

Improving forest governance in the Republic of Congo

An ITTO-supported remote sensing project assists mapping and monitoring

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THE FOREST ESTATE of the Republic of Congo, extending on both sides of the equator, covers a surface area of more than 22 million ha, more than 65% of the national territory. Close to 75% of the forest area, or more than 15 million ha, constitute the production estate. Conservation of fauna and flora is well established in the country's several large national parks and fauna and hunting reserves. The total cover of such protected areas represents more than 11% of the national territory.

The government of Congo is engaged in a process of monitoring the forest activities on its territory, in order to improve its capacity for the planning and sustainable management of its forests. It is in this context that the Congo Ministry of Forestry Economics (MEF) and the World Resources Institute (WRI) have agreed to cooperate. The implementation of this collaboration is primarily based on the three year ITTO project PD 176/02 REV.1 (F) initiated in February 2004 entitled *Application of the techniques of remote sensing and geographical information systems to support the control of the forest legislation in Republic of Congo*. The project was implemented through close cooperation between WRI, the

Northern bounty

Map 1: Vegetative cover and road transport network



National Center for Inventories and Management of Forests and Fauna (CNIAF) and the national NGO 'Friends of the Environment' (CAE).

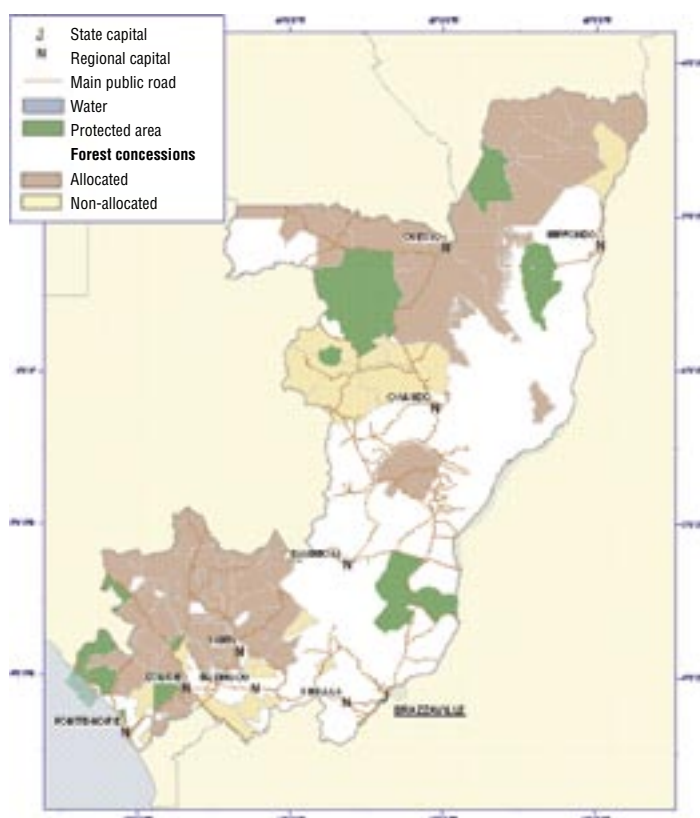
Implementation

The strategy set out by the project was to facilitate the enforcement of the forest legislation by developing a system which provides forest data deemed essential for law enforcement and encourages the use of these data to reduce the frequency of illegal activities. This strategy was based on four themes:

1. **Strengthening the national capacity.** Training of the project's technical managers in the fields of remote-sensing, geographical information systems, database management and use of the GPS. Raising the MEF executives' awareness of the potential of these tools to facilitate their work and the process of decision-making for a more effective application of the forest legislation. Setting up of a well-equipped remote-sensing and GIS laboratory and establishing technical procedures and methods as well as effective and comprehensive working practices.
2. **Data acquisition.** The project has ensured that the government received regularly updated GIS-based national scale information on the limits of the zones theoretically open to logging; information on the locations of actually logged areas and forest tracks derived from remote-sensing; and, using a series of indicators, information on logging practices.

Spreading the wealth

Map 2: Allocation of production forests



3. **Data analysis.** The data generated has been compared with the measurements prescribed by the forest legislation and other commitments made towards sustainable management.
4. **Dissemination of the project's results.** The results were made available to the public by means of forest maps, spatial maps and information workshops held in Brazzaville and in the provinces in order to show the efforts made by the MEF to curb illegal forest activities.

This ITTO project provided the foundations for the implementation of a support project financed by the CARPE (USAID) program to continue the remote-sensing and GIS activities which made it possible in June 2007 to produce and publish Congo's first interactive forest atlas, giving access to easily generated information on Congo's forests. In addition, also through CARPE, the ITTO project made it possible to implement collaborative activities between the WRI and the Marian N'Goubai University's Institute for Rural Development for the development and implementation of a curriculum in geographical information systems, remote-sensing and cartography.

