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Title: Biodiversity and Development and the CEBioS programme

Author(s): CEBioS – Capacities for Biodiversity and Sustainable Development.

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Abstract of the poster / Description of the booth:

The booth presents the importance of biodiversity and ecosystem services for development in developing countries and outlines the main activities of the CEBioS programme (Capacities for Biodiversity and Sustainable Development).

CEBioS is a centre of excellence for capacity building and development in partner countries of the Belgian development cooperation. The programme promotes research, training, mainstreaming, dissemination of information, awareness raising, and policy advice on the conservation and sustainable use and management of biodiversity and more specifically ecosystem services. This is organised through calls for proposals for short grants, workshops, trainings, dedicated projects, campaigns, publications, and through institutional partnerships.

Many activities are undertaken under the umbrella of the UN Rio Convention on Biological Diversity (CBD), such as capacity building on the Clearing House Mechanism (web-based information dissemination network) and taxonomic trainings in the context of the Global Taxonomy Initiative (GTI).

Most activities of the programme are funded by the Directorate General Development (DGD), as part of the implementation of the CBD Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets, and the Belgian and European biodiversity strategies and action plans.

Title: Target Cross Linking Tool: Report once, use many times

Author(s): Han de Koeijer

Affiliation: CEBioS, RBINS

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Abstract of the poster / Description of the booth:

A trial Target Cross-Linking Tool has been developed by the European Environmental Agency and the Royal Belgian Institute of Natural Sciences to respond to reporting obligations by Parties to the Convention on Biological Diversity and related biodiversity Conventions. This tool will allow countries to see the inter-linkages between the Aichi Targets, the EU Biodiversity Strategy and any national biodiversity strategy and action plan (NBSAP), in terms of the thematic content of implementation and the reporting requirements.

An online demonstration version was developed by Belgium, with support from EEA, and contains data from the Belgian Biodiversity Strategy 2006-2016 and the 3rd National Report to the CBD. An official version of the Belgian use of the tool has been available since May 2014, based on the revised Biodiversity Strategy 2020 and information from the fifth National Report to the CBD. Further development of the tool will take into account the national, EU and global indicators for each target. This might be done in collaboration with the Biodiversity Indicators Partnership (BIP).

This tool has been introduced to different partner countries of the Belgian Development cooperation. At this moment 3 partner countries have started using the tool while 4 others are still testing it before looking for official approval from their respective governments. Examples can be found on:

Belgian NBSAP implementation : <http://nbsap.biodiv.be>

Benin NBSAP : <http://benin.nbsap.eaudeweb.ro/>

Maroc NBSAP : <http://maroc.nbsap.eaudeweb.re>

Title:

KMMA: partner van de Belgische ontwikkelingssamenwerking voor een duurzame ontwikkeling in Afrika

MRAC: partenaire de la coopération belge au développement pour un développement durable en Afrique

Author(s): E. November

Affiliation: Koninklijk Museum voor Midden –Afrika / Musée royal de l'Afrique centrale

Contact: <http://www.africamuseum.be/about-us/cooperation>

Abstract of the poster / Description of the booth:

Contributing to Africa's sustainable development is one of the missions of the Royal Museum for Central Africa (RMCA). A significant part of its activities is aimed at promoting development cooperation, towards which the RMCA can use its scientific expertise, collections, documentation, and infrastructure to advantage. The museum's main partner in this area is the Belgian Development Cooperation (DGD). Activities are varied and are directed at:

- transferring knowledge about Africa and development issues, primarily through educational workshops for schools, exhibitions for the general public in Belgium, and international conferences for academics and professionals.
- implementing research projects in a wide range of disciplines (zoology, wood biology, geology, history, musicology etc) with partner institutes mostly in Central Africa.
- reinforcing the capacities of African institutions through cooperation projects, training for African scientists, and sharing of digital information systems and / or sources.

The RMCA's data and collections in the natural and human sciences are one-of-a-kind, and the museum makes this information available to African institutions, researchers, and students:

- FishBase is the largest online fish encyclopedia (www.fishbase.org). As partner of this international network, the museum focuses on information of African fishes.
- Through the RMCA Knowledge Centre, a large part of the RMCA collections have been placed online in recent years in the form of databases that can be consulted on the RMCA website.
- The RMCA created the African Biodiversity Information Center (ABIC). This initiative allows each year visits of African scientists to the Museum to share the data on African biodiversity of the collections.

Title: Twentieth anniversary of the Belgian ratification of the Convention on Biological Diversity:

“1001 Ideas, 1001 Decisions and 1001 Actions to save biodiversity”

Author(s): Belgian National Focal Point to the Convention on Biological Diversity

Affiliation: Royal Belgian Institute of natural Sciences, OD Nature

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Abstract of the poster / Description of the booth:

In 2016 Belgium will celebrate the 20th anniversary of its ratification of the Convention on Biological Diversity. The booth of the National Focal Point to the Convention will present the actions and event that are being organized for this celebration, and that will support the global challenge to save biodiversity by 2020 !

1001 Ideas - Save biodiversity !

Our way of life and of consumption have an enormous impact on our planet's biodiversity. The Royal Belgian Institute of Natural Sciences and its partners therefore invites all to participate in a competition for ideas on how to protect biodiversity. Submission is possible until 10 April 2016. The best ideas to reduce impact of our daily activities on biodiversity in Belgium and in developing countries will be published in an upgraded and mobile version of our “366 Tips for Biodiversity” tool and be rewarded with fantastic prizes: ecological smartphones, a bamboo bike, a day on the oceanographic research vessel Belgica, and many, many more. Website / Twitter: [www.igivelifetomyplanet.be / #1001biodiv](http://www.igivelifetomyplanet.be/#1001biodiv).

1001 Decisions - Save Biodiversity !

Paper copies of “Biodiversity 2020, Update of Belgium's National Strategy”, adopted in 2013 by the Interministerial Conference for the Environment, and a poster illustrating the major updates, are available in multiple languages in the booth. This strategy is the only national framework instrument for the conservation, and sustainable and equitable use of biodiversity, in Belgium and abroad. Website: www.biodiv.be.

1001 Actions - Save Biodiversity !

All participants to the event are invited to engage in the campaign “igivelifetomyplanet.be” and register their actions for the planet. Our booth will showcase our public awareness raising publications, including the “366 Tips for Biodiversity”, and its condensed version that has been published in all EU and UN languages. No more excuse to delay your change of behaviour!

International Biodiversity Day 2016: More information on the celebration of the 20th anniversary of the Belgian ratification of the CBD and the event scheduled on 20.05.2016 will be available as of February 2016 on 1001pourlabiodiversiteit.be / 1001voorbiodiversiteit.be.

