

Management and conservation of forest concession biodiversity

Evaluation of ITTO projects shows positive outcomes in North Congo

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THE CONGO BASIN is the second largest continuous mass of tropical moist forests in the world after the Amazon and is abundant in varied and unique flora and fauna. For centuries the basin's local populations have lived from gathering, fishing and hunting in these forests. In recent years, many of the Congo basin's forests have been earmarked for development. Current forest development activities (including establishment of road infrastructure, industrial facilities, housing and transport logistics) are drawing an influx of workers and other migrants totaling in the tens of thousands of people. These various communities live within and around the forest, generally with easy access to forest resources facilitated by forest roads.

With the widespread circulation of small light arms, Congo basin fauna has been increasingly subject to poaching to supply local and urban markets, and for the export of trophies. Consequently, the populations of animal species protected by law, such as gorillas, elephants or bongos, have declined, often sharply. Even small mammals, a vital traditional source of protein for native populations, are in some places threatened with extinction.

Traditional systems of natural resource management, as well as holy sites and local ways of life are often being disrupted by forest development, and native communities often feel marginalized especially where forest industries employ outsiders. In many places, forests are being managed without taking into account ecological, socio-economic, cultural and religious parameters.

Congo projects

In the Republic of Congo, forests occupy approximately 60% of the country's surface area (20.4 million hectares). Recognizing the ecological and economic importance of these resources, limited areas of high ecological value have been totally protected. However, 15 million hectares of Congo's forests are intended for production and are subject to forest management. Congo, as a member of ITTO and signatory of relevant international conventions, is aiming at achieving the sustainable management of its forest resources. With this perspective of sustainability in mind, the ITTO-funded project entitled 'Biodiversity management and conservation in a forest concession adjacent to a totally protected area of the Nouabale-Ndoki National Park (PROGEPP)' was initiated in 1999 in North Congo in order to implement the techniques of sustainable management. The implementation of a system of fauna and forest management is at the center of the PROGEPP activities, with the participation of local communities. PROGEPP was conceived to safeguard forest resources for their long-term use by the local communities and the indigenous populations.

PROGEPP is a joint initiative between Congo's Ministry for Forestry Economics (MFE), an international NGO (Wildlife Conservation Society, WCS), and a private company (Congolaise Industrielle des Bois, CIB). The project site covers an area of approximately 1.8 million hectares



Green business: Villagers selling gnetum leaves, Pokola Market.
Photo: M. Borner

(including the national park and the CIB concession) in one of the most critical regions for biodiversity in Africa.

The project aimed to reduce the human pressure on fauna and biodiversity through enhanced protection of these resources and the introduction of reduced impact logging. In September 2001, a second agreement was signed with the ITTO for project PD 4/00 Rev.1(F), which placed particular emphasis on the participation of local communities in the planning and management of natural resources. This partnership with the ITTO was recently renewed in 2007 under project PD 310/ 04 Rev.2(F).

Strategic partners

The MFE provides institutional, human, logistic and financial support for the smooth operation of the project. The results achieved, as well as the management tools developed, are integrated into the management plan adopted by the Government and will enable it to replicate results in other forest management units (FMUs). They will also help the Government to adapt its legal and institutional framework at the national level, with potential implications in Central Africa, where Congo is a member of the Sub-regional Commission on Forests.

CIB, which has been operating in Congo since 1969, has been allocated forest concessions of approximately 1.3 million

hectares constituting the buffer zones of the Nouabalé-Ndoki National Park (PNNN). CIB has significant industrial facilities in two sites (Kabo and Pokola). In its vision of long-term sustainable production, CIB provides substantial financial support to the PROGEPP, especially for protection. Moreover, CIB also has a management unit which plans for reduced impact logging (RIL), and a social unit which designs, together with local communities, a participative planning process as a basis for consultation. CIB has introduced into its rules of procedure provisions to formally ban hunting in prohibited sites and the transport and export of bush-meat from one site to another. An environmental management plan has been established within its industrial sites. The management plan of the Kabo concession, the first in the Congo, was adopted in 2006 and has obtained FSC certification, and CIB is continuing the same process in its other concessions. The objective is to position itself in external timber product markets which are becoming increasingly demanding for timber sourced from sustainably managed forests.

