



PARCC West Africa

News & Updates

The quarterly 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.

This newsletter is prepared with funding from the GEF (through UNEP) and it does not necessarily express its views or the views of contributory organizations.

Issue 1–May 2012



Picathartes in Gola Forest, Sierra Leone © Neil Lambert/RSPB



Kiang West National Park, The Gambia © Elise Belle

In this issue

The project and partners	1
Updates and results	3
Scientific and technical reports	5
Publications	8
Agenda	8

The project and partners: Protected Areas Resilient to Climate Change in West Africa (PARCC West Africa)

The official name of the project is “Evolution of Protected areas systems with regard to climate change in the West Africa Region”. It is a full-size GEF project which aims at: (i) identifying risks to PAs as a consequence of climate variability and change, (ii) planning for adaptive measures that should be undertaken, and (iii) ensuring that those risks are reduced to acceptable levels.

The project will run until September 2015. The geographic scope of the project covers 5 core countries in West Africa: Chad, The Gambia, Mali, Sierra Leone, and Togo. An additional 3 countries could be involved in transboundary aspects of the project (Burkina Faso, Côte d’Ivoire and Ghana).

Many different institutions will participate in the implementation of the project. The main partners, which all committed cofinancing to the project, are:

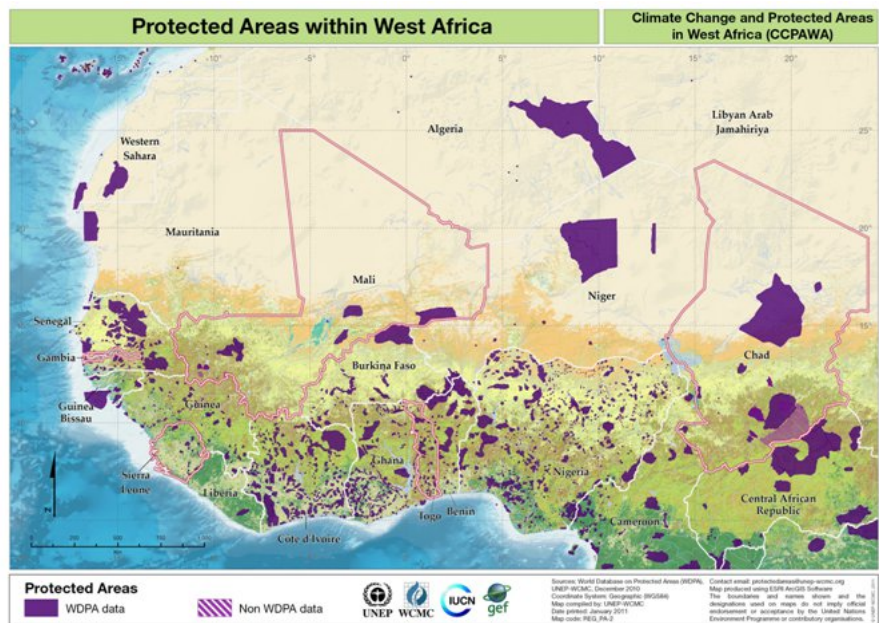
- UNEP-WCMC (Cambridge, UK) implements the project at the global level.
- IUCN-Protected Areas Programme for West and Central Africa (PAPACO, Ouagadougou, Burkina Faso) provides technical guidance for the implementation of activities and delivery of project’s results at the regional and national levels.

- The Governments (through their service in charge of protected areas-related issues¹) of the five core countries are involved in national-level activities.
- IUCN-Species Programme (Cambridge) will conduct assessments of species vulnerability to climate change, and will also work with the IUCN Species Survival Commission (SSC) to update and fill in the Red List assessment gaps in the region.
- The Met Office Hadley Centre (the UK national meteorology service) will lead on the development of climate scenarios.
- Birdlife (International and Africa programme) and national NGOs.
- Academic institutions: The University of Durham which will work on species distribution modelling, in collaboration with Birdlife; and the Durrell Institute for Conservation and Ecology (DICE, University of Kent) will lead on the conservation planning component.
- National and regional consultants of the five core countries will work in collaboration with the international partners mentioned above.

