

# Protected Areas Resilient to Climate Change, PARCC West Africa



2016

Regional strategy and policy recommendations  
for the planning and management of protected  
areas in the face of climate change



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## Glossary

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AfDB	African Development Bank
AMCEN	African Ministerial Conference on the Environment
CBD	Convention on Biological Diversity
CCAP	Climate Change Action Plan
CILSS	Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (Permanent Interstates Committee for Drought Control in the Sahel)
COP	Conference of the Parties
EBSA	Ecologically and biologically significant area
ECOWAS	Economic Community of West African States
GBO	Global Biodiversity Outlook
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
METT	Management Effectiveness Tracking Tool
NBSAP	National Biodiversity Strategy and Action Plan
NEPAD	New Partnership for Africa's Development
PA	Protected area
PAPE	Programme d'Appui aux Parcs de l'Entente
PARCC	Protected Areas Resilient to Climate Change
POWPA	Programme of Work on Protected Areas
PRCM	Programme Régional de Conservation de la Zone Côtière et Marine en Afrique de l'Ouest
RAMPAO	Réseau Régional d'Aires Marines Protégées en Afrique de l'Ouest
REDD	Reducing emissions from deforestation and forest degradation
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
UEMOA	Union économique et monétaire ouest-africaine (The West African Economic and Monetary Union)
UNFCCC	United Nations Framework Convention on Climate Change
WAP	Complexe transfrontalier W - Arly - Pendjari

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## Executive Summary

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The development of a regional strategy and policy recommendations for the best approaches to the planning and management of protected area systems resilient to climate change was one of the final outputs of the PARCC West Africa project. This regional document should serve as an authoritative point of reference and ensure coherence, coordination and networking in the implementation of national strategies. It should facilitate (i) the harmonization in national legislations and institutions (e.g. interoperability of clearing-house mechanisms and data management), particularly for transboundary protected areas (PAs), (ii) the mobilization of financial resources, (iii) the implementation of human and technological capacity building programmes, and (iv) communication and reporting processes. Regional policy instruments should also be developed in response to needs identified in regional policy documents, such as the AMCEN draft 'comprehensive African strategy on climate change', the Programme of Work on Protected Areas (POWPA) under the Convention on Biological Diversity (CBD) and related decisions of the CBD Conference of the Parties (COP).

During the consultations held in 7 countries (Burkina Faso, Chad, The Gambia, Ghana, Mali, Senegal and Togo) in August and September 2015, it was agreed that a regional strategy will:

(a) Help countries in the region implement actions under Strategic Goal 1 of the national adaptation strategies 'Ensure that conservation features identified for conservation when existing PAs were established are really protected to give them enough chances to resist the actual and future impact of climate perturbations' and Strategic Goal 2 'Design PAs in anticipation of the impact of climate change taking into account, in particular, the changes in species ranges in response to climate change and using the findings from the PARCC project' of the national strategies for the 5 project countries;

(b) Lead to the identification of features that require priority protection at the regional level, and the determination of levels of protection that will enable each conservation feature to resist or remain resilient to climate change, and agree on the contribution of each country, taking into account its priorities and resources; and

(c) Promote regional cooperation for the planning and management of climate change resilient PA systems. Cooperative programmes could be developed around strengthening human capacities with support from regional banks and regional economic organizations, and harmonization of policies, legislations and institutions dealing with PAs, with some focus on transboundary PAs, and climate change matters, including clearing-house mechanisms, databases and stations collecting and analyzing climate data.

The implementation of the regional strategy for the best approaches to the planning and management of PAs and PA systems in face of climate change should therefore help support mobilization of additional financial resources for the implementation of the Programme of Work on Protected Areas and related national plans of action in which all the dimensions of the impact of climate change are be taken into account.

## 1. Introduction

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Initiated in 2010, the PARCC West Africa project was undertaken to develop strategies and tools to increase the resilience of the PA systems to climate change, and build capacity in the region to implement these new approaches, with a focus on the following countries: Chad, The Gambia, Mali, Sierra Leone and Togo. The project achieved a number of important goals for PA programmes in West Africa including (i) collating climate data and producing future climate change scenarios at the regional level, (ii) providing information on the current and expected future distribution ranges of bird, mammal, and amphibian species, (iii) updating the IUCN Red List and assessing the vulnerability of species based on their biological traits, for all West African mammal, bird, reptile, amphibian and freshwater fish species, (iv) identifying areas resilient to climate change that would be beneficial to protect as climate refuges for the flora and fauna, and (v) bringing the results together for the design of systematic conservation planning systems and the implementation of a gap analysis to identify priority areas for conservation for the five project countries and the West Africa region as a whole, that is to say particular areas where new PAs could be established, or where existing PAs could be extended and where connectivity corridors could be created or restored.

The development of strategies and policy recommendations is one of the final stages of the PARCC project. These documents have been developed to ensure an effective uptake and use of the PARCC project outputs. Elements of the strategies and policy recommendations have been proposed for each of the project countries and discussed with national experts. They are articulated around the following three strategic goals: (i) strengthening ongoing conservation plans and programmes and their implementation so as to improve the performance of existing protected areas and their resilience to the impact of climate change, (ii) anticipating the impact of environmental change and responding proactively to ongoing and future changes, focusing on changes caused by climate change, and (iii) creating or strengthening the enabling environment for a successful implementation of national strategies.

Given that political boundaries do not generally coincide with natural ecological boundaries, and that addressing climate change for more effective PAs and PA systems is likely to be more efficient if it follows the natural boundaries of ecosystems, land-/seascapes instead of administrative boundaries, a regional strategy with regional policy recommendations for the best approaches to the planning and management of PAs in the face of climate change was also found necessary.

National adaptation strategies and policy recommendations for the five project countries were also undertaken. These national reports present adaptation strategies for the best approaches to manage PAs for climate change, building on the results of the project's scientific outputs, as well as policy recommendations for PAs in the face of climate change. The elements identified for the regional strategy draw on the strategies and policy recommendations developed at the national level. Furthermore, a number of national strategies and plans developed in the region were reviewed, as well as documents on regional cooperation and transboundary PAs including various strategic documents on climate change and natural resources management of ECOWAS, CILSS, the Great Green Wall for the Sahara and the Sahel Initiative, AMCEN, NEPAD and the African Development Bank.

The present document was developed based on consultations held in several countries in the region. However, it was not possible to involve and consult all countries from the region and explore in depth which of the regional organizations could anchor the regional strategy once it is adopted. This report therefore focuses on identifying points to consider for the development of a regional strategy. These points were shared with country representatives from the five project countries (Chad, The Gambia, Mali, Sierra Leone and Togo), as well as with Burkina Faso, Ghana and Senegal and with members of relevant regional organizations in West Africa (see Annex 1 for the list of persons consulted).

This report is organized in six different sections: Section 2 presents the proposed goals of a regional strategy and related policy recommendations for the best approaches to the planning and management of PAs in the face of climate change; Section 3 considers a few regional policy processes of relevance to the PARCC project, and discusses how the project outcomes might be most effectively integrated into these processes; Section 4 suggests some key steps and activities for the implementation of the selected PA processes integrating the PARCC project outcomes; and Section 5 presents the possible scope of a regional strategy on PAs and climate change, followed in the last section by some ideas on how to enhance the profile of the PARCC project outputs in the future.