Title: The intergovernmental Platform for Biodiversity and Ecosystem Services (IPBES): strengthening capacity for the effective use of science in decision-making

Author(s): Hilde Eggermont¹, Pierre Huybrechts¹ & Hans Keune²

Affiliation:

¹Royal Belgian Institute of Natural Sciences – Belgian Biodiversity Platform

²Research Institute for Nature and Forest (INBO) – Belgian Biodiversity Platform

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Abstract of the poster / Description of the booth:

Biodiversity from terrestrial, marine, coastal, and inland water ecosystems provides the basis for ecosystems and the services they provide that underpin human well-being. However, biodiversity and ecosystem services are declining at an unprecedented rate, and in order to address this challenge, adequate local, national and international policies need to be adopted and implemented. To achieve this, decision makers need scientifically credible and independent information that takes into account the complex relationships between biodiversity, ecosystem services, and people. They also need effective methods to interpret this scientific information in order to make informed decisions. Finally, the scientific community also needs a better understanding of the needs of decision makers in order to provide them with the relevant information. In essence, the dialogue between the scientific community, governments, and other stakeholders on biodiversity and ecosystem services needs to be strengthened.

To this end, a new platform has been established by the international community - the 'Intergovernmental Platform on Biodiversity and Ecosystem Services' (IPBES). IPBES was established in April 2012, as an independent intergovernmental body open to all member countries of the United Nations. The members are committed to building IPBES as the leading intergovernmental body for assessing the state of the planet's biodiversity, its ecosystems and the essential services they provide to society.

IPBES provides a mechanism recognized by both the scientific and policy communities to synthesize, review, assess and critically evaluate relevant information and knowledge generated worldwide by governments, academia, scientific organizations, non-governmental organizations and indigenous communities. This involves a credible group of experts in conducting assessments of such information and knowledge in a transparent way. IPBES is unique in that it will aim to strengthen capacity for the effective use of science in decision-making at all levels. IPBES will also aim to address the needs of Multilateral Environmental Agreements that are related to biodiversity and ecosystem services, and build on existing processes ensuring synergy and complementarities in each other's work.

This poster will describe the main functions and operational objectives of IPBES, with focus on capacity building and knowledge foundations. In addition, it will provide some insights how to engage in Belgian IPBES National Focal point activities.

Title: The Belgian GBIF node

Author(s): André Heughebaert

Affiliation: Belgian Biodiversity Platform

Contact: a.heughebaert@biodiversity.be

Abstract of the poster / Description of the booth:

The Global Biodiversity Information Facility (GBIF) is an international open data infrastructure, funded by governments. It allows anyone, anywhere to access data about all types of life on Earth, shared across national boundaries via the Internet.

By encouraging and helping institutions to publish data according to common standards, GBIF enables research not possible before, and informs better decisions to conserve and sustainably use the biological resources of the planet. GBIF operates through a network of nodes, coordinating the biodiversity information facilities of Participant countries and organizations, collaborating with each other and the Secretariat to share skills, experiences and technical capacity.

GBIF's vision: "A world in which biodiversity information is freely and universally available for science, society and a sustainable future."

The Belgian Biodiversity Platform is the Belgian national node to GBIF. As such, we support any Belgian individual or institution wishing to publish or make use of biodiversity data on GBIF network.

The Belgian BIF is a vibrant community of data publishers that consists of federal institutions, regional administrations, universities, research institutes and NGOs. Together they have published 9 million records from 73 occurrence datasets and 9 checklists datasets.

Belgium publishes data covering 228 countries, territories and islands.

More than 110 peer reviewed scientific articles making use, or citing, GBIF.org have Belgian authors.

We are willing to go even further by expanding the current network of Belgian biodiversity data publishers and users through our data mobilization and data training program.

Title: CETAF Consortium of European TAXonomic Facilities**Author(s):**

Ana Casino (General Secretary);
Christophe Coel (Communication);
Lise Goudeseune (International Relations & Networking)

Affiliation: CETAF

Contact: info@cetaf.org

Abstract of the poster / Description of the booth:

CETAF is the Consortium of European Taxonomic Facilities: a European network of Natural Science Museums, Natural History Museums, Botanical Gardens and Biodiversity Research Centres with their associated biological collections and research expertise.

We aim to promote training, research and understanding in systematic biology and palaeobiology, and facilitate access to information (collections) and the expertise of its member institutions across Europe.

The CETAF network comprises 33 members representing 57 of the largest taxonomic institutions from 20 European countries. Its member institutions include Natural History Museums, Natural Sciences Museums, Botanical Gardens and other research institutions, with their associated collections and research expertise. Our collections comprise an estimated 1.5 billion specimens and represent more than 80% of the world's described species. The collections themselves contain specimens of animals, plants, fungi, rocks or genetic resources that are used for scientific research and exhibitions. Owing to these collections, CETAF collectively represents an unprecedented resource for scientific research across the globe and its members act as the custodians of our common heritage. CETAF member institutions dedicate themselves to both the preservation of this rich heritage as well as to the promotion of it through scientific research, education and public outreach.

Title: Biodiversity; Forests in Congo

Author(s): Belgian Development Cooperation

Contact: Mia Van Aken (mia.vanaken@diplobel.fed.be)

Abstract of the poster / Description of the booth:

- Without biodiversity, no life is possible. Our health, food, wellness ... depend every day on the biological richness of our planet. The exhibition explains the importance of biodiversity with the example of two Belgian projects.
- The forests in Central Africa, « the second lung of the world », host a great diversity. They produce a variety of food for the local population and transform lots of CO₂ in oxygen. The exhibition explains the importance of the Congolese forests and shows how Belgium aims to protect them.

Title: Contributing to ecological research and sustainable management of African tropical forests

Author(s): Gestion des Ressources Forestières - Foresterie Tropicale (Département BIOSE, Gembloux Agro-Bio Tech, Université de Liège)

Contact: jydevleeschouwer@ulg.ac.be ; anais.gorel@ulg.ac.be

Abstract of the poster / Description of the booth:

Central African rainforests home a unique biodiversity, are also important carbon sinks and provide a variety of products, essential for the economic development (timber) and for the survival of local communities (non-timber forest products, game, medicines, etc.) However, increasing population and industrialization could threaten the equilibrium achieved during many generations. Thus, understanding the past and present dynamics of these ecosystems is urgently needed to ensure their sustainable management.

Our research team on tropical forestry (Gestion des Ressources Forestières, Gembloux Agro-Bio Tech – Université de Liège) leads fundamental and applied scientific research on various aspects of forest dynamics in order to allow sustainable uses of these ecosystems, while preserving their integrity. We also provide technical support to local communities and forest companies for a sustainable management of tropical ecosystems.

We will share our approaches and methodology by showing research instruments and field collections (herbarium, charcoals, pottery, wood samples, etc.) Our main results will be presented by several books, papers and posters on tropical ecology, botany, genetics, paleoecology, archaeology and sociology. Finally, we would be very pleased to discuss with you about tropical ecosystems.

Title: Study of dispersers and predators of *Guibourtia tessmannii*: What influence on the regenerative potential of the species?

Author(s): Félicien Tosso^{1*}, Gauthier Cherchye¹, Georges Lognay², Jean-Louis Doucet¹

Affiliation:

(¹) Forest Resources Management, BIOSE Department, Gembloux Agro-Bio Tech, Université de Liège

(²) Unit of Analytical Chemistry, Gembloux Agro-Bio Tech, Université de Liège

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Abstract of the poster / Description of the booth:

Guibourtia tessmannii (Fabaceae / Caesalpinioideae), known as Bubinga (Cameroun) and Kevazingo (Gabon) is a species of a great commercial and social importance. Its population densities are low due to local deficits combined with the increasing anthropogenic pressure. To estimate the species regeneration capacity, a study of dispersers and predators through direct and indirect observations allowed to identify four species of birds (*Ceratogymna atrata*, *Corythaeola cristata*, *Tockus camurus* et *Agelastes niger*), two species rodents (*Crycetomis emini* et *Funisciurus anerythrus*) and one species of monkey (*Mandrillus sphinx*). This study showed that the seeds of *G. tessmannii* are under heavy predation by rats. A chemical analysis of several samples of *G. tessmannii* seeds indicated the presence of many volatile molecules, whose the most important is sulcatone (6-methyl-5-Hepten-2-one). This particular volatile molecule was identified in female rats in estrus phase justifying the strong power of attraction of *G. tessmannii* seeds on male rats. The major consequence of the seed predation is a crucial lack of regeneration. This observation underline the importance to develop of assisted regeneration strategies for this species.

Keywords: Dispersal, Predation, Regeneration, *Guibourtia tessmannii*

Title: Miombo woodlands: an endangered forest ecosystem in periurban areas of the southeastern cities of the Democratic Republic of Congo.

Author(s): Hick Aurélie ⁽¹⁾, Kizila Wimana Pacifique ⁽²⁾, Tooth Martin ⁽¹⁾, Hallin Maud ⁽¹⁾, Hoffait Nicolas ⁽¹⁾, Salmon Fanny ⁽¹⁾, Tshibungu Alain ⁽²⁾, Mahy Grégory ⁽¹⁾

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⁽²⁾ Faculté des Sciences Agronomiques, Université de Lubumbashi – Lubumbashi, RDC

Contact: Hick Aurélie – aurelie.hick@ulg.ac.be

Abstract of the poster / Description of the booth:

In Democratic Republic of Congo (DRC), deforestation affects periurban areas. In the southeast of the country, the redevelopment of mining activities caused exponential demographic development of the main mining towns. The population of Lubumbashi has increased from 100.000 people to more than 1.5 million in 50 years. This population growth increased pressure on the Miombo woodlands (wood energy, area of the city, subsistence farming).

In the periurban area of Lubumbashi, forests occupying 85% of the territory in 1956 were reduced to less than 12% in 2009. These land use changes threaten the sustainability of the ecosystem and the survival of many local people who depend on forest products for food and energy.

In this context of deforestation / forests degradation, characterization of the last forests on the outskirts of the city is the first step in ecological restoration.

The potential of a natural restoration was evaluated through the study of ecosystem's resilience after forest degradation. Ecological restoration should be done in collaboration with local populations. The taxonomic knowledges of tree species used by the population were evaluated through interviews conducted in villages near the city. The presence of trees in the agricultural system was also identified.

Several studies have been conducted in a PhD at the Biodiversity and Landscape Unit - Gembloux Agro-Bio Tech .This poster provides a summary of the results.

Five Miombo forest communities have been highlighted in the rural area adjacent to the city of Lubumbashi. Miombo woodlands appear to be resilient to degradation. Taxonomic knowledges of the rural population are low and few trees are left in the agricultural system.

Title: Which strategies to conserve and restore metallophytes threatened by intensive mining activities in Southeastern D.R.Congo ?

Author(s): Le Stradic Soizig¹, Boisson Sylvain¹, Séleck Maxime¹, Handjila Guylain², Mahy Grégory¹

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Abstract of the poster / Description of the booth:

One of the greatest contemporary challenges consists in the integration of economic activities with environmental integrity and social concerns. This is especially the case of mining activities. South of the Democratic Republic of Congo and adjoining regions in the North of Zambia comprise some of the largest ore bodies of copper (Cu) and cobalt (Co) in the world. The Katangan Copperbelt is composed of more than a thousand Cu-Co outcrops scattered over more than 400 km (W-E). Most Cu-Co outcrops have now been allocated to mining companies and expected to be impacted in the coming years and decades. In transition to environmentally responsible operations, some actors of the mining industry are changing their environmental and social practices. Since 2007 Gembloux Agro Bio Tech, University of Liege has been developing a collaboration with a mining company in order to plan conservation and restoration actions before, during and after the extraction phase. Actions include in-situ conservation, community translocation through vegetation mat and topsoil transposition, direct top soil seeding of structuring species and ex-situ conservation through the development of a seed bank. Another mechanism for ensuring the survival of metallophytes is to promote their use in ecological restoration, site rehabilitation and phytoremediation projects at mine closure. Aims of implemented actions are i) to gain information and experience on the feasibility of restoration program for copper vegetation and understand which process can limit the restoration of copper communities and, ii) to temporarily store and conserve native copper plant diversity in order to reestablish it on post-mining sites. It is essential to increase and promote effective restoration programs using native plant and deliver appropriate know-how to mining companies if we are to avoid the widespread use of exotic species in the revegetalisation of ecologically compromised areas.

Title: ECOMakala : meeting energy needs, fighting poverty and protecting the forests of the Virunga National Park, eastern Democratic Republic of Congo

Author(s): WWF Belgium

Affiliation: WWF

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Abstract of the poster / Description of the booth:

The Virunga National Park (ViNP) situated in the East of the DRC, in the North Kivu province, is Africa's oldest and most biodiverse park covering 784,368 ha's going from primary rain forest, savannah and volcanoes to a high mountain's massif. North Kivu is one of DRC's most dense populated provinces where more than 90% of the population relies on wood for their energy needs. Goma, North Kivu's provincial capital, has seen the arrival of many families fleeing the fighting and its consequences in rural areas. Goma's population currently stands at 1 million inhabitants following a population boom which has led to a steep rise in energy demand. Since electricity is scarce, people rely on energy wood, and in urban areas, mostly used under the form of charcoal or "makala" in local language. As a result, the resources of the ViNP encounter an enormous pressure. Above this, the illegal wood energy cut down in the ViNP and the resulting charcoal is subject to an illegal business which doesn't favour the local population. At present, one bag of charcoal costs between 25 and 30\$, where a couple of years ago the price lied around 10\$. In a region like the Kivu's, large scale reforestation initiatives in collaboration with local communities are a relevant alternative for the forest resources of the park while contributing to local development. The ECOMakala program (2007-2016; EU/Dutch Cooperation/IFDC/CIFOR/CBFF/WWF) reforested up to 10 000 hectares of small holder lands (with an average of 1 ha) in the territories surrounding the ViNP, for the provision of legal and sustainable energy wood to the local communities. In 2015 and with the support from the Belgian Development Cooperation, WWF initiated the "Makala kwa mafa yetu" project focusing on the organisation of the eco-makala value chain, through the structuration of the farmer planters in groups or cooperatives in view of the marketing of the eco-makala while assuring a fair revenue for the farmer planter. Another objective of the project is to diversify pure reforestation activities by introducing trees into crop land. It is important to make sure that the sources of makala production are also supporting food production systems while protecting the soil, increasing the quality of crops, and easing climate change. The ECOMakala program also tries to contribute to decrease the makala consumption needs in the short run, by promoting the use of efficient wood stoves, requiring up to 50% less makala. Since 2013, ECOMakala is part of the REDD+ program for the DRC which aims to reduce emissions from deforestation and forest degradation as well as to increase conservation, with the greater objective of mitigating climate change.

