economic situation mainly, the Ministry of Research have not been able to secure a budget for the research activities related to the SATREPS project.

#### <Evaluation Result>

In the light above, there has been some problem from technical and financial aspects, but the policy and institutional/organizational aspect has been in good condition. Therefore, the sustainability of the effects through the Project is fair.

### 5 Summary of the Evaluation

The project was achieved the Project Purpose for preparation of the concept and long-term vision for ecotourism development and biodiversity conservation for PNMD. As for sustainability, there have been some concerns from the technical and financial aspects but the organizational setting has been adequate to continue the related research activities. As for efficiency, the project cost exceeded the plan. Considering all of the above points, this project is evaluated to be satisfactory.

## III. Recommendations & Lessons Learnt

<sup>5</sup> Joint Research Unit (Unité Mixte de Recherche) (CENRS) from France, under the supervisions of Prof Bretagne; Spanish NGO Gabon Untouched, under the supervision of Anotonio Anoro; Kyoto University; Chubu Gakuin University with Prof Takenoshita, Nagasaki University; Panel of students from the University of Nagasaki who often come to Gabon through their research study programs

**Recommendations for Implementing Agency:**

- It is suggested that IRET encourages the Ministry of Research and related ministries to develop research strategies which will boost their implication and activities.
- It is recommended that IRET sets up regular opportunities for the Ministry of Research and other relevant institutions to become more aware of the importance of this project by organizing activities such as workshop.
- It is necessary for IRET to take actions for securing a steady budget from the Ministry of Research.

**Lessons Learnt for JICA:**

- In case where construction of facilities is planned during the project implementation and the cost is borne by the implementing agency, there are risks including delay of the construction work due to unexpected additional work, economic environment and fiscal conditions. Therefore, it can be expected that possible countermeasures against the assumed risks will enable to fully realize project effects and to ensure sustainability of the project effects.
- Activities including equipment maintenance training that could not be completed during the project period may remain unimplemented due to difficulties in follow-up, even if planned after the project. It could be more effective to take some measures such as extending the project period to ensure that the activities are implemented.



Gorillas in the s observed in the forest in Doussala, Tchibanga



Vegetation in Doussala, Tchibanga