AFRICA BIODIVERSITY COLLABORATIVE GROUP

Human response survey by TNC, Makame, Tanzania. Photo Credit: Roshni Lodhia

Managing Global Change Impacts on Biodiversity

Analyzing how human responses to climate change negatively impact biodiversity and providing opportunities to reduce human vulnerability while benefitting biodiversity conservation.

CONTEXT

A major oversight of most climate change assessments is the inadequate consideration of indirect impacts on biodiversity due to changes in human use of natural resources. Studies have shown that while some wildlife species ranges will not diminish due to direct impact of climate change, they are likely to suffer significant habitat loss from human land use changes. Despite widespread recognition of the intensifying threat presented by climate change, conservation planning that takes into account climate change adaption principles is a newly emerging field as there is yet a conventionally accepted framework to guide the design and implementation of adaptation measures.

OVERVIEW

The Africa Biodiversity Collaborative Group (ABCG), through its thematic working group, Managing Global Change Impacts on Biodiversity (GCI), is documenting coping responses of human communities to climate change and the potential impacts of these responses on biodiversity to provide knowledge that can guide adaptation strategies towards improving conservation outcomes under future climatic conditions. The GCI group will produce a suite of tools that include an online database of adaptive responses, a map of biodiversity impacts, and a list of recommended ecosystem-based adaptation interventions.

The **Africa Biodiversity Collaborative Group** is supported by the United States Agency for International Development (USAID) to advance understanding of critical biodiversity conservation challenges and their solutions in sub-Saharan Africa.

ACTIVITIES & STRATEGIES

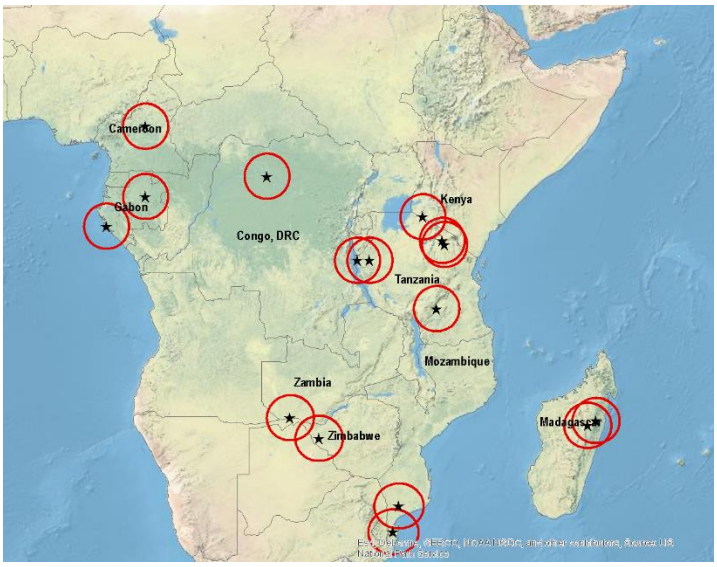
The GCI working group is documenting human responses to climate change and their impacts on biodiversity in Africa through the following activities:

Literature Review

World Wildlife Fund (WWF) is conducting a review of countries' National Adaptation Programmes of Action, Intended Nationally Determined Contributions, and over 2000 peer-reviewed publications to extract data on how human responses to climate change are impacting biodiversity.

Human Response Field Surveys

Data collection focuses on the human adaptive responses to climate change and how to use that information to improve conservation strategies, as well as human livelihoods. Surveys are designed to target both genders across a range of livelihoods, climates, and environments. Each member organization contributes to data collection from different sites across 11 countries (Cameroon, DRC, Gabon, Kenya, Madagascar, Mozambique, Namibia, Tanzania, Uganda, Zambia and Zimbabwe), with over 700 key informant interviews in total.



Data collection sites. Credit: Chris Zganjar, TNC

Typology of Human Responses to Climate Change

Conservation International (CI) is organizing the suite of survey responses into different categories or types. The goal is to link identified types of responses to past climatic changes, and characterize the likely benefits and impacts on biodiversity of the different responses. Guidance will focus on how beneficial (for biodiversity and communties) responses to climate change can be replicated where they may occur in the future (based on climate projections). Recommendations for solutions to responses that negatively impact biodiversity or livelihoods will also be provided.

WWF staff installing a weather station in Sesheke, Zambia. Photo credit: WWF Climate Crowd

Mapping Human Responses in Relation to Climate Impacts and Conservation Impact

The Nature Conservancy (TNC) and Wildlife Conservation Society (WCS) are conducting contemporary climate and future climate analysis using the Climate Wizard and meteorological stations collocated to over 500 survey locations in nine African countries. The human response survey locations are mapped into a Geographic Information System (GIS) and overlaid with the climate maps generated by the climate analysis. A correlation matrix to identify human responses to discrete climate change events will be developed.

EXPECTED OUTCOMES

Based on observed human responses, and projected conservation impact, the GCI group will identify and prioritize ecosystem-based adaptation strategies that reduce human vulnerability to climate change while benefitting biodiversity conservation efforts.

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