

The newsletter of the project “Protected Areas Resilient to Climate Change in West Africa (PARCC)” provides information on latest updates on project’s and related initiatives’ activities and results.

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The intermittent Bahr Salamat stream, Chad © Bemadjim N. Etienne



Waterbucks, Zakouma National Park, Chad © Bemadjim N. Etienne

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Review of options for managing PAs for climate change impacts and possible financing mechanisms

As part of the PARCC project, a rapid **Review of options for managing PAs for climate change impacts and possible financing mechanisms** was conducted by a consultant. The report was compiled via a desktop literature review as well as through consultations with key experts. It provides interesting reference information that could be complemented by PA managers and other stakeholders involved in PA management.

Below is an overview of the **CC adaptation strategies** available and already in use in PAs identified in the literature review, grouped by different headings. For each of the headings (underlined below), some of the strategies are presented below¹ (with examples from across the sub region, in particular the PARCC project area):

Scenario development and planning:

Strategies:

- Define reference conditions
- Assess risk: Identify the resources and processes at risk from CC
- Incorporate CC impacts into programs and activities

The PARCC project developed future regional climate-change scenarios and assessed the vulnerability of PAs to climate change; it will also implement five transboundary pilot sites.

Build and improve PA networks:

Strategies:

¹ Not all strategies are mentioned here. Please refer to the final report at www.parcc-web.org

- Increase the extent of PAs, or 'more and larger' PAs and buffer zones
- Improve representation within PA networks
- Enhancing connectivity, e.g. connect PAs and increase connectivity among PAs

An assessment of connectivity for the West Africa region has been carried out as part of the PARCC project and will be presented in the next newsletter.

Build resilience:

Strategies:

- Improve management and restoration of existing PAs to facilitate resilience
- Design new natural areas and restoration sites to maximize resilience
- Increase the level of protection for carbon stores within PAs

Mangrove restoration activities are being carried out in Guinea Bissau, Guinea Conakry, Sierra Leone, Senegal with the support of Wetlands International and The Nature Conservancy.

Improve governance:

Strategies:

- Review the language and interpretations of laws, regulations, policies, and management guidelines for their continued applicability to management under CC, and modify accordingly
- Recognize and implement the full range of PA governance types

The PARCC project will provide policy implementation support, notably through the development of draft agreements and management plans for the pilot sites.

Adaptive management:

Strategies:

- Develop/enhance monitoring and assessment programs
- Include adaptive management and scenario building/planning in toolbox of PA management
- Develop dynamic landscape conservation plans

The PARCC project developed an additional module for the Management Effectiveness Tracking Tool (METT), including new questions on climate change and the updated tool was successfully tested in The Gambia (see PARCC newsletter number 3)). The

project will also develop strategies at the regional and national level, and guidelines for PA managers on the best approaches to manage PAs for CC.

In terms of **PA financing mechanisms**, the study finds that there are many available mechanisms to finance PAs, including: National government funds; international donors; NGO grants; resource use/extraction fees; payments for ecosystem services (PES); tourism fees/charges; carbon offsets; private voluntary donations; environmental funds; debt-for-nature swaps; etc. Only a few of these are commonly used in West Africa (e.g. tourism charges, government budgets and donor funds).

West African PAs face a long list of challenges, many of which can be tackled by improving management effectiveness. However, the study suggests that more straightforward solutions to climate-change adaptation and financing challenges should be sought. Climate change can be seen as an opportunity to improve management more generally and potentially as an entry point for new channels of funding, interest and support.

In West Africa, the PARCC project assists PA managers with climate-change adaptation and will produce locally relevant strategies that could be an entry point for more effectively taking into consideration the possible impacts of climate change on protected areas.

The full report is available at: www.parcc-web.org

Incorporating climate change into IBA monitoring

Birdlife International, a partner in the project is responsible for providing relevant data on the avifauna of West Africa to inform climate change modelling and vulnerability analyses. This section gives an overview of how they consider climate change could be incorporated into International Bird Areas (IBAs) monitoring.

What are IBAs?

International Bird Areas (IBAs) are areas identified as important to ensure the conservation of birds. They are identified

using internationally agreed criteria (developed by BirdLife) applied by local experts.

There are over 12,000 IBAs in some 200 countries and territories, including in West Africa (www.birdlife.org).

Some of the various sites identified by BirdLife International as IBAs in the project countries include:

- The Yawri Bay coastal zone area in Sierra Leone
- Zakouma National Park, Manda national park, Ouadi Rimé Ouadi Achim reserve in Chad
- Tanji Bird reserve, Kiang West National park in The Gambia
- The *Mare d'Oursi* in Burkina Faso



Cut-throat Finch in Ouadirimé-Ouadi Achim faunal reserve, Chad © Tim Washer

What is IBA monitoring?