## **2. Aim of the strategy and related policy recommendations for West Africa**

Countries in West Africa share a lot of biodiversity, ecosystem services, ecoregions and land cover types. They are located in relatively similar biophysical and climatic zones and face the same or comparable challenges. As such, a regional approach to addressing the challenges is justified, in particular to generate economies of scale at a time when resources have become scarce.

West Africa is one of the world's regions which are and, according to forecast, will be most affected by climate change. Given the cross-cutting and transboundary nature of climate change, this regional strategy and policy recommendations for the best approaches to the planning and management of PAs in the face of climate change can serve the following functions:

- (a) An authoritative point of reference and a communication tool that would:
  - (i) Ensure harmony in the implementation of national strategies, and facilitate reporting on their implementation;
  - (ii) Facilitate harmonization in national and regional legislations and institutions (e.g. interoperability of clearing house mechanisms and data management), and allow coherence in implementing programmes, particularly for transboundary PAs, to cover as needed any shift in species ranges across borders caused by climate change;
  - (iii) Attract funding more easily than when funding applications are done on an individual country basis, taking into account the ecosystem approach, which is the primary framework for addressing biodiversity issues in the face of climate change;
  - (iv) Facilitate ways and means to address human and technological capacity needs efficiently, e.g. through common training workshops, and by sharing training courses, research facilities, and data from meteorological stations in order to get a better understanding of the climatic events in the region;
  - (v) Allow making stronger interventions in meetings of the Parties to the CBD and the UNFCCC by using a common voice on climate change impacts on PAs;
- (b) A tool for enhanced coordination, synergies and facilitated networking;
- (c) A response to the AMCEN request in Goal 19 of the draft 'Comprehensive African Strategy on Climate Change' (still under consideration), which calls for the regional development, improvement and harmonization of policies, laws and strategies relating to biodiversity and land desertification, among others, including transboundary issues for the conservation and sustainable use of biodiversity in and outside protected areas.

### **3. Integration of the PARCC project outcomes into selected PA policy processes**

#### *Integration into regional organizations and processes*

A critical issue to address in developing a strategy at the West African region level is how such a regional strategy can be anchored in existing policy agendas and processes. Indeed, a new strategy that is not clearly linked to existing agendas is not likely to be an effective approach. Table 1 lists some regional organizations and processes they coordinate, which can benefit from the outputs of the PARCC project. The Table also identifies some ways through which the strategic elements and outputs from the PARCC project can be integrated to the identified processes.

This integration can be effected during the process planning, formulation, implementation and/or review stages. Most of the initiatives and processes described in Table 1 are under way and a few, such as the ECOWAS 'Sub-Regional Programme of Action to Reduce Vulnerability to Climate Change in West Africa' or the African Development Bank's strategy on climate change are due for review. UNEP-WCMC, the PARCC project executing agency, IUCN PACO, the main regional partner, National Liaison Officers and their national partners are the main actors who could ensure that the PARCC project outputs are integrated in regional processes and in eventually catalyzing that a regional organization offers to anchor the West African strategy for PA systems resilient to climate change. They can also be assisted by the project Steering Committee and all the technical partners.

UNEP-WCMC and IUCN PACO could for instance:

(a) Interact with the relevant regional organizations to inform them about the project outputs and possibly work with them to identify specific entry points for the project outputs and how integration could be beneficial to the regional organizations. Such interactions could be possible through various means, such as with consultants revising a strategic plan (e.g., in the case of the AfDB strategy on climate change under review, or the ECOWAS 'Sub-Regional Programme of Action to Reduce Vulnerability to Climate Change in West Africa' to be reviewed and updated soon), meetings of specialized technical committees of Ministers (e.g., Ministers in charge of forestry and wildlife in the context of the 'Convergence Plan for the Sustainable Management and Utilization of Forest Ecosystems in West Africa'), meetings with regional advisory committees, technical units (e.g., on climate change adaptation), consultation workshops (organized e.g., in preparation of AMCEN sessions), and the organisation of side events in the margins of international or regional meetings on biodiversity and/or climate change.

Interactions could also take place with the UNEP Regional Office for Africa serving as the secretariat of AMCEN to explore ways to facilitate the integration of the PARCC project outputs in the work of AMCEN;

(b) If the project budget allows it, organise more information workshops to inform NLOs and other national participants about the outputs of the project to make sure they fully understand their usefulness in their work and in their respective national programmes, and that they own them, use them and can communicate them, including for the purpose of raising funds for their work, the lack of or limited financial resources being a major constraint in the integration and use of the PARCC project outputs in the work of the individual participants in the project; and

(c) Support the development of a regional collaborative partnership or network of NLOs and other national participants in the project to facilitate the exchange of relevant experiences, information and expertise in the region. However, financial resources will be needed to make the network/partnership operational.

NLOs and other national participants in the project could:

(a) Use the PARCC project outputs in their ongoing work and for mobilizing additional resources; communicate them to decision-makers, in particular the Ministers or other persons who are focal points for the respective regional organizations, processes or agreements; and use them for general awareness-raising and in education curricula;

(b) Network with NLOs and other participants in the project from other countries; and

(c) Be proactive in communicating the PARCC outputs in meetings of regional processes/organizations that can benefit from those outputs and/or anchor the regional strategy on PA system resilient to climate change, and suggest ways to integrate them into the strategic documents of the regional organization when they are due for revision, or to have them taken into consideration during the implementation of regional processes and agreements; and

(d) Support the development of a regional collaborative partnership or network of NLOs and other national participants in the project to facilitate the exchange of relevant experiences, information and expertise in the region. Financial resources will be needed to make the network/partnership operational.

**Table 1. Possible entry points for integrating recommendations and findings from the PARCC project in selected ongoing regional processes.**

Regional process	Possible entry points
<p>Economic Community of West African States (ECOWAS)</p>	<ol style="list-style-type: none"> <li data-bbox="758 337 1850 418"> <p>1. Implementation of the 1993 revised Treaty, in particular Articles 29 and 31 in Chapter VI on ‘Co-operation in Environment and Natural Resources’ (ECOWAS, 1993).</p> <p>Article 29 on the environment requests Member States to protect, preserve and enhance the natural environment of the region and co-operate in the event of natural disasters, including by adopting and implementing policies, strategies and programmes at national and regional levels and establishing appropriate institutions. In accordance with Article, Member States are expected to harmonise and co-ordinate their policies and programme in the field of natural resources. All the PARCC project outputs can assist Member States in identifying and selecting the best sites for the protection of the conservation features in each country and in putting in place mechanisms for transboundary PAs management and establishment or restoration of corridors between PAs.</p> </li> <li data-bbox="758 1011 1850 1092"> <p>2. Implementation of the Sub-Regional Programme of Action to Reduce Vulnerability to Climate Change in West Africa (ECOWAS, undated).</p> <p>This Programme of action was developed bearing in mind that although countries in West Africa have identified adaptation measures in their National Adaptation Programme of Action (NAPA) and their National Communications to the United Nations Framework Convention on Climate Change (UNFCCC), these efforts should be complemented with concerted adaptation responses at the regional level.</p> </li> </ol>