A **Project Steering Committee (PSC)** provides a link between the executing agency, the implementing agency, the five core countries, the three transboundary countries and the technical partners. The PSC meets once a year to review the outputs, make recommendations on the actions to be implemented in view of meeting the project's

targets and objectives and provide relevant advice and strategic guidance.

A **Technical Advisory Group (TAG)** of scientific experts comprises all the technical partners mentioned above; the group provides scientific and technical advice on the implementation of the project and the tools which will be developed.



Map of protected areas of the core countries (source: WDPA)

The project has four main components:

Component 1: Vulnerability assessment and risk reduction strategies for existing protected areas system

The project seeks, through this component, to comprehensively assess the extent to which PAs in West Africa have been affected or could be affected by climate change.

Component 2: Gap analysis and spatial planning

Climate change related studies, assessments and preparation of maps, all of which are required to inform decision-makers and recommend practical actions to enhance PA resilience will be produced.

¹National Environment Agency (NEA) -The Gambia ; Direction Nationale des Eaux et Forêts (DNEF) - Mali ; Environment Protection Agency (EPA) - Sierra Leone ; Direction de la Conservation de la Biodiversité et de l'adaptation au Changement Climatique –Chad ; Direction de la Faune et de la Chasse (DFC) - Togo

Component 3: Political support and implementation, pilot projects and training

This component focuses on building capacity and raising awareness of all stakeholders in order to take advantage of the tools, approaches and recommendations developed by the first two components.

Component 4: Knowledge management, communication and monitoring and evaluation

A communication strategy with a strong emphasis on data sharing and capacity building will be developed. The central point for all knowledge, information and outputs generated by the project will be the project website and data portal, which will include an online mapping tool.

The main expected results of the project are:

- Tools to assess the vulnerability of protected areas to climate change will be produced;
- Strategies to strengthen the resilience of protected areas to the impacts of climate change will be developed ;
- Capacity will be built in the region through regional and national workshops to ensure that the countries are able to use the tools and strategies that are developed.

More information on the project at:

<http://ccpawa.demoapps.unep-wcmc.org/>

Updates & results

Regional Inception meeting

The regional inception meeting of the project was held from 30 March to 1st April 2011 in Banjul (The Gambia). The project was launched and the activities to be undertaken by each partner were clarified.

During this workshop, initial training was provided by each partner on: Climate change and protected areas (lead consultant); Climate change impact on biodiversity (Durham University); Climate change modeling (Hadley Centre); Vulnerability assessments and

Climate change adaptation planning (Birdlife international) and; Transboundary networks and corridors (FFI).



Participants to the Regional inception meeting

National inception meetings

Inception meetings took place in each of the five core countries not only to launch the project at the national level, but also to review the data situation for each country and collect the readily available data. Data collected related to PAs, climate, species, vegetation and other relevant GIS layers; and National Action Plans were created for each country to gather the remaining data.

PARCC and the WDPA

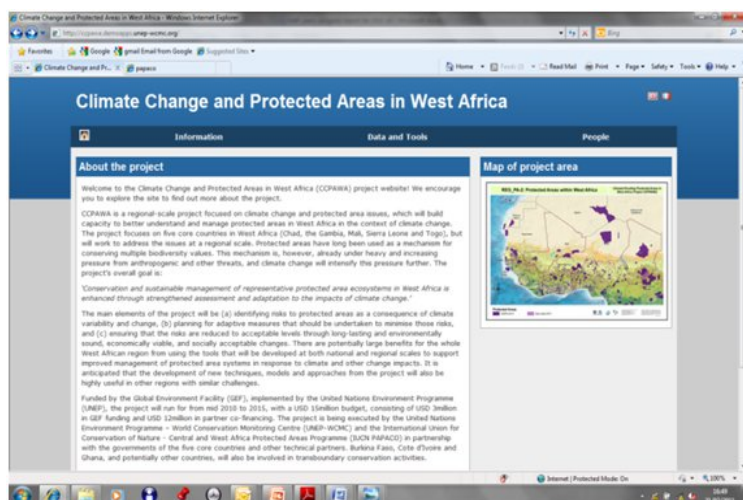
The World Database on protected Areas (WDPA) agreement was signed with The Gambia at the national meeting in Banjul. As a result, the WDPA team has been able to update the WDPA for this country. Given that the WDPA plays a critical role in measuring progress toward global conservation goals and targets, such as the UN Millenium Development Goals, this agreement is an important achievement for The Gambia, but also for the project, which seeks to update the WDPA.

Project website

A preliminary project website has been designed. It contains sections on: Information about the project (project documents, relevant articles, reports, etc); Data and tools (data from the countries, communication strategy, scientific reports) and; People involved (all project partners). The final web site will be created this year and will include

an interactive data portal, and ultimately an online mapping tool.

The data portal will be used to exchange data related to the project (including maps, presentations, articles and reports), and all project participants will be able to upload documents relevant to the project.



The preliminary project website

Communication strategy

Based on an online questionnaire to all PSC members, a communication strategy was developed to provide some general directions on communication for all project partners.

An important aspect of this communication strategy is the dissemination of project's results. This will be done through the project web site where all information can be uploaded and viewed by anyone; it will also be done through the dissemination of the newsletter, meeting and technical reports, etc. The partners will play a very important role in circulating the information among their networks, and posting it on their web sites.

Several communication tools will also be developed and made available to project partners and all stakeholders such as the project website, reports, newsletters, brochures, maps and posters.

Data collection

Initial data collection occurred during national inception workshops. Thus, for some PAs of the five core countries, parks boundaries and

GIS data (important to update the WDPA), management plans, list of species for different taxa (mammals, birds, fishes, amphibians), existence of meteorological stations near or within the PAs, occurrence of fire, and other socio economic data were collected. However, there are still missing data that would be

useful to build climatic models and scenarios and assess the vulnerability of species to the impacts of climate change. Missing data are currently being collected by national consultants especially recruited for this purpose. For instance, in Sierra Leone, the consultant will, among other tasks, provide updated PA boundaries for: River Estuary Wetlands, Kangari Hills, Kamburi North, Loma Mountains, Western area Peninsula, Yawri Bay, Gola Forest, and Tiwai island. This will be useful to update the WDPA for this country.

Regional thematic workshops

In 2012 three regional workshops are planned:

1. The first workshop on "Climate information to enhance resilience of West African PAs" took place in April in Freetown. It was lead by the Met Office Hadley Centre (UK). Met Office representatives of several countries in the West Africa region (not only the five core countries) and Wildlife services attended the workshop. They shared climate information, and received training on climate modeling and on the use of climate information for biodiversity, which contributed to capacity building in the region. Sharing of experiences between Wildlife services and the Met Office was acknowledged.



Forest in Kakum National Park, Ghana

2. The second workshop on “Assessment of West African Reptiles” will take place in July: it will assess the conservation status, threats to extinction and vulnerability to climate change impacts of each of the approximately 300 species of lizards, snakes and turtles present in West Africa, by applying both the IUCN Red List Criteria and IUCN’s recently developed ‘Climate Change Vulnerability Assessment Framework’.

3. The third workshop on “Assessment of West African mammals and freshwater fish” will take place in July: it will assess the vulnerability to climate change impacts of each of the approximately 570 species of freshwater fish and 450 species of mammal present in West Africa by applying IUCN’s recently developed ‘Climate Change Vulnerability Assessment Framework’.

More information on these meetings will be provided in the next issue.



Elephants in Nazinga Game Reserve, Burkina Faso

Student visiting partner in Togo

The project gives the opportunity for PhD and Masters students to conduct their research work on the ground. A Masters’ student from DICE (UK) is currently working with the *Direction de la Faune et de la Chasse* (Togo) in order to collect the relevant socio-economic datasets that are needed to inform spatial conservation and climate change planning policies in this country. The student will conduct a gap analysis to measure the availability of socio-economic data.

Scientific and technical reports

Several technical and scientific reports have been produced since the beginning of the project and are detailed below.

Baseline studies for the West African region were conducted during the Project Preparation phase.

Baseline study A: Identifying current data gaps and status of data acquisition for Climate Change and Protected Areas in West Africa: This report, prepared by UNEP-WCMC identifies the current gaps and status of data acquisition of the available spatial (GIS) datasets on protected areas and impacts of climate change in the project region.

Baseline study B: Current status of research and understanding on links between climate change, protected areas and communities: This report prepared by IUCN-PAPACO provides information on existing studies/models/tools which relate to the links between climate change and protected areas. It also highlights priority areas for project interventions.

Baseline study C: Status of policy instruments, institutional capacity and levels of awareness relating to climate change and protected areas in West Africa: This report prepared by IUCN-PAPACO provides information on the institutional framework and context within which climate change and protected areas issues are managed in the study region (policies and legal instruments in each country and their level of implementation, and gaps).

Data review and gap filling strategy: This report, which was prepared by UNEP-WCMC, is a review of the data availability situation. The study updates the data on the five project countries, and the wider West Africa region, especially with regards to protected areas. The following information on each of the project countries was updated based on the data contained in the WDPA:

- Number and reported area of nationally designated and proposed protected areas, e.g. Mali has 10 designated PAs totaling 26,004 km²;
- Number and reported area of nationally designated protected areas by IUCN category, e.g. from the 10 Malian PAs mentioned above, there is one category II PA with a total area of 1,878 km², 7 category IV PAs with a total area of 23,034 km², and the IUCN category is unknown for the other 2 PAs;
- Number and reported area of internationally recognized protected areas, e.g. Chad has 6 internationally recognized PAs with a total area of 124,051 km²;
- Total number and reported area of internationally recognized protected areas per country by convention: Togo for instance, has 4 Ramsar sites (12,104 km²).

of biodiversity and conservation priority for the region.

The study also collated and reviewed:

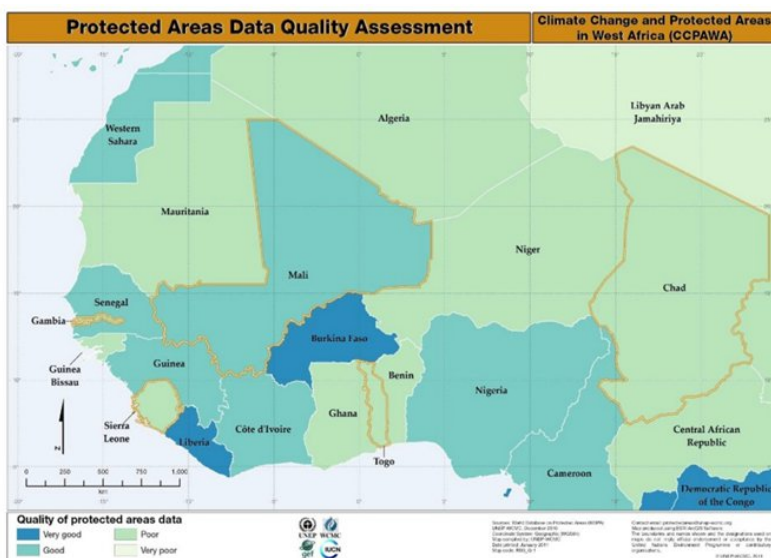
- Key biodiversity and conservation priority datasets, which include: name of PA, country, designation, type, IUCN category, status, year created, reported area, GIS area;
- Opportunities to strengthen existing transboundary PA networks;
- Information on scenarios of climate change and potential impact and contact points for data acquisition on climate change;
- All the contact points for acquisition of data mentioned above.

Rapid Screening of Vulnerability Assessment Tools and Framework Proposal

This work carried out by an international consultant, Carmen Lacambra, with contributions from Nathalie Doswald (UNEP-WCMC) and Carina Bachofen, reviews the available approaches and methodologies used to assess vulnerability, and formulates recommendations on key aspects to consider when we want to assess the vulnerability of PAs to climate change.

The work reports that there are a multitude of approaches to assess vulnerability, and that these approaches should be developed according to the specific aims of the project. These approaches include:

descriptive approaches, storylines, qualitative assessments, syndrome analysis, spatial assessments, quantitative assessments, indicator based assessments, computational indexes, models based on simulations, models based on scenarios... For this project and in order to reflect the real vulnerability of the object of assessment, *“a combination of visualizing tools, process and analytical tools, and storylines would be the best set of tools for the assessment of protected areas’ vulnerability to climate change in West Africa”*. Furthermore, it was recommended that this assessment involve the active



Data quality map (source: WDPA)

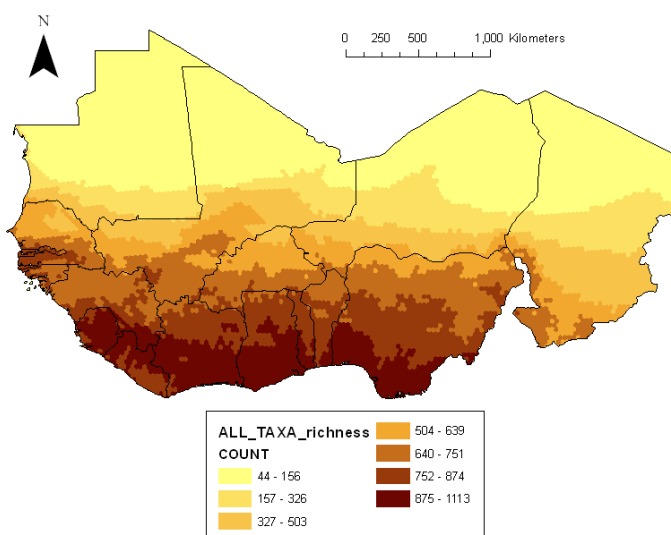
The study also developed a new methodology to assess the quality of the protected area data per country. The data quality was assessed according to the following criteria: (i) the percentage of boundary data for each country; (ii) the recency of the data; (iii) the completeness of the attributes. After analysis, it appears that the data quality in the West Africa region is generally quite low.

Other new maps were created, including a map of protected areas in West Africa, a map

participation of national and regional stakeholders and especially local experts.

A synthesis of existing species data of the West Africa Region

This report by IUCN Species Programme provides a synthesis of the spatial data of selected taxonomic groups for the project countries, and preliminary 'susceptibility maps' derived through application of IUCN's Climate Change Vulnerability Assessment Framework. The maps present: species' richness; numbers of threatened species; regional endemism and national endemism. The taxa include: birds, mammals, amphibians, freshwater fish, crabs, Odonata, molluscs, freshwater plants and other selected plants.



Map of species richness (all taxa combined)

The report also drew preliminary maps on global climate change vulnerability assessments for bird and amphibian species using IUCN's Climate Change Vulnerability Assessment Framework.

Using the systematic conservation planning approach for mitigating the impacts of climate change on protected areas

This report from DICE University of Kent provides an introduction to the topic of systematic conservation planning (description of theory behind this topic and techniques for incorporating climate change data) and an

outline of the conservation planning work that will be done as part of the PARCC project.

As part of the PARCC project, conservation planning systems will be developed for each of the five core countries and capacity will be built to ensure that these systems can be used for long-term conservation planning and guide decision making. Specifically this action will involve:

- *Mapping of climate change resilience areas in West Africa:* it will use the Shuttle Radar Topography Mission (SRTM) DEM dataset, combined with the GlobCover landcover data;
- *West Africa regional PA gap analysis:* this action will (i) measure the extent to which specific features are represented in the PA system at regional and national levels; (ii) measure the area of each conservation feature found in PAs;
- *Producing national conservation planning systems* for the project countries based on the Marxan and Zonae Cogito software packages.
- *Providing training* in using the national planning systems (training in using the softwares);
- *Undertaking conservation assessments to identify priority areas in each country:* the current distribution of the conservation features and predicted changes under climate change will serve as a basis to identify priority areas for conservation in each of the five core countries;
- *Collecting socio economic data for MSc project* to see how they are relevant to inform conservation policies, and identify what datasets are needed to address any information gaps (see above section on Master student in Togo).

All the reports are available on the project web site.

Publications

Below are some recent publications relevant to the project.

Willis, S.G. et al. (2009) Assessing the impacts of future climate change on protected areas networks: a method to simulate individual species' responses. Environmental management, 43(5): 836-845
<https://springerlink3.metapress.com/content/j490206413k77864/resource-secured/?target=fulltext.pdf&sid=3tsk4xmzuyxixj5rsqoqk0in&sh=www.springerlink.com>

Critically endangered birds: a global audit
<http://www.birdlife.org/community/2011/01/critically-endangered-birds-a-global-audit/>

Vulnerability assessments. A review of approaches
<http://data.iucn.org/dbtw-wpd/edocs/2011-068.pdf>

A framework for assessing the vulnerability of wetlands to climate change
http://www.ramsar.org/pdf/lib/lib_rtr05.pdf

Agenda

- From 16 to 20 July, Lomé, Togo: Workshop on "Assessment of West African Reptiles"
- 23 July, Lomé, Togo: Second meeting of the Project Steering Committee
- From 24 to 27 July, Lomé, Togo: Workshop on "Assessment of West African mammals and freshwater fish"

Links to partners' web sites:

UNEP-DEPI www.unep.org/depi
UNEP-WCMC www.unep-wcmc.org
IUCN-PAPACO www.papaco.org
IUCN species programme
www.iucn.org/about/work/programmes/species/

Met Office Hadley Centre
www.metoffice.gov.uk/
DICE University of Kent
www.kent.ac.uk/dice/
Birdlife www.birdlife.org
Durham University www.dur.ac.uk

All meeting and other technical and scientific reports are available on the temporary project website:

<http://ccpawa.demoapps.unep-wcmc.org/>

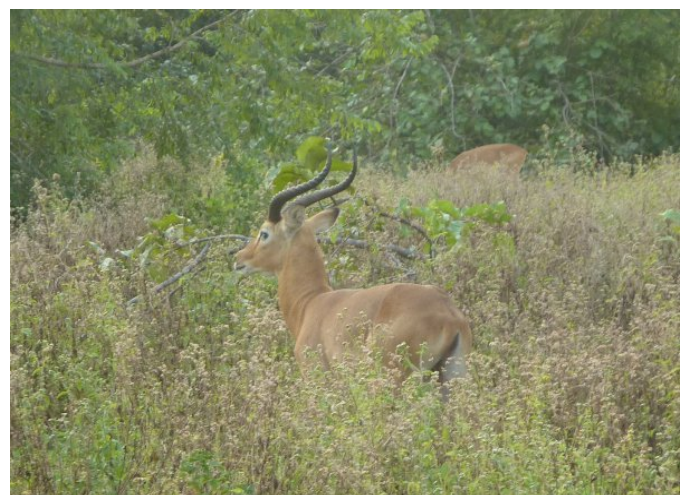
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We welcome any contribution relevant to the subject in the form of articles, news, announcements, photos, events, etc.

Thanks in advance for contributing.



Male kob in Mole national park, Ghana