Title: Natural regeneration of forest for environmental and socio-economic development in Bas-Congo, DRC

Author(s): Viktor Deklerck, Gilbert Atanda Botikale, Céline De Caluwé

Affiliation:

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WWF Democratic Republic of Congo; WWF Belgium

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Abstract of the poster / Description of the booth:

Local communities in the west of the Bas-Congo province are very dependent on forest resources for firewood collection, hunting and agriculture. Many parts of the ancient Mayombe forest have disappeared due to historical timber logging as well as slash and burn agriculture, and are left over as savannas. Communities are concentrating around the Luki Biosphere Reserve as the savannas don't offer many resources in comparison to forest. The savannas are still burned every year to capture small mammals, leaving the soil completely degraded and unsuitable for agriculture.

WWF is working in the areas around the Reserve on the natural regeneration of savanna (NRS) by preventing annual fires. Groups of local communities for forest conservation are established thanks to ten year experience on community based conservation in the region. To protect the savannas from fires, WWF works closely with the community groups and landowners through awareness programs.

A plot of 88 ha was established in Manzonzi village in 2005. By 2015, the savanna had evolved to a mosaic of different types of secondary forest. Typical forest expansion pioneer species as *Macaranga spinosa* and forest species as *Anthocleiste vogelii* are becoming more important and typical savanna species as *Hymenocardia acida* are losing ground.

The trees provide firewood for local communities. Additionally, the NRS offers hunting possibilities, since the local communities have observed the comeback of birds and mammals. The absence of fire enables the soil to slowly develop again and to restore the soil's fertility, which offers possibilities for agriculture. The communities based conservation groups and WWF are working on a sustainable way of managing these new patches of forest.

This project is part of the REDD+ program of DRC with the greater objective of mitigating climate change. In 2015, WWF engaged in scientific research for the calculation of carbon storage through the NRS, in cooperation with Ghent University and the Royal Museum for Central Africa. The aboveground carbon was estimated on 41.8 ± 1.30 ton C/ha or 153.4 ± 4.8 ton CO₂ /ha. However, further research is needed to create a growth curve of the trees to estimate carbon storage over time.

By June 2016, WWF aims to secure 5000 ha of natural regeneration of savanna around the Luki Biosphere Reserve.

Title: Tools for the conservation and sustainable use of African woodlands: edible fungi

Author(s): André DE KESEL¹, Bill KASONGO², Jérôme DEGREEF¹ & Nourou YOROU³

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Abstract of the poster / Description of the booth:

The mega-diverse rainforests of Central Africa usually draw most of the attention of conservationists because of their destruction by the logging industry. Lesser known is the forested area around the so-called Congo Basin that is being systematically depleted due to charcoal production. The latter woodlands (termed Miombo's) are adapted to a long dry season (at least 4 months) with many tree species being resistant to bushfires. These forests are vulnerable because once cleared they have difficulty to regenerate. The human pressure on this forest ecosystem is excessively high since half of the African population depends on it for food, medicine, fuel and construction timber.

Over the years we developed a method for delivering taxonomical data and tools for the conservation and sustainable use of these woodlands. These tools are meant to estimate the value of Non Timber Forest Products (NTFPs) like edible fungi, an essential step in the re-evaluation of the true worth of less-valued yet threatened ecosystems.

By using permanent plots the annual, natural production of wild edible fungi was measured in different forest types. This study was conducted in the woodlands of Southeastern DR Congo (Katanga, Zambezian region). In this area fungi are an important food source and a vital income for millions of people. The study reveals a high diversity of edible species within the region. The majority of these fungi are ectomycorrhizal symbionts, i.e. obligatorily associated with the root system of living trees. The species composition appears to depend on the forest type. Our study reveals that the yields of fungi range from 100 to 300kg/ha.year, depending on the species and forest type. If just 10% of this production reaches the market to be sold at an average price of 1€/kg, the wild edible fungi from a single hectare of miombo forest would deliver, on average, 18.2€/year. Although charcoal delivers a much greater amount, i.e. 400€/ha, this income has to be corrected because a felled woodland needs 30 years to regenerate. Consequently charcoal conversion of a miombo forest delivers on average 13.3€/year.

The study proves that maintaining the ecosystems' service of delivering NTFPs is financially and culturally much more beneficial for local people than the production of charcoal and that long-term benefit outweighs short-term gains.

Title: Reinforcement of the fungal expertise in Ecuador via case studies of fungal plants interactions in selected ecosystems and the development of biotechnology-oriented fungal resource centres.

Author(s): Gordillo A. ¹⁻² Garcés M. ¹⁻², Cevallos S. ¹⁻³ Luna V. ² Decock C. ¹

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Abstract of the poster / Description of the booth:

Ecuador harbors an exceptional biodiversity, reaching its peak in the eastern Amazonian Region. Ecuador emphasized the ecological but also economical and societal values of its biodiversity and the necessity to preserve it together with the development of sustainable mechanisms to valorize it for present and future benefit and the country economy. Today, many local ecosystems are still poorly inventoried as far as their biodiversity is concerned, and some groups of organisms, such as the fungi, remain scarcely investigated. At the same time, the ecosystems in Ecuador do not escape the global biodiversity erosion, resulting from direct or indirect human activities. Amongst these activities, exploitation and deforestation represent major threats. Oil activities represent key economic and environmental issues for Ecuador. It represents 1/3 of the annual incomes of the country. However, the main oil fields overlap largely protected areas and ancestral indigenous territories, and its exploitation negatively affects terrestrial and aquatic ecosystems, causes serious threats to the environment and affects the local populations.

Fungi constitute a major clade of biodiversity. Their ecological significances are incalculable, as they play key ecological roles, participating in ecosystems functioning and equilibrium (recycling carbon, plant production, plant diversity). Fungi associated to plants are important components of the fungal diversity. Fungi and plant have developed specific to generalist interactions. Issues in mycology, culture collection, plant ecology and ecosystem conservation delineated a project which global objective is to improve the knowledge of ecosystems functioning, through the study of plant-fungi interactions at the rhizosphere level in various natural or disturbed areas or botanical groups.

Selected plant/fungi interaction models are: rhizosphere fungal component (arbuscular mycorrhizal fungi and saprophytes) of plants communities in regenerating oil polluted ponds and Orchids mycorrhizal diversity in relation to orchid diversity, an indicator of ecosystem vitality.

Title: Integrating capacity building and nature conservation in large-scale biodiversity surveys: Our Planet Reviewed Papua New Guinea

Author(s): Maurice Leponce¹, Vojtěch Novotný², Olivier Pascal³

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Abstract of the poster / Description of the booth:

During the terrestrial survey of the “Our Planet Reviewed” project in Papua New Guinea we created a bridge between biodiversity research, capacity building and nature conservation. The scientific aim of the project was to estimate, for the first time, the biological diversity generated by altitudinal turnover of insect species. The project was set up by the Natural History Museums of Brussels (RBINS) and Paris (MNHN), the NGO Pro-Natura International, the French IRD and, as local partners, the New Guinea Binatang Research Center (BRC) and the University of Papua New Guinea. Half of the core scientific team (ca 50 persons) was made of local research assistants and the other half of international biodiversity experts. Local research assistants (called paraecologists and parataxonomists) were recruited in local communities, trained by BRC and supervised by the international experts. Locals were involved in sample collection, sample pre-sorting and received training and salary. This not only speeded up sample collection, but simultaneously supported nature conservation as the locals had means of income other than from commercial logging. We also paid land-use fees to land owners as compensation for collecting plants and animals in their forest plots. Conservation initiatives by local communities were further supported by funds from private sponsors raised by BRC. Funds were also collected to allow local scientists to visit overseas laboratories and to participate to international conferences. To summarize, large-scale biotic surveys are not only essential to understand the functioning of complex tropical ecosystems where biodiversity is highest but can also be important drivers of capacity building and nature conservation.

Associated movie: “In the treetops of Papua New Guinea”. Director: Maurice Leponce.
Author: Maurice Leponce & Gildas Corngnet, 2015, HD, 16min

Title: A tale about knowledge and power: rebuilding biodiversity related capacities in the DR Congo**Author(s):** Erik Verheyen**Affiliation:**

Operational Direction Taxonomy and Phylogeny, Royal Belgian Institute of Natural Sciences, 1000 Brussels, Belgium

Contact: erik.verheyen@naturalsciences.be**Abstract of the poster / Description of the booth:**

Millions of people rely on forests for food, medicines, energy and income. Indigenous groups depend almost entirely on them. It is anticipated that more economic activity may result in an increasingly rapid and chaotic development, with the destruction of natural resources and biodiversity as a consequence. Therefore, policy makers worldwide are becoming more and more interested in preserving biodiversity. The relatively recent notion of ecosystem services rendered to human populations (locally and on a global scale) is gradually incorporated in the economic equation. Suspect and unlawful access to or acquisition of biodiversity (and/or related traditional knowledge) without prior informed consent by local stakeholders on the part of those whose biodiversity (or traditional knowledge) has been “accessed” or “acquired”, is recognized as the nasty and ongoing issue of “bio-piracy”.

In addition to their ecological value, the forests of the Congo basin also represent an important resource for the country's economic development and the related political stability. Knowledge on a region's ecosystem can be thus become a powerful tool for those interested in increasing their economical and political power. The tropical forests in the DR Congo account for approximately 50% of the rain forests on the African continent, globally only surpassed in size by the tropical rain forests in the Amazon. From a global perspective, the main importance of the Congo basin is its uniquely rich biodiversity and its climate-relevant functions.

Because of its weakened institutional structures and its limited financial resources, the DR Congo solicits external support to rebuild its capacities in this regard. Only a solid knowledge base on the biodiversity in the DR Congo allows the reliable monitoring and control of the impact on forest biodiversity by logging, slash-and-burn agriculture practices, human-made bush fires, mining activities, and uncontrolled fishing practices and bush meat hunting. Our poster introduces three ongoing projects in Kisangani (Congo2010/CSB, IMAB/CeBIOS & VLIR CUI-Unikis) that each in a different way, contribute to increased local expertise, the valorization of biological resources through sustainable exploitation, and a better knowledge of the biodiversity in the Congo Basin. Arguably, these projects contribute to the empowerment of the Congolese scientific community, and the Congolese society as a whole.

Title: Cetacean conservation of Nicaragua

Author(s): Joëlle De Weerd, Victoria Pouey-Santalou, Julie Morin-Rivat

Affiliation: ELI-Scientific

Contact: joelle.deweerd@eli-s.com

Abstract of the poster / Description of the booth:

Dive into the world of whales and dolphins!

Whales and dolphins are smart and mysterious animals. Despite the key ecological services that whales and dolphins offer to the marine environment, most of them are endangered because of anthropogenic impacts among which food impoverishment, pollution, bycatch, maritime traffic and global climate change. As a model country, Nicaragua is a developing country with a great biodiversity potential for research on cetaceans.

At the moment, there is a lack of information on cetaceans in Nicaragua. As anthropogenic activities are increasing because of the development of ecotourism and the future construction of a 278km maritime canal across the country. The lack of data directly affects the conservation of species. Indeed, a recent study on a dolphin species usually classified as "common" showed that it is actually disappearing in Argentina because of limited information on this species and management plans.

We cannot protect what we do not know. In this context, ELI-Scientific NGO designed a scientific research project called "Cetacean conservation in Nicaragua" (CCN) in order to combine science with local communities and decision makers. Local communities showed great interest in collaborating to this project because they want to actively participate to the protection of their marine heritage. So, please visit our stand to talk with our enthusiastic team about our unique project!

The project aims at combining science with environmental education and management.



A multidisciplinary research program to ensure sustainable coastal livelihoods in Madagascar

Eeckhaut I.¹, Lavitra T.², Dubois P.³, Lepoint G.⁴, Grosjean P.⁵, Todinanahary G.G.B.^{1,2} and Tsiresy G.^{1,2}

¹ Lab. of Biology of Marine Organisms and Biomimetism, University de Mons (Belgium); ² PRU in Institut Halieutique et des Sciences Marines, Toliara (Madagascar); ³ Lab. of Marine Biology, Free University of Brussels (Belgium);

⁴ Lab. of Oceanology, University of Liège (Belgium); ⁵ Lab. of Numerical Ecology of Aquatic environment, University of Mons (Belgium)



A multidisciplinary research partnership :

- 4-year programs financed by the ARES-CDD (Belgium)
- 3 Belgian universities, 4 laboratories :
Lab. of Marine Organisms and Biomimetism and Lab. of Numerical Ecology of Aquatic Environment (University of Mons) ;
Lab. of Marine Biology (Free University of Brussels) ; Lab. of Oceanology (University of Liège)
- 2 Malagasy universities : Université Nord d'Antsiranana ; Institut Halieutique et des Sciences Marines (University of Toliara)
- 2 PhDs and several Masters degrees in preparation
- Private sectors and NGOs fully involved

