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The forests of the Congo Basin are under increasing pressure from the mining industry, agribusiness and infrastructure associated with it. The Nki Falls in Cameroon (photo above) could be flooded if a hydroelectric dam allowing mining in the TRIDOM region were built.

One response to this proposed increased pressure is ecological compensation [1]. With it, a developer could design, fund, and implement conservation actions to offset the environmental damage of its intervention.

CoForTips is interested in scenarios of biodiversity in the Congo Basin. In order to focus more specifically on compensation mechanisms, we created CoForSet. Like its sister project, CoForSet will use models and participatory scenarios to explore the modalities of implementation of compensation, their implementation and their influence on the development trajectories of the Congo Basin.



**Donald Iponga**  
**CoForTips/Set**

Donald is an ecologist, researcher at the Research Institute for Tropical Ecology (IRET) in Libreville (Gabon). His research activities focus on two areas: basic ecology and forest governance in the Congo Basin. First, Donald is interested in biophysical, ecological and socio-economic factors that determine the spatial and temporal distribution of plants and animals. Moreover, he establishes new approaches for forest management in the Congo Basin. By promoting its multifunctionality, they aim to maintain the ecosystem's integrity while enhancing riverside livelihoods in a sustainable way.



**Victor Mbolo**  
**CoForSet**

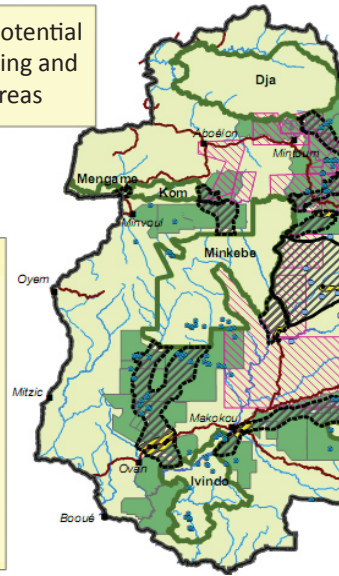
Victor has worked for 22 years in conservation in Central Africa, and since 2008 as a technical assistant with the WWF in the interzone TRIDOM Congo. He provides field supervision, supports ecological monitoring and patrols monitoring. Victor is perhaps the expert with the finest knowledge of the area and its issues.

The forests of the Congo Basin represent one of the last great tropical forests unaffected by humans. They host a variety of species, including gorillas and elephants. The inhabitants of these forests (Bantu, Baka Pygmies) depend on it for their livelihood. But the underground of these forests also contain significant deposits, particularly iron ore. This is particularly the case in the area called TRIDOM, spanning Cameroon, Gabon and the Republic of the Congo (see map against). Mining will bring employment, roads, and a better access to markets and services, but it will also destroy some of these forests, changing lifestyles of local peoples. Even when everything is designed to prevent, reduce and restore the damage done, there will be environmental casualty. Is it possible to extract the ore, and derive the maximum benefits, while reducing or canceling the damage done to the forests and their inhabitants?

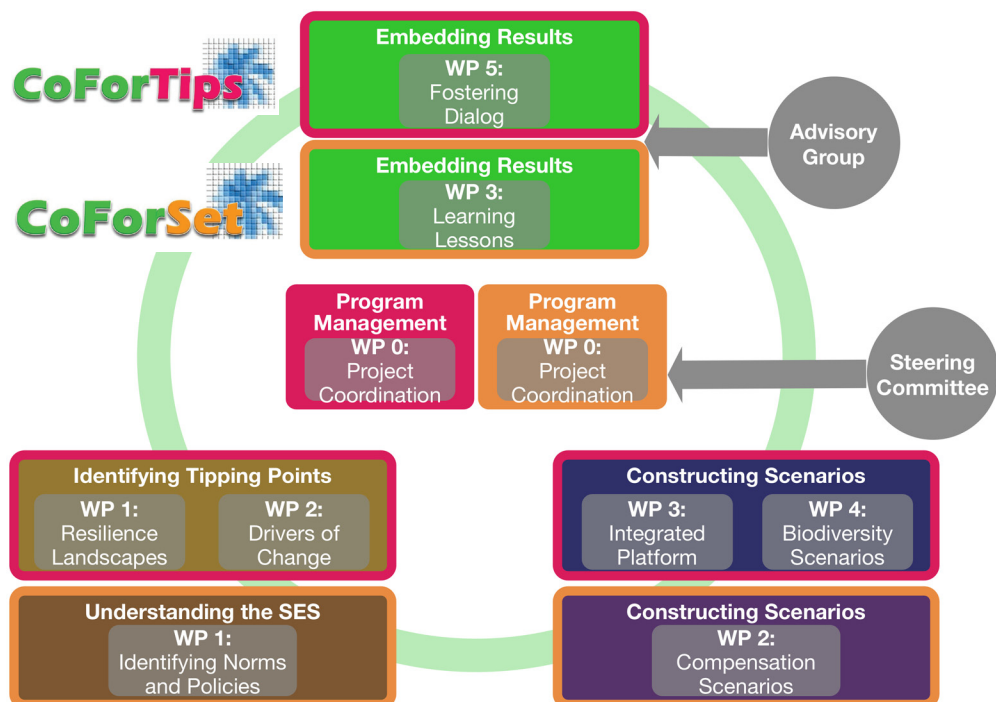
To answer this question, mining

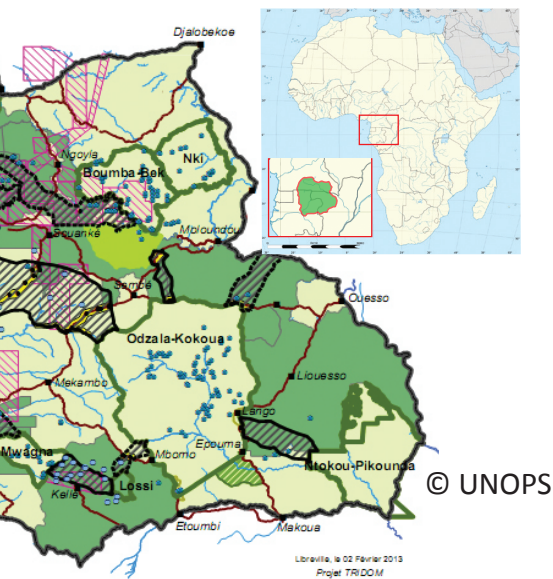
Overlay map of potential corridors on Mining and community areas

- Legend :
- Village
  - City
  - Clearing
  - Potential clearing
  - Road
  - Small river
  - Large river
  - Approved corridors
  - Potential corridors
  - Community zone
  - Mining concession
  - Forest concession
  - Conservation zone
  - Cynegetic zone
  - Protected area
  - Limits of the TRIDOM space



companies, governments and conservation organizations proposed that the impacts are compensated "in kind" (see box on page 4). This is for the mining company to act in favor of the forest and its inhabitants in a place other than where it will operate. But the idea of compensation raises many questions that the CoForSet project aims to explore using a participatory modeling approach.





and distribution in the TRIDOM area affected by mining projects (iron).

### WP2: Compensation scenarios

To explore what might be the possible futures, with and without mines, with or without compensation, we will make models. These models, built with miners, forest rangers, villagers, and policy makers, look like games whose rules are based on the actual functioning of the system. This approach, called ComMod (Companion Modeling) will be used to discuss the possible impacts of compensation mechanisms, and to identify ways to better take into account environmental and social issues. Two African researchers, partners of the project, have already been trained in 2014 - supported by CoForTips. Other training sessions will be held in the spring 2015.

### WP3: Learning lessons

How can we have an impact on the ground? CoForSet invited Kirsten Hund, from World Bank, to join the CoForTips / CoForSet project's Advisory Group. Contacts were made with the main actors of compensation in the Republic of the Congo, Gabon and Cameroon, during the fieldwork or via networks of WWF and IUCN, which are project partners. The first semester of 2015 will be an opportunity to build a common communication strategy to both projects.

CoForSet is built around the CoForTips project, while keeping its own coherence (see diagram opposite). It was funded by the FRB and FFEM (see logos below) and consists of 4 "Work Packages"

### WP0: Project Coordination

To make the most of CoForTips/ CoForSet synergies, meetings of the steering committee and the workshops are joint. The first meeting of the steering committee was held in Montpellier (France) on June 27th. CoForSet was launched during CoForTips mid-term workshop in October in Gembloux (Belgium).