	<p>The Programme of Action was developed to develop and strengthen the resilience and adaptability of the sub-region to climate change and extreme weather events, and to promote cooperation among Member States through the harmonisation and coordination of various national policies including for the protection of the environment and natural resources. The Programme of Action contains, among other things, a review of the vulnerability of West Africa to climate change and response strategies for adaptation to climate change. It is based on the best available scientific information and knowledge and is in line with the three Rio Conventions and the environmental programme of the New Partnership for Africa's Development (NEPAD). At the time of the adoption of the Programme of Action, models for predicting climate change impact had a lot of limits as well as the adaptation measures. The Programme of Action is due for revision and the task will be given to consultants.</p> <p>The PARCC project outputs, in particular the data on: climate; the projected impact of climate change; current and expected future distribution ranges of bird, mammal, and amphibian species; the vulnerability of all West African mammal, bird, reptile, amphibian and freshwater fish species; areas resilient to climate change; and the identification of priority areas for conservation, will enrich the evaluation of the progress made through the Programme of Action. The capacity building programme of the PARCC project has also contributed to the capacity development targeted in this ECOWAS Programme of Action developed to reduce vulnerability to climate change. The anticipative approach called for in Strategic Objective 2 of the PARCC</p>
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	<p>project national strategies for PA systems resilient to climate change could be a new element in the revised Programme of Action.</p> <p>3. The 2013 Convergence Plan for the Sustainable Management and Utilization of Forest Ecosystems in West Africa</p> <p>Countries in West Africa share similar or common forestry challenges with similar causes that would be more effectively addressed at both the national and regional levels. In the region, practices, research and administration are in general at similar levels of improvement, which makes it possible to share experiences and expertise effectively.</p> <p>The Convergence Plan for the Sustainable Management and Utilization of Forest Ecosystems in West Africa, also referred to as the Convergence Plan on Forests (CPF), was developed through a participatory dialogue to strengthen cooperation among West African countries in the area of forest and wildlife sustainable management, and facilitate a well-coordinated and efficient implementation of the ECOWAS Forest Policy in the face of various challenges raised by the cross-border aspects of forest and wildlife resources management. The objectives of the plan are mainstreamed in the wider ECOWAS strategy regarding the sound management of natural resources, environmental preservation and sustainable development.</p> <p>The Plan has been translated into programmes, projects and agreements at the sub-regional level, taking into account the ecosystem approach. Regarding wildlife management, there are for example: (i) the Regional Programme to support the</p>
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	<p>Integrated Management of Natural Resources (AGIR) between Guinea, Senegal, Guinea Bissau, The Gambia and Mali; (ii) the ECOPAS and PAPE (Programme to support the Parks of the Entente in Benin, Burkina Faso, Niger and Togo) Programmes, which enable to federate and harmonize PAs conservation interventions across several countries; and (iii) concerted management agreements concerning transboundary ecosystems.</p> <p>The CPF acknowledges:</p> <p>(a) The importance of PAs as a management tool for the conservation of forests and wildlife in West Africa. Among many other actions, the Plan calls for the gazetting of forests and the development of effectively-managed forest reserves, parks, wildlife reserves and transboundary areas of special ecological interest (e.g., for the conservation of endangered species habitat). The Plan supports research on wildlife and PAs and the use of the findings in the ECOWAS region. In this context, the outputs of the PARCC projects, including in particular the results of the systematic conservation planning (Smith, 2015), can be integrated to the training materials and in the education curricula in West Africa; and</p> <p>(b) The negative impact of climate change on forests and the role of the sustainable forest management in climate change mitigation and adaptation. The PARCC project provides useful scientific information on priority forest areas, including across national borders, that should be protected, and on the vulnerability in the face of climate change of animal species, some of which are found in forests. The PARCC project notes for example that the East Saharan Montane Xeric Woodland ecoregion</p>
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	<p>and the Cross Niger Transition Forests ecoregion are respectively no or very little protected. This information should be taken into account in the implementation of the Plan and more specifically in the implementation and review of the programmes, projects and agreements developed in the framework of the Plan.</p>
<p>The Permanent Interstates Committee for Drought Control in the Sahel - CILSS (Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel)</p>	<p>CILSS' mandate is to organize research for food security and the fight against the effects of drought and desertification for a new ecological balance in the Sahel through (i) the formulation, analysis, coordination and harmonization of strategies and policies in the Sahel region; (ii) the strengthening of scientific and technical cooperation; the collection, processing and dissemination of information; (iii) and capacity building of stakeholders, dissemination of experiences and awareness-raising. CILSS is also involved in climate change through the implementation of several activities such as:</p> <ul style="list-style-type: none"> <li>▪ Generating scientific knowledge on climate, the vulnerability of strategic economic sectors, and on adaptation and mitigation measures;</li> <li>▪ Supporting countries to integrate climate change into development policies, strategies and budgeting processes;</li> <li>▪ Building capacity for access to carbon finance;</li> <li>▪ Environmental monitoring and management of natural resources; and</li> <li>▪ The CILSS regional sustainable land management programme.</li> </ul> <p>CILSS mandate provides opportunities for using the PARCC project outputs e.g., in the formulation of the regional strategies to combat desertification and drought. The PARCC project outputs can be used as a contribution to the objectives of CILSS work on climate change.</p>



<p>Great Green Wall for the Sahara and the Sahel Initiative (GGWSSI)</p>	<p>“The overall objective of the GGWSSI is to improve the resilience of human and natural systems in Sahel and Saharan areas faced with climate change through healthy ecosystem management and sustainable development of natural resources (water, soil, vegetation, fauna, flora), protection of tangible and intangible rural heritage, the development of rural production and sustainable development hubs, improvement of living conditions and livelihoods of people living in these areas.” Approved in 2007 by the African Union, the initiative adopted in 2014 a harmonized regional strategy (African Union Commission and the Secretariat of the Panafrican Agency responsible for the Great Green Wall, 2014).</p> <ul style="list-style-type: none"> <li>▪ Under Strategic Objective 2 “Improve the state and health of African arid land ecosystems and their resilience to climate change and variability and to drought”, one of the Initiative’s expected outcomes (Expected outcome 2.2), the Initiative plans to affected ecosystems less vulnerable i.e. more resilient to climate change, climate variability and drought. This is in line with the objectives of the PARCC project.</li> <li>▪ In addition to strategic objectives, the GGWSSI strategy outlines a number of Operational Objectives. The expected outcome to one of these Operational Objectives is that decision-makers in the region endeavour to become better informed about arid area development challenges, the biophysical and socio-economic factors and their interactions in the Sahara and Sahel regions; and develop and implement actions towards, among other goals, adaptation to climate change and biodiversity conservation.</li> </ul>
<p>New Partnership for Africa's Development (NEPAD)</p>	<p>NEPAD is both a vision and a policy framework for Africa in the twenty-first century adopted by the African Union in 2001 to address critical challenges facing the continent:</p>

poverty, development and Africa's marginalisation internationally. The partnership provides unique opportunities for African countries to take full control of their development agenda, to work more closely together, and to cooperate more effectively with international partners.

NEPAD manages a number of programmes and projects, some of which are particularly relevant to the PARCC project:

- The Climate Change and Natural Resource Management programme:

Its objective is to promote regional and national programmes aimed at counteracting climate change and unsustainable use of natural resources. Through this programme, NEPAD collects data and information on climate change mitigation and adaptation on the continent, as a support to scientists in the region and the African Ministerial Conference on the Environment meetings (AMCEN). All the outputs of the PARCC project are a contribution to this programme.