It is important to monitor biodiversity features:

1) At individual protected areas/sites:

- To ensure biodiversity features (populations, species, habitats) remain intact and in good condition
- To identify and track intensity of threats
- To assess effectiveness of conservation efforts including protection

2) With reference to climate change:

- To detect when climate is changing and how
- To determine if/when projected impacts on biodiversity happen
- To determine effectiveness of adaptation
- Because there is uncertainty in how the change will happen

Birds are useful and effective indicators of biodiversity, especially in other animal groups and plants, when it comes to identifying some conservation sites. They therefore contribute to the survival of other animals and plants because sites are identified based on the presence or absence of certain species of birds.

IBA monitoring is a simple system that consists of monitoring bird populations. Monitoring is performed as follows: randomized or semi-randomized locations across country/region; stratified sampling, standardized methods (area-based censuses, line transects or point transects); trained volunteers, local and national coordinators; and statistical analysis of data (with software freely available online).

IBA monitoring is already being applied in some PAs in West Africa to monitor the state/condition of species of conservation concern, the pressures and/or the responses.

How to incorporate climate change into IBA monitoring?

Given the possible impacts of climate change on conservation sites, including IBAs, it might be useful to take into account climate features when monitoring IBAs.

Incorporating climate change into IBA monitoring consists in the following activities:

- Monitor standard climate variables: rainfall, temperature, etc.
- Focus on species and sites most likely to be impacted soonest
- Track altitudinal distribution
- Monitor implementation of adaptation actions
- Monitor impacts of climate change on delivery of ecosystem services to people

National workshops on climate information and species vulnerability

Following the regional meetings on the use of climate data and models (April 2012, Freetown, Sierra Leone), and on species vulnerability to climate change (July 2012, Lomé, Togo), national level workshops were held in order to provide more capacity building on these topics. The first series of national workshops, which involved Anglophone countries (Sierra Leone and the Gambia), took place in April 2013 (see issue 3 of the newsletter). The second series of workshops for Francophone countries (Togo, Chad and Mali) was held in November 2013 in Lomé, Togo.

The main objective of these workshops was to build capacity on how to better link climate and climatic variability to the health of particular species populations. Participants were able to extract, analyze and interpret climate data, conduct species risk assessments, and identify possible adaptive responses.

In terms of adaptive responses (possible actions that could help reduce the vulnerability of the species), some of them could include:

- Directing management to reduce the impacts
- Promoting/assisting species dispersal
- Increasing available habitat
- Promoting conditions for ecosystem function
- Reducing pressures not linked to climate change
- Establishing captive populations of species that would otherwise go extinct
- Evaluating and enhance monitoring programmes
- Reviewing and modifying laws, regulations and policies on wildlife and natural resources management.

Regarding the next steps needed to achieve effective climate change adaptation for biodiversity, participants thought that the

government and other stakeholders should focus on the following aspects:

In Togo:

- Research: update data on the status of threatened species, establish a training centre, integrate climate data in all studies
- Ecological monitoring: monitoring of the Red List of threatened species, monitoring of priority PAs
- Capacity building on: modeling, the use of climate data, data collection on vulnerable species, vulnerability assessments
- Collaboration: more collaboration between the different state departments and stakeholders (NGOs, scientists, etc.), synergies between stakeholders' actions
- Awareness-raising
- Enhance policies and legislation



Pelicans, Zakouma National Park, Chad © Bemadjim N. Etienne

In Mali and Chad:

- Capacity building on: GIS, modelling, the use of the METT tool with climate change module, collection and analysis of data on great mammals, vulnerability assessments
- Ecological monitoring and inventories: monitoring of threatened species, monitoring species distribution induced by climate change
- Financing: more technical and financial means
- Awareness-raising: raising awareness of local populations on climate risks
- Collaboration: more collaboration between the different state departments and stakeholders (NGOs, scientists, etc.)
- Enhance policies and legislation: review of legal texts, implement adaptation strategies

Selection of transboundary pilot sites for the project

The project will implement transboundary activities. Transboundary conservation suggests that the risks of climate change effects may be reduced if species can move and remain protected with the same regulations and joint management plans across boundaries.

At the last Project Steering Committee meeting, transboundary pilot sites have been selected in each of the 5 core project countries.

