

# AFROBIODRIVERS

## AFRICAN BIODIVERSITY DYNAMICS: INTERACTIONS BETWEEN ECOLOGICAL PROCESSES AND CONSERVATION ACTIONS

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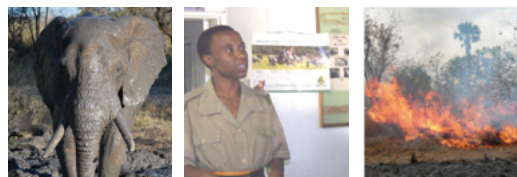


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**A**frica is home to the richest and most spectacular communities of large mammals on the planet. This exceptional but under-threat biodiversity plays an essential role in the functioning and maintenance of ecosystems while being an important economic and natural resource for human populations. The ongoing development in Africa can still be adjusted to conserve biodiversity on a scale not possible elsewhere where human densities are higher. Protected areas are the cornerstones of the conservation effort, but the decline of wild life is not homogeneous across the continent, indicating different dynamics across countries, regions or biomes.

The AFROBIODRIVERS project aims at studying the patterns and processes of change in the status of the populations of large mammals, with various indices, focusing on the interactions between the ecological processes (especially in connection with the global and climatic changes and human uses) and the actions for conservation. We hope that this project will contribute to the definition of public policy for the management of the biodiversity. To complement the dataset available across sub-Saharan Africa, the project will initially focus on Central and Western Africa and Madagascar where most data are scattered and unpublished.



CESAB'S  
ADVANCES

- The CESAB will facilitate the pooling of individual original databases and the coherence of the various indices used, in synergy with the large international projects on biodiversity monitoring.
- Among its original applications, this CESAB project will develop an Internet gateway providing updated information on the distribution and abundance of large mammals in Central and Western Africa, and in Madagascar.

### STEPS

- Compile data on large African mammal populations and on the causes of changes (natural, anthropogenic) to improve the availability and development of multidisciplinary data.
- Identify relevant and reliable indices to analyze the spatial and temporal trends of the populations at the local, national, regional and continental scales.
- Analyze these long-term datasets to identify ecological and anthropogenic key drivers of change and to develop models for decision making in conservation.

### Focus

#### \*Indices and indicateurs

The decline of some species groups can strongly affect the functioning of the ecosystems. These species groups can be operational indicators to monitor in real time the dynamics of the biodiversity and to understand its drivers through rigorous analyses in order to develop preservation strategies. The trends in large mammal populations are an example of a relevant indicator of the ecosystem health while being a major conservation challenge.

Using a variety of indices (abundance, presence-absence, etc.) developed from quantified and repeatable measures allows to draw more robust conclusions, especially for elusive species or species living in less accessible habitats. The challenge is also to develop methods suitable for the analysis of the various available indices to identify reliable indicators of the ecosystem health.