- The African Landscapes Action Plan:

In 2014, with the support of NEPAD, experts, practitioners and policy makers from across Africa and around the world synthesize lessons learned from research and experience in integrated landscape management to jointly achieve food security, biodiversity and climate objectives. They generated a powerful set of policy and programmatic recommendations for national, regional and international action. The plan is yet to be implemented. The PARCC project outputs can enrich actions at the policy, research and capacity development levels by supporting climate change National Adaptation Planning process.

	<p>The National Adaptation Plan (NAP) process was established under the Cancun Adaptation Framework in 2010 (COP 16/ CMP 6) to enable Parties to formulate and implement national adaptation plans (NAPs) as a means of identifying medium and long term adaptation needs and developing and implementing strategies and programmes to address those needs<sup>1</sup>. The NAP process is meant to complement the existing short-term projects under the National Adaptation Programmes of Action (NAPAs) and play a critical role in reducing vulnerability and, building adaptive capacity by mainstreaming climate change adaptation into all sector-specific and national development planning. The NAP process is country-driven and participatory. Its continuous and iterative nature provides unique opportunities to integrate the findings from the PARCC project at various steps of the planning process.</p>
<p>African Ministerial Conference on the Environment (AMCEN)</p>	<p>AMCEN was established in 1985 “to provide advocacy for environmental protection in Africa; to ensure that basic human needs are met adequately and in a sustainable manner; to ensure that social and economic development is realized at all levels; and to ensure that agricultural activities and practices meet the food security needs of the region”.</p> <ul style="list-style-type: none"> <li>▪ AMCEN adopted the “Sustainable Land Management, Desertification, Biodiversity and Ecosystems-based Adaptation to Climate Change (LDBA)” as one of its Flagship Programmes managed by NEPAD to implement the outcomes of the Rio+20 summit on sustainable development, so as to adapt and mitigate the impacts of climate change and promote sustainable development.</li> <li>▪ AMCEN is working on a comprehensive African strategy on climate to deal with short, medium and long term climate change issues in Africa, as a broad framework for integrated and coordinated mechanisms designed to give strategic support to regional</li> </ul>

	<p>economic communities, member States and other stakeholders in addressing the challenges and opportunities associated with climate change. The draft strategy under consideration by AMCEN contains elements ('entry points' mentioned below) to which actions identified in the national strategies developed within the framework of the PARCC project can be added to provide more guidance on implementation of the broad goals and actions. For example, Goal 19 of the draft 'Comprehensive African Strategy on Climate Change' calls for the regional development, improvement and harmonization of policies, laws and strategies relating to biodiversity and land desertification, among others, including transboundary issues for the conservation and sustainable use of biodiversity in and outside protected areas; and Goal 27 of the draft strategy is about strengthening the resilience of coastal areas to climate change. The draft strategy will be submitted to the African Union for consideration and adoption in 2017.</p> <ul style="list-style-type: none"> <li>▪ AMCEN also called for national and regional action to strengthen sustainable mountain development, including the development of appropriate institutions, policies, laws and programmes, as well as strengthen existing transboundary and regional frameworks on sustainable management of African mountain ecosystems (AMCEN, 2015). The strategic elements identified in this document and for each of the five project countries (Mulongoy, 2016) could be integrated in the frameworks on sustainable management of African mountain ecosystems in the face of climate change.</li> </ul>
<p>West African Economic and Monetary Union (<i>Union économique et monétaire ouest africaine - UEMOA</i>)</p>	<p>The West African Economic and Monetary Union (also known as UEMOA from its French acronym) was established to promote economic integration among countries that share the CFA franc as a common currency. Its objectives include greater economic competitiveness</p>

through open markets and harmonization of the legal environment, the convergence of macro-economic policies and indicators, the creation of a common market, the coordination of sectoral policies and harmonization of fiscal policies. The UEMOA coordinates a Support Program to the Entente Parks (Programme d'Appui aux Parcs de l'Entente - PAPE).

An office of general coordination has been created within its Department of Rural Development and Environment to monitor all the support program components provided to the W-Arly-Pendjari (WAP) complex. These components include: (i) better economic viability and better coordination of conservation at the regional level for economies of scale on the complex (implemented by UEMOA); (ii) effective management and conservation of core areas (W, Arly, Pendjari), buffer zones and wildlife areas (implemented by UNDP); and (iii) control of direct and indirect negative pressures, with a favorable cost-benefit ratio for local communities. There are plans to expand the programme to include the Oti-Kéran and Oti-Mandouri (OKM) complex in Togo and to enhance consideration of climate change impacts. This was confirmed during the consultations held in August 2015 with a representative of UEMOA in Burkina Faso and PA managers who were attending their biannual workshop in Fada N'Gourma on strengthening collaboration in the management of the "Entente Parks" (see Annex 1 for lists of persons consulted in Burkina Faso).

UNEP-WCMC and project partners could interact with the PAPE Office of General Coordination to inform them about the project outputs and the importance of integrating them in future support activities of the Program. Information and training activities for UEMOA members could also be carried out, and assistance provided to UEMOA member countries in better understanding the socioeconomic benefits of jointly managing the WAP

	<p>and OKM complexes in the face of climate change, in addition to their ecological benefits, as a contribution to the UEMOA objective of strengthening the economic competitiveness of UEMOA Member States.</p>
<p>African Development Bank</p>	<p>The African Development Bank designed a Climate Change Action Plan (CCAP) for 2011-2015 to support its Regional Member Countries adapt to climate change and mitigate its effects while supporting the Bank’s focus on infrastructure development and regional operations. The CCAP is organized around three pillars -- Low Carbon Development, Climate Resilient Development and Funding Platform -- to help African countries strengthen their capacity to respond to climate change and to mobilize resources from existing and proposed sources of climate finance, the private sector and market mechanisms. The CCAP also includes advisory services, support to policy reform, knowledge generation and competency building that cut across all programs. The CCAP is consistent with existing Bank strategies and it takes into account the issues included in the Bank’s Long Term Strategy under development, especially on green growth. Implementation of the CCAP is strategically coordinated by the Climate Change Coordinating Committee (CCCC). This is the committee that should be targeted to integrate PARCC findings as well as the consultants participating in the updating of the Action plan.</p> <p>Also, working with partners, the Bank publishes technical papers to improve the understanding of climate science and impacts, in particular the risks and vulnerability to climate change in Africa. The technical papers also help implementation of CCAP.</p>

## *Integration during the implementation of the Convention on Biological Diversity*

Elements of the regional strategy for PAs systems resilient to climate change can be taken into consideration during the implementation of the CBD Programme of Work on Protected Areas (POWPA)<sup>2</sup>. This Programme represents the best agreed framework for the planning and management of PAs at the national and regional levels, including in the face of climate change. Goal 1.1 relates to establishing and strengthening national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals. Under its Goal 1.4 (To substantially improve site-based protected area planning and management), the POWPA provides in activity 1.4.5 that climate change adaptation measures should be integrated in PA planning, management strategies, and the design of PA systems. Nine West African countries<sup>3</sup> developed their POWPA Action Plans and reported, 4 years ago, that they just started to integrate climate change considerations in their planning and management of PAs and that they were developing or strengthening agreements with neighbouring countries to improve the effectiveness of their transboundary PAs management.

