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**Tropical Ecology and Society
Reconciling Conservation and
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O13-01 – S13 Biodiversity conservation in a conflicting context – The case of the Congo basin

Monday 20 June 20 / 11:00-15:30 – Barthez

Identifying unique areas in the Congo Basin for conservation

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A major challenge in conservation biology is to identify areas to be protected in priority. With the hypotheses in mind that areas presenting unique environmental features when compared to their surroundings are more likely 1) to be vulnerable to changes and 2) hosting relatively more specialized species, we performed a global analysis to identify singular forested areas and further explored the relationship of those areas with forest bird richness and endemism.

Using a moving window of 50 x 50 km, we computed, across the earth's surface, on a grid of 5 x 5 km resolution the probabilities for each cell to find similar biophysical features elsewhere in the window. The input variables were, NDVI and NDWI, slope, and the percentages of grassland and tree covers. This systematic screening allowed us to map areas presenting unique features and to further correlate this information with the level of the correlation between bird endemism and species richness.

At the global scale, we found the forested biomes of the Congo Basin, namely the Tropical & Subtropical Moist Broadleaf Forests and the Tropical & Subtropical Grasslands, Savannas & Shrublands among the most homogeneous ones for what concern our environmental variables. While it is well-known that the Tropical Moist Forest is the biome holding the biggest diversity in terms of bird-species richness, the relationship between biomes and endemism levels is less documented. If we found that more than half of our variables explained bird endemism for the moist forests, such characterization of the level of endemism was not straightforward for other biomes. More relevant to the identification of potential new areas to focus on for biodiversity conservation, we found that the Tropical and Subtropical Moist Broadleaf Forests shown little ecological heterogeneity and consequently present only a few unique areas. Interestingly, while we found that the relationship between endemism and areas presenting unique environmental features was not obvious for most forested ecosystems, we found a significant relationship between endemism and habitat uniqueness for the Tropical and Subtropical Moist Broadleaf Forest.

It is the purpose of this contribution to discuss further our preliminary results and to contrast our findings with the current distribution of protected areas in the Congo Basin.

O13-02 – S13 Biodiversity conservation in a conflicting context – The case of the Congo basin

Monday 20 June 20 / 11:00-15:30 – Barthez

IMET (Integrated Management Effectiveness Tool): an integrated tool for the Planning, Monitoring & Evaluation of protected areas

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Despite the efforts of conservation authorities and partners, protected areas (PAs) management is complex because of pressures and threats, non-respect of good governance principles, insufficient management capacities and resources for conservation and unclear Planning & Evaluation systems, often due to incomplete and unsatisfactory information.

To reverse this negative trend, it is essential to invest in better decisions taking, structuring and orienting information systems and strengthening the coordination of the different management aspects towards well-defined result-oriented actions.

IMET is conceived to establish a common understanding of the problems to solve and solutions to adopt between actors of conservation. It supports managers at field or central level to improve management effectiveness and the status of biodiversity conservation. Designed originally for the countries of Central and Western Africa, it's applicable for any protected area, terrestrial or marine.

It consists of 3 modules: 1) context of intervention, 2) management effectiveness, 3) visualization of the elements and analyses produced (Decision Support Systems, DSSs).

The Context Module provides general information on the PA and its external context, on the territory, on resources available for management, on values (species & habitats), threats, climate change and ecosystem services.

The Management effectiveness Module is built on the main existing works and tools. Automatically connected with the Context Module, it allows the detailed assessment of the management process, along the 6 steps of the PA Management Cycle.

Building on reliable statistical processing, the information is organized and deployed through data visualization tools (DSS) to support analysis and decision-making.

Data collection is the result of a self-assessment process, jointly carried out by PAs and HQs staff facilitated by duly trained "coaches". The full involvement of national PA Agencies is a key element of the process.

The use of IMET allows the definition of both strategic and management objectives, of indicators and of reference values (benchmarks) to ensure the necessary follow-up, over time in view of a proactive approach towards biodiversity conservation.

It may become a key tool in the Central Africa region. In this regard, ownership by the users, enforcement of result analysis capacities and the scaling-up from the PA to highest levels still require challenging action-research approach.