Objectives :

- Improve knowledge and identify solutions to problems facing emerging aquaculture sectors
- Develop know-how and national capacities to ensure and promote polyaquaculture at the village-scale
- Increase the potential of marine artisanal aquaculture development in the coastal zones of Madagascar
- Evaluate the possibility of combining seaweed farming with other mariculture (e.g. coral farming and/or sea cucumber)

Activities implemented :

- Creation of 2 Polyaquaculture Research Units laboratories equipped for *ex-* and *in-situ* experiments (north and south of Madagascar)
- Multidisciplinary research and experimentation combining oceanology, marine biology and physiology, numerical ecology, genetics, histology, social sciences...
- Supervision of students and improvement of training on aquaculture topics
- Leading national multi-stakeholder aquaculture platform exchange and capitalization

● Polyaquaculture Research Unit (PRU) :



● Seaweed cultivation :



● Holothurian farming :



● Coral cultivation :



Main goals :

- Multiple types of physiology and farming performance
- Main disease etiology and means of disease control
- Survival and growth parameters and patterns
- Defining quality parameters
- Socioeconomic impacts (seaweed and sea cucumber farming)
- Socioeconomic and commercial feasibility (coral farming)



Title: FishBase for Africa: A contribution to information transfer and capacity building in African ichthyology

Author(s): Dimitri Geelhand de Merxem¹, Tobias Musschoot¹, Gert Boden¹ and Jos Snoeks^{1,2}

Affiliation: ¹ Royal Museum for Central Africa (RMCA); ² Department of Biology, Laboratory of Biodiversity and Evolutionary Genomics, KU Leuven

Contact: dimitri.geelhand@africamuseum.be

Abstract of the poster / Description of the booth:

FishBase is the world's largest, freely accessible, online database on fishes. It contains information on the more than 33.000 known fish species and can be consulted in different languages. FishBase includes data on the taxonomy, distribution, reproduction, morphology and behavior of fishes, as well as numerous practical tools for ichthyologists and fisheries biologists.

The Royal Museum for Central Africa (RMCA) is a founding member of the FishBase Consortium and has a more than a century long tradition in biodiversity studies on African fresh- and brackish water fishes. It curates the largest collection of African fresh- and brackish water fish species in the world and also holds a unique library focused on the ichthyodiversity of Africa.

The Ichthyology Unit of the RMCA has developed a comprehensive FishBase for Africa program to provide high quality information on African fishes directly to scientists and decision makers in Africa, and to contribute to local capacity building. The program includes, but is not limited to, following activities: adding and verifying information on African fresh- and brackish water fishes in FishBase, organizing annual and comprehensive training sessions on the use of FishBase and on fish taxonomy, developing AquaMaps for African freshwater fish species and assessing the conservation status of African fish species for the IUCN Red List of Threatened Species. The development of these activities within the museum is a major instrument to directly assist in a better conservation of the African ichthyodiversity and in a sustainable management of fisheries.

Title: The Ciprinidae of Morocco and their gill monogenea: Systematic and biogeography

Author(s): Imane Rahmouni, Ouafae Berrada Rkhami, Andrea Simkova, Antoine Pariselle

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Abstract of the poster / Description of the booth:

The Moroccan continental water is rare, and the Cyprinidae the most frequent freshwater fish group. Native and endemic cyprinids in Morocco included 7 *Luciobarbus* species, two *Carassobarbus* species and *Ptercapoeta maroccana*. Climate change is likely to endanger the rare and precious water resources. If we want to mitigate their effects through a careful management, we should first identify fish species with certainty and also understand their complex evolutionary history (different origins), which is a challenge because of their polyploidization and intra- and inter-generic hybridization phenomena. One of the solutions, in addition to conventional methods (morphology and genetics), is to study host specific parasites (Monogenea), which can be used as biological markers (systematic, phylogenetic and biogeography of hosts). Three sampling campaigns were carried out in Southern part of Morocco in 2014-15. More than 500 fishes were sampled from 16 localities. Their examination confirmed that the fishes belong to three genus *Luciobarbus*, *Carassobarbus* and *Ptercapoeta*. The examination of the gill arches revealed the presence of 24 *Dactylogyrus* species, including twenty likely new species. One monogenean species collected on the fish gills possessed no anchors in its haptor. Our study also shows a specificity of the parasites at a species level, but also at a lower level with a clear difference between Northern and Southern Atlas monogenean populations of *Carassobarbus fritshii*.

Title: Termites ravageurs des ignames et leur gestion traditionnelle au centre du Bénin

Author(s): LOKO Yêyinou Laura Estelle

Affiliation: Université Polytechnique d'Abomey

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Abstract of the poster / Description of the booth:

Les ignames (*Dioscorea* spp.) constituent l'une des cultures vivrières qui contribuent à la sécurité alimentaire et à la réduction de la pauvreté au Bénin. Cependant, leur culture se trouve de nos jours confrontée à plusieurs contraintes conduisant au déclin de la productivité et à une perte de diversité. L'infestation et la destruction des tubercules par les termites reste une des contraintes majeur de la production de l'igname au Bénin et spécifiquement au Centre du pays. Au même moment, les termites jouent le rôle de décomposeur de matières organiques et ont une importance alimentaire. Au vue de ces deux rôles antagonistes que peuvent jouer les termites, il est donc important de documenter la perception paysanne des termites comme ravageur de l'igname et documenter les méthodes de lutte traditionnelle dans le but de développer une méthode de lutte efficace contre ces ravageurs. Une étude menée dans 14 villages à travers le centre du Benin a permis d'identifier les principales espèces de termites considérées par les producteurs comme les plus dommageables. Une multitude de méthode de lutte a été recensée dont la plus importante reste l'utilisation d'insecticides chimiques.

Title: Recherche sur les insectes pollinisateurs des écosystèmes forestiers et agricoles du Burundi - Rôle des pollinisateurs dans la sécurité alimentaire

Author(s): Longin Ndayikeza, Alain Pauly, Benoît Nzigidahera, Alexis Mpawenimana & Shadrack Girukwishaka

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Abstract of the poster / Description of the booth:

Les pollinisateurs sont des insectes essentiels à l'entretien de la biodiversité agricole qui assure les moyens d'existence dans le monde en général et au Burundi en particulier. En plus de la pollinisation de nombreuses plantes à fleurs, les abeilles et autres insectes pollinisateurs jouent un rôle essentiel à la conservation de la diversité biologique sauvage et au maintien de leur biodiversité génétique.

Ainsi, La sécurité alimentaire, la diversité des aliments, la nutrition humaine, la santé et les prix des produits alimentaires sont autant d'éléments qui sont fortement tributaires des animaux pollinisateurs. La pollinisation est nécessaire à toute production de graines et de fruits par les plantes à fleurs. Les populations récoltent des graines de certaines cultures pour se nourrir et des fruits quise développent avec la graine. Ces grains sont donc nécessaires à la production de la prochaine génération de cultures et permettent souvent d'améliorer les variétés dans les programmes de sélection des plantes.