Table 2 shows how POWPA elements can be used to guide regional PA planning and implementation, and the relevance of the PARCC project findings in POWPA implementation. The fact that POWPA Focal Points of three of the five project countries (the 'Direction de la Faune et de la Chasse' in Togo, the 'Direction Nationale des Eaux et Forêts' in Mali and the Department of Parks and Wildlife Management in the Gambia) are also the national focal points for the PARCC project should facilitate the uptake of the project outputs and their integration into the implementation of POWPA. These project focal points could be organised in a support network that can work to ensure the effective uptake of the project outputs through regular communications, exchange of best practices, tools and lessons learned, including organization of webinars and training programmes, as well as resource mobilization and facilitating monitoring and reporting (see section 3.1 above). Furthermore, an assessment of the ecological and socioeconomic benefits of the best approaches for the planning and management of PA systems (including for transboundary PAs) needs to be carried out and used in applications for funding at the national and international levels.

**Table 2. POWPA elements and goals, and outcomes of the PARCC project that can guide regional PA planning and implementation.**

Selected components of a regional PA planning and implementation	Guiding elements from the POWPA and related CBD documents	Relevant goals and outcomes from the PARCC project
<p>1. Identification and prioritization of conservation features, bearing in mind sustainable development and poverty reduction goals as well as the present and future impact of climate change</p>	<p>In accordance with the CBD, its POWPA and the Aichi Biodiversity Targets, conservation features should include:</p> <ul style="list-style-type: none"> <li>▪ Genetic resources and genes, species and communities, and habitats and ecosystems that could be identified using criteria from Annex 1 of the CBD and / or criteria developed for ecologically and biologically significant areas (EBSAs);</li> <li>▪ Some priority should be given to: biodiversity components that are highly threatened, fragile or vulnerable or that are of particular value to the country, including areas for migratory species and ecosystems that provide essential services, such as services related to water, health, livelihoods and well-being; large, intact or relatively unfragmented or highly irreplaceable natural areas, including transboundary areas of biodiversity importance; and under-represented marine and inland water ecosystems in existing national and regional PA systems.</li> </ul> <p>One of the major objectives of POWPA Goal 1.1 is to encourage countries to establish comprehensive PA systems. The primary tool for assessing the comprehensiveness of a PA system is an ecological gap assessment. Only few of such assessments incorporated climate change aspects among the criteria. The following are some basic steps</p>	<p>The PARCC project considered the following conservation features in West Africa: land cover types; elevation zones; ecoregions; and bird, mammal and amphibian species distribution (at present and in the future). The project also described and mapped (bird, mammal, freshwater fish, reptile and amphibian) species vulnerability to climate change, and identified areas of resilience to climate change. Furthermore, the project considered how to integrate climate change in the planning and management of transboundary PAs.</p> <p>The project provided important data of use by the project countries and all the region:</p> <ul style="list-style-type: none"> <li>▪ The project identified ecoregions, land cover types and species that were insufficiently protected (or not at all protected) in existing PAs in each of the five focal countries and at the West African region level;</li> <li>▪ The list and map of species vulnerability can guide the selection of areas for urgent protection. Species that are both threatened and vulnerable to climate change, as well as areas containing high numbers and/or proportions of climate change vulnerable species within a given</li> </ul>



Selected components of a regional PA planning and implementation	Guiding elements from the POWPA and related CBD documents	Relevant goals and outcomes from the PARCC project
	<p>suggested to planners in the e-modules developed under the CBD for the incorporation of climate change aspects into the ecological gap assessment process:</p> <p>(a) Assess the conservation status of species and ecosystems most vulnerable to climate change and include them in conservation programmes so as to strengthen their ability to persist and adapt;</p> <p>(b) Include areas that are resilient to climate change. Such areas can serve as refugia for species with narrow environmental ranges, and provide temporary habitat for dispersers, and serve as platform sites on which new community assemblages may develop; and</p> <p>(c) Incorporate predictive climate model scenarios, bearing in mind that most gap assessments consider only existing patterns of biodiversity.</p>	<p>taxon, could be allocated some priority for conservation measures in the face of climate change;</p> <ul style="list-style-type: none"> <li>▪ Data on expected species turnover within PAs and the list of species expected to be vulnerable to climate change will help choose the best management strategy. For example, where there are high numbers of species considered vulnerable to climate change and a very high species turnover, it would be useful to facilitate the movement of species to new areas (notably by creating corridors or expanding PAs).</li> </ul> <p>In a future phase of the project, it will be important to also consider, as appropriate, marine and coastal areas, areas for migratory species and other areas of importance, as informed by the criteria adopted by the Parties to the CBD (in Annex 1 of the CBD and documents describing EBSA). Marine and coastal areas are indeed exposed and vulnerable to climate change (sea level rise, ocean acidification, flood and erosion, etc.). If well managed (e.g. mangroves), they can serve as natural barriers to climate change impacts, in line with the provisions under Goal 27<sup>4</sup> of the draft comprehensive African strategy on climate change. The Regional Programme for the Conservation of the Coastal and Marine Zone in West Africa (<i>Programme Régional de</i></p>

Selected components of a regional PA planning and implementation	Guiding elements from the POWPA and related CBD documents	Relevant goals and outcomes from the PARCC project
		<p><i>Conservation de la Zone Côtière et Marine en Afrique de l'Ouest - PRCM</i>) and the Regional Network of Marine Protected Areas in West Africa (<i>Réseau Régional d'Aires Marines Protégées en Afrique de l'Ouest - RAMPAO</i>) are considering ways to further integrate climate change in their strategies and plans, in line with sustainable development goal 13<sup>5</sup>.</p>
<p>2. Focus on the transboundary conservation features and other conservation features that will require transboundary agreements and/or regional cooperation</p>	<p>Goal 1.2 of the POWPA is about integrating PAs into broader land- and seascapes and sectors, so as to maintain ecological structure and function.</p> <p>Specific activities for POWPA Goal 1.2:</p> <ul style="list-style-type: none"> <li>▪ Identification of transboundary conservation features and other conservation features that will require regional cooperation will be possible by applying the ecosystem-based approach, while integrating PAs into broader land- and seascapes and also taking into account the needs of migratory species (POWPA activities 1.2.1 to 1.2.4)</li> </ul> <p>Goal 1.3 is about establishing and strengthening regional networks, transboundary PAs and collaboration between neighbouring PAs across national boundaries to enhance the conservation and sustainable use of biological diversity, implementing the ecosystem approach. Specific activities include:</p> <ul style="list-style-type: none"> <li>▪ Establishment and/or strengthening of regional PA networks and transboundary PAs is</li> </ul>	<p>The PARCC project documented the shift in some species ranges in response to climate change, which are often likely to go beyond national borders. Thus, in identifying transboundary conservation features, one should not only consider the actual ranges but anticipate future ranges as influenced by climate change. These aspects should be integrated in the ways countries plan their PA designation and management, in particular as countries are developing and implementing plans to meet the Aichi Biodiversity Target 11.</p> <p>In addition, the PARCC project selected five transboundary pilot sites, notably for species monitoring and for designing or revising transboundary management plans that consider climate change, and the implementation of the new Management Effectiveness Tracking Tool (METT) which integrates climate change aspects.</p>