Criteria were first developed for selecting the pilot sites, which are listed in the table below:

| Agreed criteria for selecting transboundary pilot sites for the project |
|--|
| Site joins across a national border to another site in an adjacent country |
| Analysis of climate-change impacts using project results indicates site has high vulnerability to climate change |
| Habitat connectivity analyses show some important gaps in this region |
| Potential to use the tools developed by the project in a pilot situation (e.g. revised METT) |
| Synergies could be developed with other projects in the region |
| There is a lack of funding which is critically affecting the integrity of the pilot project area which could be solved with limited funding |
| Countries are willing to engage in the pilot project, notably with the signature of management agreements and/or the development of management plans |
| The proposed pilot area involves at least one of the additional countries (Ghana, Burkina Faso, Cote d'Ivoire) |

Based on these criteria, the following transboundary pilot sites were proposed by the countries:

Sierra Leone:

Gola Rainforest National Park (border Sierra Leone-Liberia):

- This park and adjacent forests are Sierra Leone's largest remaining area of Upper Guinea Tropical Forest ; it hosts several endemic and endangered species; important rivers and watershed systems along the border
- The park has an MOU in place and is part of the designated 'trans-boundary peace park' between the two countries
- There has been a management plan from 2007-12. It is now being reviewed and will integrate the new laws (under review) and the REDD carbon project.

Outamba-Kilimi National Park (border Sierra Leone-Guinea)

- The park is the only protected area in Sierra Leone's extensive savannah grassland zone
- Elephant populations move between Outamba-Kilimi and Guinea

Togo:

Fazao-Malfakassa National Park (border Togo-Ghana)

- Largest National Park in Togo
- Important, amongst others, for elephant migration
- Opportunity to enhance the collaboration with the NGO (Franz Weber) to which the park has been conceded

WAPO Complex (borders Togo, Benin, Niger, Burkina Faso)

- The WAP ('W', Arly, and Pendjari) complex is already in place; the idea is to extend the complex to Oti-Kéran-Mandouri in Togo to create WAPO
- It has more synergies with other projects in the sub region, like PAPE (*Programme d'Appui aux Parcs de l'Entente*) project, and involves more countries than Fazao-Malfakassa
- It has the most important elephant population in West Africa

Mali:

Réserve des éléphants du Gourma (border Mali-Burkina Faso)

- The reserve has been created to protect the elephant populations that migrate periodically between Burkina Faso and Mali

- There is an opportunity to rehabilitate the ponds. There are only two remaining ponds in this very big reserve (1 250 000 ha) because of recurrent droughts, among others.

Chad:

Sena Oua National Park (border Chad-Cameroon)

- A MOU is in place for a transboundary PA, and have some technical resources in place, which gives it a solid basis for further field activities
- A joint management plan also exists

The Gambia:

Niumi National Park - Delta du Saloum (border The Gambia-Senegal)

- The management plan in Niumi is already established and in effect
- A transboundary agreement has been signed with Senegal
- The area has synergy possibilities with other existing projects and networks (e.g. MAVA-funded Project on sustainable livelihoods and climate change in coastal West Africa)

A recent habitat connectivity analysis identified the most important transboundary links. The proposed sites are part of these identified sites.

The next steps for the pilot sites will be to identify the activities that will be implemented at each site, taking into account the local context. If they are not already in place, the activities will include: drafting of transboundary PA agreements; creation of PA management plans; and starting the implementation of the agreements.

Upcoming project meetings

- Regional workshop on 'GIS and systematic conservation planning', April-May 2014
- Project Steering Committee meeting, April-May 2014

The IUCN World Parks Congress

The next IUCN Worlds Parks Congress will be held from 12-19 November 2014 in Sydney, Australia. The theme of the congress is: ***Parks, people, Planet: inspiring solutions***

One of the selected streams of the congress is: Responding to climate change

*'This stream will assemble tools for enabling the role of protected areas as natural solutions in helping communities to mitigate and adapt to the impacts of climate change. It includes new knowledge and case studies in the field of ecosystem-based approaches to responding to climate change. The stream outlines a broad and bold vision for new coalitions which emphasize the **key role of protected areas in climate change communication and response** at both the national and local level. The sessions and associated activities will explore new approaches for planning and managing protected areas to conserve biodiversity, cultural diversity, and human well-being in the face of climate change.'*

To get information on the Congress or on how you can participate, please visit:

<http://www.worldparkscongress.org>

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We welcome any contribution relevant to the subject in the form of articles, news, announcements, photos, events, etc.

Thanks in advance for contributing.

Download project-related documents at:
www.parcc-web.org