The project is in line with and contributes to the efforts made at the sub-regional, regional and international levels by a multitude of entities (e.g. COMIFAC, PFBC, AFLEG, FLEGT, FORCOMS) as regards the fight against illegal logging and towards sustainable forest management.

Congo's forest sector

Until 1972, timber was the country's primary resource and represented more than half of its exports. It has since been relegated to second place by oil and now contributes roughly 7% of GDP. The Congo's recent programs of economic revival have laid a particular emphasis on the development of the timber processing sector, recognizing that the forest sector in general constitutes a significant source of added value and job creation. In 2004, the production of roundwood reached 1.3 million m³, almost double 2001 production.

To facilitate forest management, and pursuant to the recent forest code (law 16/2000 of November 20 2000) and its various application texts, the permanent forest estate is divided into forest management units (FMUs). These are basic forest districts devoted to activities such as planning, management, conservation, restoration and production. The FMU classification decrees define their geographical limits, as well as their planning objectives and their management methods. The country currently has established 39 FMUs totaling a surface area of almost 19 million hectares, divided into allocated forest concessions (12 million ha), non-allocated forest concessions (3.3 million ha) and protected areas (3.7 million ha).

Forest legislation

The use of the forest area is governed by law 16/2000 of November 20 2000 instituting the forest code. It takes into account the developments relating to forest management and environment conservation which have occurred in the last few years at the international level and the new socio-political context of the Congo. The recent organizational audit of the forest administration's structures has shown a trend towards the modernization of the forest sector's system of governance and of the State's financial sector. From the point of view of forest regulation, the forest code and its decrees of application have set up a framework whose broad outline meets the current challenges of the planning and sustainable management of the resources.

Although the principles of these reforms are moving in the right direction, there are nevertheless significant implementation difficulties due to the inadequacies of the institutional framework, the low local capacities and the scarcity of modern management tools to make it possible to increase

the operational performance of the administration. Greater effectiveness and transparency require the establishment of a system of control which would make it possible to centralize the operations relating to each FMU. The project has attempted to respond to some of these difficulties.

Contribution to SFM

The ITTO project has made a significant contribution to the sustainable management of the forest resources of the Republic of Congo by strengthening the capacities for systematic application of the forest legislation and by securing broader access to international timber markets. Congo is now equipped with powerful tools and qualified technical staff allowing for a better monitoring of forest activities in the country. Project contributions include the following:

- establishment of a laboratory for remote-sensing, GIS and operational forest cartography, making it possible to meet the needs of the administration and the private sector;
- official recognition by Ministerial Circular 1159/MEFE/CAB-AAJ of 25 April 2006 of the data generated by the project's laboratory as the national reference data in terms of forestry development and planning;
- production of a management guide to the geographical data and a dictionary of the attributes of the areas mapped in order to harmonize the data and relevant information on the forest sector;
- use of the remote-sensing data supported by missions on the ground has made it possible to identify irregularities such as logging outside approved concessions or illegal trans-boundary logging activities (e.g. on Congo—Central African Republic border); and
- ongoing mapping of operational forest concessions to assist in levying/allocating surface area based taxes.

The publication of the first version of the interactive Congo forest atlas is a significant innovation in the forest sector because it collects within a user-friendly tool the spatial data and qualitative information relating to management of the forests and the governance in the sector. Users of the atlas will be able to visualize and produce essential timely information within the framework of control activities and informed decision-making. The atlas also provides examples of possible applications: priorities for surveillance missions on the ground; application of laws and regulations; resolution of conflicts relating to the boundaries of areas dedicated to forest utilization; information on previous logging activities; and regional planning (including for biodiversity conservation). *Maps 1 and 2* show the type of information available from the atlas.

Access to reliable and up-to-date data on the forest sector, as well as an improvement of capacities and effective actions to monitor logging activities, as promoted by the project, are essential components of greater transparency and better governance. The image of the Congo, and of the forest products which the country produces, is enhanced at the international level and the confidence of the timber importers is maintained through the ready availability of such information.

Thanks to the information generated, the senior decision makers and the various stakeholders can henceforth easily access and process the most recent and relevant data relating to the monitoring of the forest activities as well as view, and as required produce, maps. The interactive forest atlas of Congo will be able to help the forest administration, NGOs, donors, intergovernmental organizations, research institutes and forest companies in their efforts to improve forest governance and management.

Project outputs are available from the ITTO Secretariat (rfm@itto.or.jp).