WCS is an American NGO which operates at the international level for nature conservation. Through an agreement with the Congolese Government, it was engaged to ensure the management of the PNNN and take charge of procurement activities for the PROGEPP. Given the disregard which forest companies have sometimes shown for conservation concerns, and the rather common spirit of opposition of environmental NGOs towards timber industries, both WCS and CIB should be congratulated for their strong involvement and constructive concerted approach to the management of a multi-use forest. WCS has set up a monitoring system (focusing on ecological and socio-economic monitoring, research, and law enforcement) which is a set of performance indicators to measure the project's progress. It is also committed to raising the awareness of local communities, both children and adults, regarding laws and regulations governing hunting, and the rational use of natural resources.

The local populations consist of native villagers, various groups of nomads (Pygmies), and workers of the CIB and their dependents. They have formed committees to manage their hunting grounds and, after some training, have largely assumed the management of their natural resources, including contributing to the removal of illegal hunting camps.

The partnership between these stakeholders, built on a long-term vision, is a unique and revolutionary initiative in Central Africa because it unites stakeholders with divergent objectives around a common theme of sustainably managing forest resources.

Project results

With the active participation of native communities, a zoning plan for hunting was established by the PROGEPP, taking into account the various land uses by communities/ethnic groups. Natural resources essential for the semi-nomads have also been defined to protect them from over-exploitation (e.g. individual sapelli trees, important for the collection of caterpillars or honey). The zoning plan was innovative since it extended 'outside the protected area' and reconciles the conservation objectives with the rights and activities of the local populations on the one hand, and the legislation relating to hunting on the other, while taking account of the economic interests of the forest industries.

Forest wardens are recruited within the local communities and trained by WCS to create monitoring and anti-poaching teams. The forest wardens constitute the backbone of the protection framework. Permanent road

stations have been established to check vehicles, and mobile teams patrol in the forest to search for poachers and illegal traps.

The project also trains Congolese researchers in ecological and socio-economic monitoring in its Ecological Research Center. The data collected help to adapt project strategies and to monitor local needs, as well as providing scientific support for the reduced impact logging activities. The results of this research indicate that the populations of protected fauna species have benefited from the project. Traveling through the forest, one can meet gorillas crossing the roads, and see buffaloes or bongos in the clearings. The increasing presence of elephants close to villages and in fields is an indicator of the success of protection, but constitutes an on-going problem of conflict between man and wildlife. The project has already experimented with several elephant deterrent methods, but this remains a recurring problem which requires the attention of all conservation stakeholders.

The project has achieved its main objective, i.e. the protection and conservation of forest resources. Participatory community management still requires much effort (including continued training) and must be embedded in a long-term vision to achieve effective joint administration and empowerment of the communities to manage their lands.

Demographic and social issues

In Pokola, CIB's main base, the establishment of a significant forest industry has created a unique socio-economic situation in the north of Congo. A large town has been built in the middle of a sparsely populated forest area, 10% of the 13 000 inhabitants of which are employed by CIB. This situation has required that CIB take responsibility for assuming State functions (e.g. health, schools, water and energy). A quality of life not easily found elsewhere attracts immigration to Pokola, carrying the risk of non-sustainability and depopulation of other regional townships. The supply of food poses a problem, with the import of protein sources (e.g. beef, chicken, fish) required to reduce the human pressure on wild fauna.

Income producing activities other than hunting have been introduced and should be further developed to fit adequately within the project strategy under its on-going phase. It is essential that the Government develop more regional urban centers and encourage migration to towns rather than to the forest. The Government should also continue to support the transfer of responsibility for forest management and the decision decentralization process to the indigenous communities.