Selon le Département des Nations-Unies pour l'Agriculture et l'Alimentation (FAO), 70% des espèces culturales assurant l'essentiel de l'approvisionnement alimentaire mondial sont tributaires des insectes pollinisateurs.

C'est par cela qu'au Burundi nous avons commencé les recherches sur les insectes pollinisateurs depuis 2009.

Title: Lépidoptérophagie : Sa contribution au développement durable**Author(s):** Malaisse François**Affiliation:** Biodiversité et Paysage, Gembloux Agro-Bio Tech, Université de Liège, Belgique**Contact:** malaisse1234@gmail.com , 32(0)81 60 18 13**Abstract of the poster / Description of the booth:**

Les lépidoptères, apparus il y a 220 millions d'années constituent un ordre d'insectes. Cent quatre-vingt mille espèces sont reconnues, relevant de 128 familles. Près de 500 espèces sont consommées par l'homme, principalement au stade larvaire (chenilles), de façon plus réduite au stade nymphal des (chrysalides) et de façon plutôt exceptionnelle au stade adulte (abdomen de quelques papillons). Ces espèces représentent 18,3% du total des espèces d'insectes consommés par l'homme. La famille la plus importante est celle des Saturniidae (27,5 % du total des lépidoptères consommés). Le terme de « campéophagie » a été proposé pour la consommation de chenilles par l'homme. Celles-ci sont un aliment à forte saisonnalité, qui est toutefois disponible, après séchage, pendant plusieurs mois. Il fait l'objet d'un commerce qui localement atteint plus de 1.600 tonnes de chenilles séchées par an. Cet aliment est énergétique (de l'ordre de 400 à 500 kcal/ 100 g de poids sec) et une source non négligeable de protéines, de lipides, de sels minéraux et de vitamines. Certaines populations reconnaissent plus de 30 espèces différentes, chacune ayant leur nom, et les plantes dont elles se nourrissent sont aussi connues. Les techniques de récolte, de préparation et de consommation sont variées et identifiées. Ainsi pour l'Afrique, une liste de plus de 370 références abordant ce thème a été publiée et son aspect ethnozoologique discuté (Malaisse & Latham, 2015). Une autre étude fait la synthèse des chenilles, chrysalides et papillons dans l'alimentation humaine pour les divers continents (Malaisse, Roulon-Doko, Lognay & Paoletti, 2015). Elle développe de nombreux aspects, tels que des aspects médicaux et ceux liés à la gestion de leur biodiversité dans le cadre de l'alimentation des populations des régions tropicales.

Title: Use of banana diversity for nutritious diets**Author(s):** I. Van den Bergh, B.N. Ekesa, D. Nabuuma, G. Blomme**Affiliation:** Bioversity International**Contact:** i.vandenbergh@cgiar.org**Abstract of the poster / Description of the booth:**

Vitamin A deficiency (VAD) is the leading cause of preventable blindness in children, with an estimated 250,000-500,000 children becoming blind every year. Half of them die within 12 months of losing their sight, as VAD increases the risk of disease and death from severe infections. In pregnant women, VAD causes night blindness and may increase the risk of maternal mortality. VAD is a public health problem in more than half of all countries, especially in Africa and South-East Asia. Using the whole-of-diet approach and increasing diversity in diets can help prevent such micronutrient deficiencies.

Bioversity International looks into the variability of nutrients in food crops to introduce more nutritious diets that are affordable, culturally acceptable and available year round. Banana (*Musa* spp.) is the fourth most important crop in least developed countries and a staple food for several hundred million poor people and as such provides an important source of nutrients. For instance in Burundi, Rwanda, Uganda and other parts of East and Central Africa where the food system is banana based, consumption is about 3 to 11 bananas/day/person. This fast growing perennial produces fruit year-round, thus providing food during the hunger gap when other crops are less available. Moreover, as banana plants are tall they create a microenvironment allowing intercropping with up to 60 other food crops.

Over 400 cultivars of banana are grown by smallholders worldwide. These farmers grow in their fields up to 30 cultivars simultaneously. Identification and promotion of naturally occurring pro-vitamin A-rich cultivars has the potential to have significant long-term beneficial impact on the incidence of VAD. Interest in Vitamin A-rich bananas took off in the early 2000s when analyses done by L. Englberger and her collaborators revealed that some orange-fleshed cultivars indigenous to the Pacific region have high levels of Vitamin A precursors. Since banana breeding is difficult and time-consuming, direct introduction or 'fast-tracking' of existing vitamin A-rich banana cultivars is seen to offer substantial savings in terms of both cost and time.

Title: The impact of certification on carbon stocks and biodiversity in smallholder coffee systems: A case study in the Mt Elgon region, Uganda

Author(s): Sofie Fabri, Koen Vanderhaegen, Bruno Verbist and Bart Muys

Affiliation: Division Forest, Nature and Landscape Dep. of Earth and Environmental Sciences, KU Leuven, Celestijnenlaan 200E, 3001 Leuven, Belgium

Contact: koen.vanderhaegen@ees.kuleuven.be

Abstract of the poster / Description of the booth:

The need for food for the fast growing population in eastern Uganda leads to the conversion of previously uncultivated or forested land to intensely cultivated agricultural land. This results in an increased emission of greenhouse gases, deforestation, biodiversity loss and the occurrence of landslides. On top of that climate change is expected to have a negative effect on the yield and quality of Arabica coffee in Uganda, which is the main source of cash for smallholder farmers in the east of the country. An alternative for intensive agricultural systems can be found in agroforestry, such as the coffee-banana systems in the Mount Elgon region in Uganda. Agroforestry is said to provide four main ecosystem services: carbon sequestration and storage, soil enrichment, biodiversity conservation and improved air and water quality. It also mitigates the negative effects climate change has on coffee because shade trees create a cooler microclimate.

Certification is seen as a way to stimulate people to implement sustainable management practices and agroforestry systems and thus protect ecosystem services. The goal of this research was to look at the impact of certification on two ecosystem services, carbon storage and biodiversity conservation, in smallholder coffee gardens in eastern Uganda.

The difference in carbon storage between certified and non-certified fields was studied by looking at five main carbon pools: above- and below-ground biomass carbon, soil organic carbon and carbon in litter and deadwood. Total average carbon stocks in organic certified fields (114.5 ± 35.6 Mg ha⁻¹) are significantly higher than in the matched non-certified fields (100.6 ± 39.8 Mg ha⁻¹). Total average carbon stocks in non-organic certified fields (100.5 ± 24.5 Mg ha⁻¹) are not significantly different from carbon stocks in the matched non-certified fields (118.4 ± 57.5 Mg ha⁻¹) or from the stocks in organic certified fields. When looking at both certification schemes together, certified coffee fields do not have significantly higher carbon stocks than non-certified coffee fields. The trends in the total carbon stocks are mainly due to the soil organic carbon pool, which contributes 63% to the total carbon stock.