Selected components of a regional PA planning and implementation	Guiding elements from the POWPA and related CBD documents	Relevant goals and outcomes from the PARCC project
	<p>encouraged particularly in areas generally identified as conservation priorities such as large scale river basins, mountain systems, large remaining forest areas, critical habitat for endangered species, and marine areas beyond the limits of national jurisdiction (POWPA activities 1.3.1 to 1.3.3); and</p> <ul style="list-style-type: none"> <li>▪ Multi-country coordination mechanisms are usually necessary to support the establishment and effective long term management of such networks (POWPA activity 1.3.1).</li> </ul>	
<p>3. Development of work plans and management plans for transboundary areas and conservation areas requiring regional / international cooperation, using a participatory approach involving representatives of neighbouring countries, countries from the region or found in migratory species flyways, as well as relevant regional and other international organizations</p>	<p>POWPA provides that:</p> <ul style="list-style-type: none"> <li>▪ National and regional level reviews of existing and potential forms of conservation, and their suitability for achieving biodiversity conservation goals be conducted with the full and effective participation of indigenous and local communities and relevant stakeholders (activity 1.1.4);</li> <li>▪ PA system gap analyses at national and regional levels be carried out based on the requirements to represent terrestrial, marine and inland water biodiversity in PAs, taking into account Annex I of the CBD and other relevant criteria such as irreplaceability of conservation features, minimum effective size and viability requirements, species migration requirements, integrity, ecological processes and ecosystem services (activity 1.1.5);</li> </ul>	<p>The training provided through national and regional workshops on the themes of PAs and climate change, and more specifically on systematic conservation planning gave participants the necessary practical tools for implementing effectively POWPA activities 1.1.4 to 1.1.7, 1.2.3 to 1.2.5 and 1.4.1 to 1.4.5.</p> <p>In the future, the training programmes need to reach a larger number of people to get the needed critical mass of knowledgeable people who can access the PARCC project findings, own them, adapt them to the specific conditions in which they live, improve the methods with new data and thus enhance the understanding of the effects of climate change on PAs, including transboundary ones. The revision of the widely used Management Effectiveness Tracking Tool (METT) (Belle <i>et al.</i>,</p>

Selected components of a regional PA planning and implementation	Guiding elements from the POWPA and related CBD documents	Relevant goals and outcomes from the PARCC project
	<ul style="list-style-type: none"> <li>▪ PAs identified through the national or regional gap analyses be mapped and designated for comprehensive and ecologically representative national and regional PA systems (activity 1.1.6), with some priority to protect highly threatened or highly valued areas (activity 1.1.5) and establish PAs that benefit indigenous and local communities (activity 1.1.7); and</li> <li>▪ Regional, national and sub-national PA systems be integrated into broader land- and seascape, <i>inter alia</i>, as determined by national priorities and resources, by establishing, rehabilitating, restoring and managing ecological networks, ecological corridors and/or buffer zones, and /or by also taking into account the needs of migratory species (activities 1.2.3 to 1.2.5).</li> </ul> <p>Under Goal 1.4 (to substantially improve site-based protected area planning and management), specific key points include:</p> <ul style="list-style-type: none"> <li>▪ A highly participatory process and the use of relevant ecological and socio-economic data (activity 1.4.1);</li> <li>▪ The inclusion in the site-planning process of: (i) the identification of appropriate measurable biodiversity conservation targets (activity 1.4.2), (ii) an analysis of opportunities for PAs to contribute to conservation, and sustainable use of biodiversity at local and regional scales as well as an analysis of threats (including climate</li> </ul>	<p>2012), which is in line with the guide taught in the CBD e-module for integrating climate change in PA management plans, is also an important contribution of the project to the work on PA in the world. It ensures that management issues related to climate change are monitored in PA management effectiveness assessments.</p>

Selected components of a regional PA planning and implementation	Guiding elements from the POWPA and related CBD documents	Relevant goals and outcomes from the PARCC project
	<p>change) and means of addressing them (activity 1.4.3);</p> <ul style="list-style-type: none"> <li>▪ The development or updating of PA management plans (activity 1.4.4), as much as possible long-term management plan, integrating climate change adaptation measures and climate change considerations in the design and management of PA sites and systems (activity 1.4.5); and</li> <li>▪ Capacity development or strengthening, ensuring in particular a well-trained, skilled and well-equipped staff (activity 1.4.6).</li> </ul>	
<p>4. Development of agreements on mechanisms, including capacity building, that will create an environment that is favorable to the implementation of the work plans, monitoring, evaluation of progress and reporting</p>	<p>Under POWPA Programme Element 3 (Enabling activities), Goal 3.2 relates to building capacity for the planning, establishment and management of PAs, through the development of knowledge and skills at individual, community and institutional levels, and by raising professional standards, and Goal 3.5 targets communication, education and public awareness of the PA importance, benefits and constraints, as well as ways and means to ensure PA effectiveness.</p> <p>These goals are closely correlated with the overall PA management effectiveness and, together with the activities on monitoring and research. They also enable adaptive management.</p> <p>Specific activities include:</p> <ul style="list-style-type: none"> <li>▪ PA capacity needs assessments and development of capacity building programmes on the basis of these assessments (POWPA capacity 3.2.2),</li> </ul>	<p>As already mentioned, the PARCC project organized many training workshops to increase the understanding and knowledge of how climate change can impact biodiversity and more particularly PAs in the West Africa region. Good practices and approaches to plan and manage PAs in the face of climate change in West Africa were also presented and discussed. These training workshops aimed primarily at protected area managers and planners, but they can also be useful to other stakeholders involved in the management of PAs.</p> <hr/> <p>In addition, examples and aspects specific to the West Africa region, drawing on the findings of the PARCC project, were used in developing guidelines for PA managers in the face of climate change.</p>

<b>Selected components of a regional PA planning and implementation</b>	<b>Guiding elements from the POWPA and related CBD documents</b>	<b>Relevant goals and outcomes from the PARCC project</b>
	<p>including capacity for monitoring and assessing (i) the status, trends and threats to biodiversity and related ecosystem services within PAs, and (ii) progress in the implementation of the POWPA so as to design adaptive PA management plans, and for the promotion of collaborative and interdisciplinary research to improve understanding of the ecological, social and economic aspects of PAs; and</p> <ul style="list-style-type: none"> <li>▪ Establishment of effective mechanisms to document and manage all types of knowledge and experiences on PA management (POWPA activities 3.2.2 and 3.2.3), for collaboration (POWPA capacity 3.2.4) and for the development of sustainable financing (POWPA capacity 3.2.5).</li> </ul>	

## 4. Key steps for the implementation of the selected PA processes

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1. For the identification of conservation features and their prioritization, bearing in mind the impact of climate change, the following actions should be implemented:
  - (a) Revision of conservation features (usually identified many years ago) in existing PAs;
  - (b) Updating of the list with the addition of important conservation features such as the ones that were identified as unprotected or insufficiently protected, as well as highly threatened species, species found highly vulnerable to climate change now and in the future, areas of resilience to climate change, and protected areas and links between PAs identified as being important for the regional network. It is critical that more people in the project countries and in the region become familiar with the methodologies and outcomes of the PARCC project and that they own the findings. It is also important that some of the conclusions from the PARCC project (Belle *et al.*, 2016) be validated with observations in the field;
  - (c) Prioritization of all the identified conservation features in light of sustainable development objectives and poverty reduction strategies, in addition to biological and ecological considerations;
  - (d) Revision of conservation features to serve as the basis for the development of recommendations for the creation of new PAs, expansion or modification of existing PAs and for their effective management.
2. Regarding the specific focus on transboundary conservation features and other conservation features that will require regional cooperation:
  - (a) There is a need to review ongoing work on transboundary PAs in the region, including (i) an assessment of their management effectiveness, building on the work carried out within the PARCC project, including the revised METT tool, and (ii) a compilation of the good practices and experiences in managing transboundary PAs;
  - (b) The gap analysis and connectivity analysis should help identify conservation features at the countries' borders and areas important for species requiring protection.
3. For the development of work plans for transboundary protected areas and conservation areas requiring regional / international cooperation, including management plans:
  - (a) The results from the gap analysis and the spatial conservation prioritisation should provide useful inform to conservation decision-makers;

