

Compte-rendu de mission à Washington DC, Etats-Unis, du 23 au 27 mars 2015

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Le congrès annuel sur le foncier et la pauvreté organisé par la Banque Mondiale s'est déroulé du 23 au 27 Mars à Washington DC (USA). Le thème de cette année est "Lier régime foncier et utilisation des terres pour une prospérité partagée". Pauline Gillet, Laurène Feintrenie et Valéry Gond ont été les ambassadeurs des projets CoForTips et CoForSet à cet événement. Pauline a présenté les effets de la déforestation sur le régime foncier [1], Laurène a abordé l'agriculture familiale [2], les pratiques responsables de l'agro-industrie [3], Valéry a présenté ses travaux de cartographie des forêts du Bassin du Congo [4]. Enfin Laurène a présenté le travail de Fabien Quétier et de l'équipe de CoForSet sur les mécanismes de compensation de biodiversité [5].

Pour plus d'informations, rendez-vous sur le site: <http://goo.gl/c8KTAS> et pour accéder aux articles et diapositives : <https://www.conftool.com/landandpoverty2015/sessions.php>



Linking Land Tenure and Use for Shared Prosperity

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
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1. The effect of deforestation rate on land tenure in Central Africa

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Abstract

The CoForTips project aims at the promotion of better management of the forest of the Congo Basin by presenting to the policy makers plausible scenarios of social and ecological systems evolution. In this paper, we focused on the impact of deforestation on land tenure mutation in Central Africa. Land tenure

defines the level of ownership and management experienced by the local population on defined areas (Le Roy et al., 1996). We assume that the rules acting on objects of land tenure evolve from loose land control to privatization and the ability to dispose of resources when we progress on the forest transition curve designed by Mather (1992). We demonstrate that individual land tenure increases along with the deforestation process, and continue along with the reforestation process where this one is a consequence of agricultural plantations on deforested lands. We then draw a theoretical land tenure evolution with variation of population density in relation to forest cover that could be used as an indicator of SES shifting more sensitive than the evolution of forest cover to appreciate forest transition at the SES level and predict the presence and intensity of tipping points.

2. Family farming in a changing landscape: how activities change when forest disappears.

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Abstract

In the Congo Basin forests, local communities used to live from hunting, fishing and gathering, and from slash and burn agriculture. Nowadays, few places remain isolated from the external world, and local practices often have to integrate new parameters. How do family farming and forest activities evolve in a changing landscape, when forest disappears? To answer this question we selected three social and ecological systems positioned in specific places on the forest transition curve (Mather 1992), to constitute a synchronic sample of forested social and ecological system representative of the evolution of Congo Basin Forests. We conducted in 2013 and 2014 a deep analysis of family farming in 8 villages distributed in these 3 studied sites. The method crosses a systemic approach with a systematic approach: agrarian diagnoses were conducted in the three sites (Boulaud 2014; Ferlay 2014) to evaluate technical and economic performances of family farming and forest extractive activities, in parallel, census of households were conducted (Codina Llavina 2014; Gillet et al. 2014; Lehnebach 2014) to range family activities according to their share in the family income and as subsistence means. Results were harmonized and allowed a deep understanding of the strategy of adaptation to changes of households.

3. Responsible practices: implementation challenges for agri-business companies in Central Africa

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Abstract

International standards of good practices have multiplied in the last decades. They are promoted by Non-Governmental Organizations, required by some financial institutions, demanded by final consumers and the civil society. The socio-political, economic and ecological impacts of responsible standards in the agricultural sector will be assessed and analyzed through case studies in Central Africa, specifically in Democratic Republic of Congo, Republic of Congo, Gabon, and Cameroon. The role of financial backers in promoting and implementing these standards will be examined. From this analysis, the authors draw on lessons learned and suggest measures to influence local, national and international stakeholders when designing, and developing large scale land based investments. International standards participate in ensuring a proper preparation of large-scale land based investments in agriculture. They might be used in a risk-limiting strategy by investors and as requirements by the hosting State to evaluate the investment proposal. Added to these tools, strong business plan and operational plan are necessary to ensure the trustworthiness of the investment project. The commitment of a society to develop in a socially and environmentally sustainable manner and the actual implementation of a corporate social and environmental responsibility policy might also help to overcome historical background of conflicts.

4. New insights in tropical forest diversity mapping in Central Africa using low resolution remote sensing

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Abstract

Central African forests, when mapped at regional scale using remote sensing, are generally represented as one great homogeneous ‘forest’ land cover class. However, studies based on ecological and detailed forest inventories have identified spatial patterns of species diversity, functional traits and biomass, outlining the existence of several forest types. These forest types with contrasted structure and floristic composition have been described locally, but have been little or not mapped. A detailed vegetation map, representing the diversity of forest ecosystems at the scale of Central Africa is needed in order to plan and improve the management and conservation of these systems. Such a map has recently been produced, using a multi-temporal satellite approach, and validated with a multi-disciplinary scientific team of foresters and botanists with a strong field expertise.

The study covers the entire forest area of the Congo basin (3.7 million of km²). Photosynthetic activity indices from MODIS (2000 to 2012), Radar data (band L) from PALSAR (from 2007 to 2010) and LiDAR data from GLAS (2003 to 2010) have been used to produce the map.

A temporal synthesis was built in order to obtain seasonal profiles of photosynthetic activity. The different forest classes were identified using unsupervised classifications and visual interpretation. Radar and Lidar data were used for the interpretation of forest classes in swamp areas and forest inventories were used for the interpretation of *terra firme* forests. Nineteen forest companies had conducted inventories on trees with a diameter ≥ 30 cm (at breast height-DBH) on 0.5 ha plots that were all geo-referenced. In total, 37 898 plots have been measured, covering about 6 million hectares.

Information on basal area and the degree of deciduousness of the various forest types were used in order to characterise these forests in terms of structure and functioning.

The *terra firme* forests showed significant spatial variations in terms of deciduousness and structure on both sides of a latitudinal gradient marking the periodical passage of the climatic equator above the Congo forests. In the swamp areas, the spatial organisation of forests was found to be also influenced by the flood period. These results could help quantifying the stocks of biomass according to the identification of different forest types; each with contrasting photosynthetic activities and dynamics.

This study highlights the interest of combining field inventories with multi-sensors satellite measurements in order to characterise forest structures and phenology in undocumented areas (like wetlands), and the importance to work with a team of vegetation specialists having complementary skills. In this poorly documented region of the world (little weather stations, forest monitoring plots or flux towers), forest inventories represent a unique opportunity to document and validate satellite data over large areas.

5. Biodiversity offsets: opportunities and challenges for managing cumulative impacts of large-scale land-based investments on Africa's forest landscapes and their biodiversity **Fabien Quetier¹, Pauwel De Wachter², Helene Dessard³, Melina Gersberg¹, Durrel Nzene Halleson², Maxime Nzita Nganga Di Mavambu², Eugene Ndong Ndoutoume², Laurene Feintrenie³, Claude Garcia^{3,4}**

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Abstract

In the Western Congo Basin, the Tri-National Dja Odzala Minkebe (TRIDOM) Landscape covers 178000 km² in south-east Cameroon, north-east Gabon, and north-west Republic of Congo. Almost 97% is covered by tropical rainforest and is globally important for the conservation of large mammals (elephants, gorillas, chimpanzees). TRIDOM is also an emerging iron ore province with 9 iron ore deposits currently being explored. Mining and associated infrastructure will, under a business as usual scenario, lead to the widespread fragmentation of this forest landscape. Developing these projects with no-net loss or net gain biodiversity objectives as a condition for access to finance offers opportunities but a landscape-level approach is needed to take into account, and mitigate, indirect and cumulative impacts. There are numerous technical challenges and policy implications to this as the development and implementation of a landscape-scale vision for conservation and development in the TRIDOM requires coordinated efforts by various sectors of government and mining companies, and legal and financial tools to secure long-term land-use rights across the various interacting sectors. In this context, there are lessons to be learned from the TRIDOM for other biodiversity-rich landscapes faced with large-scale land-based investments in mining, oil & gas or agro-industrial sectors.

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