### WP1: Identifying norms and policies

WP1 activities started in March 2014. Supported by Biotope, the internship of M. Gersberg on "ecological compensation in the Congo Basin" has resulted in a report for the IUCN [2], a book chapter being published by the Quae Editions [3] and a letter to the editor of the journal Ecological Applications [4]. Meanwhile, WWF started an inventory of large wildlife to document its density



### Mélina Gersberg CoForSet

Mélina obtained a Masters in Environmental Science and Policy at the Pierre and Marie Curie University and Sciences Po Paris (France). Particularly interested in cross-disciplinary issues, including the conservation of biodiversity, she wants to explore various tools to best combine biodiversity and human development. In May 2014, she participated in the first CoForSet mission in the TRIDOM, under the supervision of Fabien Quétier.



### Fabien Quétier CoForSet

Fabien is an agronomist with a doctorate in ecology, and now works at Biotope (Montpellier, France). He has over 10 years of experience in the valuation of ecosystem functioning and ecosystem services, and provides technical expertise on the design and implementation of measures to offset the residual impacts of land use planning. He assists various institutions on ecological compensation mechanisms, and on technical and institutional choices to promote (European Commission, French Ministry of Ecology, IUCN etc.). Fabien is an active member of the program BBOP (Business and Biodiversity Offsets Programme) and regularly publishes on compensation mechanisms.

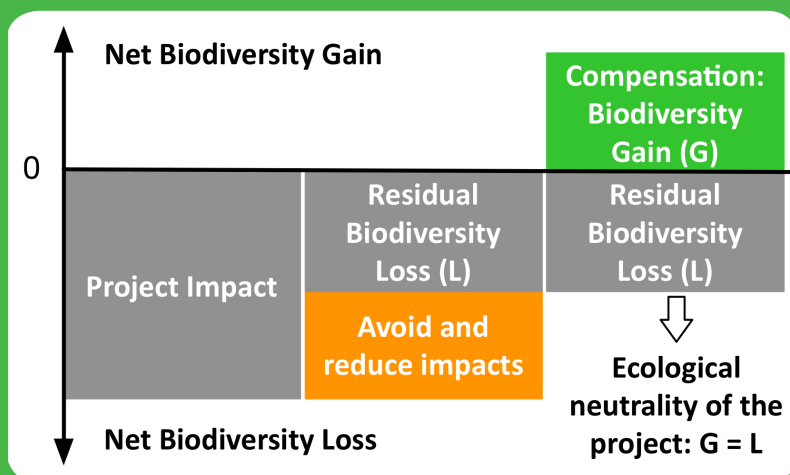


## The definitions corner

### Ecological compensation and “biodiversity offsets”

Ecological compensation is intended to offset project impacts on biodiversity that could have been avoided or reduced by measurable conservation actions.

According to the BBOP standard (Business and Biodiversity Offsets Programme), the goal of biodiversity offsets is to achieve no net loss (NNL, see diagram against) and preferably a net gain of biodiversity. The calculation of this loss or gain concerns species composition, habitat structure, functions and anthropogenic use of ecosystems and cultural values associated with biodiversity. The French translation of BBOP standard has retained the term “offset”.



[1] Edwards, D. P., Sloan, S., Weng, L., Dirks, P., Sayer, J., & Laurance, W. F. (2013). Mining and the African environment. Conservation Letters.

[2] Quétier F. & Gersberg M. (2014) : La compensation écologique au Congo - étude prospective sur l'applicabilité des mécanismes de compensation écologique (biodiversity offsets) en République du Congo. UICN, programme PACO, Yaoundé, Cameroun, 35 p.

[3] Quétier F., De Wachter P., Gersberg M., Dessard, H., Nzene Halleson D. & Ndong Ndoutoume E. (2015): La compensation “volontaire” : Les normes de performance des institutions financières et leur application aux forêts d'Afrique centrale. In Levrel H., Frascaria-Lacoste N., Hay J., Martin G. & Pioch S. (Eds.): Restaurer la nature pour atténuer les impacts du développement. Analyse des mesures compensatoires pour la biodiversité, Collection Repères, Edition Quae, Paris, France, sous presse.

[4] Quétier F., Van Teeffelen A.J.A., Pilgrim, J.D., von Hase, A. & ten Kate K. (2015): Biodiversity offsets are one solution to unmitigated biodiversity loss – a response to Curran et al. Ecological Applications, in press.

## Project Donors



## Project Partners



## Associated partners



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