

CoForTips – Congo basin forests: tipping points for biodiversity conservation and resilience of forested social and ecological systems

The purpose of CoForTips is to foster better management of the Congo Basin forests through 1) a better understanding of the dynamics and regime shifts of biodiversity, and linkages between social and ecological systems and 2) the construction of scenarios of biodiversity, exploring possible futures for the forests and people of the region. The scenarios will explicitly address different management and policy options.

How is biodiversity changing? What are the drivers of environmental change? How will they interact and shape the future of the region? To tackle these questions CoForTips will develop spatially explicit models linking social and ecological processes, and focus on study sites selected along a gradient of human intervention. The project explicitly addresses the need to embed research in the decision making process, and will therefore work in close partnership with the stakeholders and policy makers of the region.

The project is organized in three research components aiming at:

- 1) Identifying tipping points in the forests of the Congo basin SES, characterising and mapping biodiversity resilience, identifying stable states and tipping points focusing on tree communities and keystone wildlife species.
- 2) Constructing scenarios of biodiversity, integrating social, economic, governance, ecological and geophysical processes in a platform able to simulate regional trajectories including sensitivity analysis and levels of uncertainty and incorporating feedback loops based on coping strategies developed by stakeholders.
- 3) Fostering resilience, embedding the results of our research in the decision making process at the regional and national levels, through well-defined impact pathways involving policy makers and the civil society, through participatory construction of scenarios, fostering innovation in forest and biodiversity policy and management.

The project will cover all the countries of the Congo Basin but three sites will be selected for in-depth surveys: Two sites have already been selected: in Cameroon (Dja region) and in Gabon (Makokou region). A third site is under discussion.



Partners:

Centre for International Cooperation in Agronomic Research for Development, CIRAD, FRANCE, coordinator
International Institute for Applied Systems Analysis, IIASA, AUSTRIA
Université de Liège, BELGIUM
Institut de Recherche pour le Développement, IRD, FRANCE
Ecole Nationale Supérieure des Mines de Paris, FRANCE
University of Montpellier 2, FRANCE
University of Rennes, FRANCE
Électricité De France, FRANCE
IRAD, CAMEROON
University of Douala, CAMEROON
University of Bangui, CENTRAL AFRICAN REPUBLIC
Institut de Recherche en Ecologie Tropicale-IRET, GABON
INDEFOR, GUINEA EQUATORIAL
University Marien Ngouabi, REPUBLIC OF THE CONGO
University of Barcelona, SPAIN
ETH Zürich, SWITZERLAND

Duration: 01-2013 to 12-2015

Total grant: €835 118

**Further information: Claude Garcia
(claud.garcia@cirad.fr)**