- (b) Using the experience gained in the PARCC project with transboundary PAs and in other transboundary PAs such as the 'Programme d'Appui aux Parcs de l'Entente' (PAPE) and the W-Arly-Pendjari (WAP) complex, management plans will be developed for all transboundary PAs with the supporting institutions;
  - (c) Work plans will also be developed for conservation areas requiring regional/international cooperation such as areas for migratory species;
- 4. Regarding mechanisms, including capacity building, that will create an environment that is favorable to the implementation of the work plans, and for monitoring, evaluation of progress and reporting:
  - (a) Supporting mechanisms/institutions such as joint webpages or joint monitoring, evaluation and reporting body will be agreed for transboundary PAs and areas for migratory species;
  - (b) Human capacities will be developed or strengthened through, for example, the sharing of monitoring centers (e.g. meteorological stations), the sharing of expertise and research centers, and joint training programmes, among others. A critical mass of people familiar with the PARCC project and with its findings is needed to ensure a good integration of the PARCC projects methods and findings in the national and regional work on PAs. These researchers and practitioners will also continue to assist in improving the systematic conservation planning system by updating existing data and collecting new ones.
  - (c) In line with Decision XI/24 (h) of the CBD COP 11, sub-regional and regional networks of national focal points for the Programme of work should be established to "exchange best practices, highlights of implementing action plans, experiences in implementing projects funded by the Global Environment Facility and other donors, lessons learned and tools, with a view to promoting technical cooperation, including South-South and North-South, so as to achieve Aichi Biodiversity Target 11 and contribute to achieving related Aichi Biodiversity Targets".



## **5. Scope of a regional strategy on protected areas and climate change**

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This section describes which strategic goals should be part of the regional strategy. All the seven countries consulted (Chad, Mali, The Gambia, Togo, Burkina Faso, Ghana and Senegal) in August and September 2015 found the three strategic goals<sup>1</sup> and actions proposed for the national strategies of the five project countries relevant to them. As such, they believed they could also be applied to the other countries in the region.

**Under Strategic Goal 1 of the regional strategy, countries are expected to implement actions under strategic goals 1 and 2 described in the national strategies of the 5 project countries of the PARCC project.** Actions under the two strategic goals make provisions for taking climate change into account by:

(a) Ensuring that features that were identified for conservation when the PAs were established are effectively protected. Failure to protect them now does not give them enough chances to adapt to the actual and future impact of climate change;

(b) Designing PAs and connectivity corridors in anticipation of the impact of climate change in the future, in particular the expected changes in species ranges. Apart from Guinea Bissau and Senegal that have already exceeded the 17% coverage of the Aichi Biodiversity Target 11, and Togo where the focus is on rehabilitating its PA system rather than on creating new PAs to reach the Aichi Target 11, all the countries in West Africa are planning to expand their PA coverage. The findings and methodologies of the PARCC project (such as the identification of species vulnerable to climate change, of areas of resilience to climate change, of expected future species range based on species distribution models, and, most importantly, of priority areas for the creation of new PAs in the region) will assist countries in planning the expansion or modification of their PA system.

There is also a need to (i) identify and prioritize the features that require protection, which depends on the availability of resources needed to put into effect the protection of features in a sustainable

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<sup>1</sup> The three Strategic Goals of the national strategies are:

1. Strategic Goal 1: Strengthen ongoing conservation plans and programs and their implementation by improving the performance of existing protected areas (PAs) and by finalising the designation or regulation of areas identified as requiring protection
2. Strategic Goal 2: Anticipate and respond to ongoing and future environmental changes, focusing on changes caused by climate change
3. Strategic Goal 3: Strengthen the enabling environment for the successful implementation of the strategy

manner; and (ii) determine the level of protection that will enable each conservation feature to remain resilient to climate change. However, participants in the consultations expressed the following concerns:

(a) Some participants questioned whether the development of a strategy to incorporate climate change in the planning of PAs was really a priority. Some considered that the CBD POWPA and related national action plans to implement the programme of work already included provisions for integrating climate change in PA planning and management. However, because little progress can be noted in the integration of climate change considerations in PA planning and management, a strategy could help meet the objective; and

(b) Lack of funds was considered to be the major obstacle to the implementation of conservation measures, and some felt that there was no need to embark on new endeavors if it was not possible to manage existing PAs effectively. However, if further consideration of climate change can facilitate mobilization of additional financial resources, then efforts could be devoted to the development of the strategy.

***Strategic Goal 2 of the regional strategy*** includes:

(a) **Strengthening regional cooperation to promote PA planning and management for climate change resilient PA systems.** Cooperative programmes should be developed around:

- (i) Strengthening human capacities including through organization of targeted capacity building workshops, exchange of experts, strengthening of education programmes and student exchange throughout the region, as a follow-up to the training workshops held throughout the project lifetime on climate change and its impact on biodiversity and PAs in West Africa. Such activities should build on provisions in many regional strategies and plans (e.g., in the ECOWAS Treaty or CILSS), and could be supported by regional banks, the 'Union économique et monétaire ouest-africaine' (UEMOA - The West African Economic and Monetary Union) or ECOWAS. The 'Comprehensive African Strategy on Climate Change' under consideration by AMCEN contains provisions under its Goal 36 to strengthen capacity building of Member States for dealing with climate change and addressing institutional and technical challenges and constraints at national and local levels, and to empower relevant capacity building institutions and regional networks. Strategic objective 1 in the ECOWAS 'Sub-Regional Programme of Action to Reduce Vulnerability to Climate Change in West Africa' is about strengthening the scientific and technical capacity of

the sub-region to reduce vulnerability to climate change, including capacity to mobilize resources, bearing in mind that increased capacity at the regional level will in turn strengthen capacity at the national and local levels;

- (ii) Harmonizing policies, legislations and institutions dealing with PAs (in particular transboundary PAs) and climate change matters, including clearing-house mechanisms and databases;
- (iii) Strengthening technological capacities, including by agreeing to provide regional mandates to institutions such as meteorological stations, and education institutions, in line with Goal 44 of the 'Comprehensive African Strategy on Climate Change' under consideration by AMCEN, which is calling *inter alia* for the strengthening of regional cooperation in Climate Services Center, including through the support for regional institutions with mandates on climate science communication and knowledge brokerage. In addition, Goal 37 calls for development, transfer and adoption of appropriate technology among Member States; and
- (iv) Developing joint projects and submitting them for funding. Goal 38 of the draft 'African strategy on climate change' contains provision of adequate financing means for climate change adaptation and mitigation, including through the identification of global, regional and national financing sources, and coordination of sustainable African climate change financing. Also, Strategic Objective 3 of the ECOWAS 'Sub-Regional Programme of Action to Reduce Vulnerability to Climate Change in West Africa' is about developing and implementing sub-regional and national programmes and projects on adaptation to climate change, taking into account traditional knowledge and up-to-date technologies.