It is also essential for the project to develop activities dependent on the conservation of natural resources, thus reinforcing the interests of local communities in the sustainable use of such resources. For example, this could take the form of growing and gathering gnetum leaves (*Gnetum africanum*), honey and basket-making material. All these activities will take time to produce significant results, because the local communities still need to be strengthened at the organizational, design and training levels.

One of the greatest constraints facing the project lies in the lack of human resources, either at community level for organizing themselves and to function as productive groups, or at the level of technicians, and especially at the management level to build on the initiatives undertaken. A plan for the development and management of human resources must be established by the project to ensure the long-term achievement of the objectives of sustainable forest resource management.

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Sustainable bamboo utilization in Thailand

Long term improvements result from an ITTO project

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FOREST-dependent communities in Thailand became increasingly dependent on the harvesting and trading of non-wood forest products (NWFPS) such as bamboo and rattan, gums and resins, edible plants including mushrooms, medicinal plants and spices, edible insects, tannins and other crops, as a result of the total ban on logging in the country that started in 1989. ITTO pre-project PPD 4/98 Rev.1 (1) 'Promotion of Tropical Non-Wood Forest Products in Thailand' identified the problem of rapidly declining bamboo resources due to excessive harvesting, including illegal harvesting of bamboo stands in the forests. Appropriate propagation and plantation management techniques for shoot and pole production were generally not widely known by farmers. Similarly, rural-based bamboo-using enterprises had limited access to information and technologies on the efficient use of bamboo; hence no opportunities to improve traditional products, let alone produce higher value ones.

ITTO PD 56/99 Rev.1 (1) 'Promotion of the Utilization of Bamboo from Sustainable Sources in Thailand' arose



Hand up: Villagers pass bamboo seedlings for planting at Ban Mae Mae Community Forest.
Photo: F. Soriano

from PPD 4/98 and was implemented by the Royal Forest Department (RFD) of Thailand from October 2000 to September 2004 to promote sustainable bamboo plantation management and utilization as a means of generating livelihoods and income for rural communities engaged in collecting, processing, storage and sale of bamboo products. Plantation management techniques were disseminated to farmers and other villagers by establishing experimental plots planted with five selected commercially important bamboo species either for shoot or pole production in two

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Sustainability and wider applicability of project outcomes

Since its initiation in 1999, this project has carried out many activities which today constitute assets and bases for the continuation of the principal objective of biodiversity conservation while taking into account the needs of local communities. The tools for biodiversity conservation and a methodology for reduced impact logging have been developed. This project is therefore a well-suited model for replication in other FMUs. However, replication entails some preconditions.

A consistent political and institutional will to promote and advance the sustainable management of forest resources is essential. While the national forest policy aims towards sustainable reduced impact logging, this policy does not seem to be consistently and effectively imposed on all operators in Congo. Industrial companies which make substantial efforts in forest management and biodiversity conservation are often penalized rather than remunerated for their efforts. They invest at the social and environmental levels, and assume the responsibility for functions of the State, but are taxed at the same rate as operators who undertake no such investments/responsibilities. To promote an equitable policy of good management in all FMUs, the Government must apply a 'motivation—sanction' approach to

encourage operators, e.g. by granting tax advantages and, at the same time, exerting pressure on those companies which do not fulfill their obligations, e.g. by withdrawing their concessions.

In addition to the ITTO funding, the project partners have committed themselves to financially supporting the project in its current phase. However, the experience of the last several years has highlighted a lack of adequate financing. While seeking the contribution of other donors, innovative and sustainable finance sources, for example the use of part of the taxes paid by the forest industries, should be explored.

In the long term there must be a synergy between conservation on the one hand and the well-being of the local populations on the other. More intensive support for economic development with regard to the sustainable use of natural resources by the local populations is necessary, at the same time as intensified efforts to raise public awareness and education. Indeed, these two aspects must be combined to show how sustainable natural resource management leads to activities which produce income and preserve the resources at the same time.

The full evaluation report and more details on the Congo projects are available from rjm@itto.or.jp.