Biodiversity conservation was estimated by recording trees, shrub and regeneration species as indicators of slow environmental changes. Ants were collected as an indicator species for the effect of fast environmental changes. Diversity indices for both indicators do not indicate significantly higher richness or diversity in certified fields compared to non-certified fields. Also very little variation in tree species composition was found. The most abundant tree species in coffee gardens are *Persea americana* Mill. (avocado pear), *Cordia africana* Lam. and *Grevillea robusta* A. Cunn. ex R.Br. (silver oak). These species are planted by farmers for fruit, shade, timber or fuel wood. The tree layer in coffee gardens in eastern Uganda is thus currently very man-made.

Title: Assessing carbon stocks and biodiversity at the landscape level in Jimma, Ethiopia

Author(s): Koen Vanderhaegen, Bruno Verbist and Bart Muys

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Abstract of the poster / Description of the booth:

A major constraint to current REDD+ initiatives is the arbitrariness of the operational definition of 'forest'. The UN-REDD+ framework ignores the high potential of other (tree containing) land uses for carbon sequestration and the generation of co-benefits, in contrast to a whole landscape approach known as 'Reducing Emissions from All Land Uses' (REALU). To indicate this potential, carbon stocks and biodiversity were assessed at the landscape scale around Jimma, SW Ethiopia. Notwithstanding the indigenous forests' high carbon stocks per hectare (336.96 ± 120.6 Mg C ha⁻¹), 80% of the total carbon stock of the 106 ha assessed landscape window was found to be stored in non-forest land uses. Especially local agroforestry systems, such as managed semi-forest coffee production fragments (179.92 ± 38.5 Mg C ha⁻¹), home gardens (106.26 ± 16.8 Mg C ha⁻¹) and pole wood plantations (112.36 ± 23.9 Mg C ha⁻¹) store large amounts of carbon. Together with local maize fields (69.45 ± 12.3 Mg C ha⁻¹), teff fields (69.51 ± 6.5 Mg C ha⁻¹) and grazing lands (76.90 ± 10.3 Mg C ha⁻¹) these non-forest land uses play an important role in a prospective 'high-carbon-stock rural-development' under a REALU framework. The simultaneous assessment of biodiversity, based on tree community composition and Hill's diversity indices, indicated important biodiversity co-benefits under a REALU approach. Biodiversity indices such as the Hill's N1 diversity of abundant tree species showed a strong positive correlation with local carbon stocks ($R^2=0.56$). Since the cover of indigenous forest is reduced to only 7% of the landscape window's area, most of the remaining trees and biodiversity can be found within the surrounding landscape mosaic. Semi-forest coffee production fragments for example still harbour almost half of all encountered native tree species. An interesting result of the simultaneous biodiversity assessment was that a regrouping of plots based on tree biodiversity provides a more precise and cost efficient way to assess carbon stocks, reducing the number of plots needed with 23%, to achieve the same precision level.

Vanderhaegen, K., Verbist, B., Hundera, K. & Muys, B. REALU vs. REDD+: Carbon and biodiversity in the Afromontane landscapes of SW Ethiopia. For. Ecol. Manage. 343, 22–33 (2015)

Title: Biodiversity conservation in social-ecological systems: (mis)matches between conservation discourses & evidence-based conservation

Author(s): Katherine Vande Velde, Jean Hugé, Nico Koedam & Farid Dahdouh-Guebas

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Abstract of the poster / Description of the booth:

Defining 'effective' biodiversity conservation is inhibited by the continued lack of agreement on 'what matters' in conservation. This is leading to a paralysing debate on social and ecological 'best practices' (i.e. conservation methods and objectives), while the need for productive debate, and more integrated and effective biodiversity conservation action remains high and urgent.

As conservation methods and objectives are multidimensional in all social-ecological systems, we propose an open interpretation of 'effectiveness' of biodiversity conservation, based on multiple sources of knowledge and interpretations of what matters in conservation. Our analytic framework consists of the paradigms of: (i) inclusive conservation and (ii) evidence-based conservation.

To map and analyse discourses (integrating ecological and value knowledge) we will use Q methodology (i). To review and summarize evidence-based ecological knowledge spread among experts we will use the Delphi method (ii). Separately, these are well-established methods used to move debate to productive grounds and bring new insights (e.g. effectiveness criteria) in different research fields. However, we will innovatively integrate both methods while focussing on effectiveness of biodiversity conservation at the local scale through the use of multi-criteria decision analysis.

By integration we do not intend to 'force' consensus. Instead, we will clarify what combinations of effectiveness criteria –exposed in discourse and expert-based ecological knowledge– would result in more (win-win situation) or less effective (win-lose and lose-lose situations) biodiversity conservation for the locally expressed objectives. We expect to develop a biodiversity conservation methodology applicable to a wide range of terrestrial and aquatic social-ecological systems, but we will use mangrove systems in South-East Asia, differing in management regime and context, as a model in our study.

Title: Swifts Without Frontiers / Martinets sans frontières / Gierzwaluwen zonder grenzen

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Abstract of the poster / Description of the booth:

BioDIVERSITY is not only in natural reserves, and all birds don't build their nests in trees. Swifts, these fascinating birds that bring joy to our Northern cities, are a good example of that: Each Spring, they migrate up to 10,000 km in order to breed in our... houses! 99% of them only build their nests in building cavities! But those holes tend to disappear, as more and more people isolate their houses, not knowing that they host biodiversity. Even many ornithologists ignore this, and if nothing is done, this could be fatal for these fascinating birds!

More and more "Swift friends", from Ireland to China, militate for "Swift-friendly" buildings. A whole network has even been put into place. But we have very few contacts in the Southern Hemisphere, though Swifts spend most of their lives (9-11 months!) in Africa. As far as we know from our few contacts there, Swifts face different threats in those countries, as they spend their whole lives on the wing when they don't breed (even to drink or sleep!): They are threatened by massive deforestation, which jeopardizes Swifts' only source of food, i.e. flying insects (up to 20,000 a day!). Also, some African people kill & eat Swifts. Sometimes, as a mere "treat", but often to survive. Moreover, war and dire poverty mean that Swift protection is not a priority for most people there. A few years ago, I met Dr Jane Goodall and told her how nice it would be if people from her network in Africa could help gather more information on Swifts. Then I heard about her "Roots & Shoots" youth groups, acting for Animals, People & the Environment. Which gave me the idea of establishing links between youth from both hemispheres using Swifts as a "go-between", sharing and comparing each other's biodiversity and human impact on it, and initiating projects that would help Swifts over the whole range of their lives. Jane Goodall was very enthusiastic about it. This year, a Brussels school (Ecole Jacques Brel, in Jette) had Swift nest-bricks installed on its site. Children were fascinated to hear how these birds live! Now, the school very enthusiastic about starting a transcontinental project.

I have many ideas and useful information for any "candidates", I still need partners and participants, I hope you will join me!