**(b) Planning and managing transboundary protected areas taking into account the impact of climate change.**

Political boundaries do not generally coincide with natural ecological boundaries. Therefore, a PA is likely to be more efficient in conserving biodiversity, its components and their ecosystem services if it follows the natural boundaries of ecosystems, instead of administrative boundaries. Species range shifts or species migrations that are occurring in response to climate change can cross administrative borders, and their management thus requires transboundary agreements. Transboundary conservation areas are important for species movement (especially for the fauna) now and in the future in response to climatic

perturbations and other threats, such as invasive alien species, poaching and illegal trade across boundaries.

There are many experiences of transboundary cooperation in West Africa that can serve as guide for ways and means to successfully set up and manage transboundary PAs. During the consultations (especially in Fada N’Gourma, Burkina Faso, where PA managers from Burkina Faso, Niger, Benin and Togo were meeting to strengthen transboundary PA cooperation), it was acknowledged that the climate change dimension had not yet been fully integrated to the planning of transboundary PAs in the region. For the five transboundary pilot sites, the PARCC project developed recommendations for species monitoring (Carr 2015) and for developing transboundary management plans that take into account climate change aspects.

Finally, Goal 19 of the draft ‘Comprehensive African Strategy on Climate Change’ under consideration by AMCEN calls for the regional development, improvement and harmonization of common policies, laws and strategies relating to biodiversity, and land desertification, among others. This includes transboundary issues for the conservation and sustainable use of biodiversity in and outside PAs. Goal 25 provides that national and cross-border custom institutions need to be strengthened to prevent flows of goods and services that may undermine the carbon-sequestering potential of natural resources, and thus reduce the climate change mitigation capacity of ecosystems. Goal 29 contains action for reducing emissions from deforestation and forest degradation (REDD). Establishment of effectively managed PAs are among measures taken to reduce and prevent deforestation and forest degradation, and restore degraded forests. While they ensure the resilience of forests, PAs also contribute to carbon sequestration and thus to the mitigation of climate change.

## 6. Ways and means for enhancing the dissemination of the PARCC project outputs

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In addition to the communication strategy developed at the beginning of the project (Belle, 2011), the following are some specific recommendations that could help enhance the uptake of the PARCC project outputs:

- (a) Participants from each of the project countries should be helped to enhance their understanding of the project outputs. Special workshops could be organized to explain the details of each of the outputs so that the participants can own the project findings from their respective countries. This is a prerequisite for any effective and successful use and communication of the PARCC project's output. These participants should then share what they have learned with others who are involved in PA and climate change work, including in particular national GEF focal points, environment ministries (for the AMCEN), ministries involved in regional organisations and agencies dealing with biodiversity and climate change;
- (b) PARCC partners should disseminate the results of the PARCC project at the 20<sup>th</sup> meeting of the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA 20) in April 2016 and COP 13 in December 2016. SBSTTA 20 will have on its agenda at least 3 items of relevance to the PARCC outputs: Agenda Item 3 (Scientific review of the implementation of the Strategic Plan for Biodiversity 2011-2020 and related programmes of work and the achievement of the Aichi Biodiversity Targets), Item 8.1 (Ecosystem-based approaches to climate change mitigation and adaptation and enhancing the positive and minimizing the negative impacts of climate-change adaptation activities) and Item 10 (PAs and ecosystem restoration). Recommendations under these items will be considered by COP 13;
- (c) PARCC project countries that are still updating their NBSAP should be encouraged to integrate some points among the elements of the adaptation strategies and policy recommendations from the PARCC project in their revised NBSAPs. Technical partners who have participated in the PARCC project should be encouraged to directly work with their counterparts in the region on the revision of the NBSAP;
- (d) Some of the PARCC outputs could be integrated in the IPBES African assessment of biodiversity and ecosystem services. Of particular relevance are the preliminary study of areas resilient to climate change in Chapter 2 on value of biodiversity and ecosystems; species vulnerability assessments and species distribution models in Chapter 4 on drivers of biodiversity loss and in

Chapter 5 on scenarios. Lead Authors have been informed and encouraged to use PARCC outputs even if it is only from one subregion of Africa. All relevant UNEP-WCMC Technical Reports should be made available to them;

- (e) The presence of UNEP-WCMC, IUCN PACO and PARCC project partners at the 2016 IUCN World Conservation Congress in Honolulu, Hawaii will be useful to further disseminate the project outputs;
- (f) Some of the PARCC results could be integrated in the 6<sup>th</sup> National reports of each of the focal countries and in texts for submission to CBD Secretariat for the 5<sup>th</sup> Global Biodiversity Outlook (GBO-5). The focal countries should start working on this as soon as possible. Both the 6<sup>th</sup> National Report and GBO-5 are due between 2018 and 2020. These reports will summarize the progress that will have been made towards the achievement of the Aichi Biodiversity Targets and national targets adopted for the implementation of the Strategic Plan for Biodiversity 2011-2020. These reports will also present national contributions to the achievement of targets 13, 14 and 15 of the Sustainable Development Goals. The findings from the PARCC project and measures that West African countries are taking as a follow-up to those findings will constitute an important and unique contributions of the participating countries and the whole West African region to the achievement of Aichi Targets related to PAs and climate change. It is worth sharing globally the experience that is being gained in the region and using the results being gathered to contribute to the shaping of the long-term strategic directions to the 2030 United Nations agenda for sustainable development and the 2050 vision for biodiversity.
- (g) There is a need to find the best ways to inform regional organisations including AMCEN, ECOWAS, UEMOA, among others of the PARCC results. Interacting with representatives from these organisations should give them a good understanding of the project and its follow-up plans. It is hoped that some of them could subsequently anchor in their plans and programmes the regional strategy on best approaches for PA management in the face of climate change; and
- (h) Training workshops are also a good way to communicate the methodologies and results of the PARCC project. People who take decisions about creating or expanding new PAs should be particularly targeted, bearing in mind that ultimately all the stakeholders should be informed and trained as needed.

## 7. References

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## Annex 1. List of individuals and institutions consulted

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### A. In Ouagadougou, Burkina Faso

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NB : These persons were attending their biannual workshop from 25 to 27 August 2015

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<sup>1</sup> [http://unfccc.int/adaptation/workstreams/national\\_adaptation\\_plans/items/6057.php](http://unfccc.int/adaptation/workstreams/national_adaptation_plans/items/6057.php)

<sup>2</sup> <https://www.cbd.int/protected/>

<sup>3</sup> Chad and Sierra Leone are among the West African countries that have not yet submitted their POWPA Plans of Action

<sup>4</sup> Goal 27: Strengthen of resilience to climate change in coastal areas Action 1: Review the status of the implementation of existing Integrated Coastal and Marine Management (ICZM) with the purpose of promoting climate-resilient development in the coastal and marine environments. Action 2: Provide guidance in the development of a framework for the assessment of current and projected climate risks including marine and coastal zone hazards such as the coastal area flooding, storm surges, sea level rise; cyclones, tsunamis, and associated impacts on society, tourism, fisheries, infrastructure and livelihoods. Action 3: Enhance R & D, education, training and awareness in aspects relevant to climate change impacts and responses to marine and coastal zone related disasters. Action 4: Develop fisheries management approaches that incorporate resilience-enhancing practices.

<sup>5</sup> SDG 13: Take urgent action to combat climate change and its impacts  
13.1 strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries

13.2 integrate climate change measures into national policies, strategies, and planning

13.3 improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning