PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 Project title: Evolution of PA systems with regard to climate change in the West Africa Region

1.2 Project number: (GEF PROJECT ID) 3781- PMS: t.b.d

1.3 Project type: Full-sized project

1.4 Trust Fund:

1.5 Strategic objectives:

GEF strategic long-term objective: BD-SO#1 "To catalyze sustainability of protected area systems".

Strategic Programs for GEF 4:

- SP 1: "Sustainable financing of PA systems at the national level".
- SP 2- "Increasing representation of effectively managed marine PA areas in PA systems"
- SP 3- **"**Strengthening terrestrial PA networks"

1.6 UNEP priority: Ecosystem Management / Climate Change

1.7 Geographical scope: Chad, Gambia, Mali, Sierra Leone, Togo

1.8 Mode of execution: Internal

1.9 Project executing organization: UNEP WCMC

1.10 Duration of project: 60 months

Commencing: September 2010

Completion: September 2015

1.11 Cost of project		3,536,363			23%
Cost to the GEF Trust Fund					
Co-financing partner	**Classification**	**Total**	**Cash**	**In-kind**	**%**
5 project countries	National government	2,700,000	200,000	2,500,000	22
IUCN PAPACO / Burkina Faso	International NGO	2,020,000	961,905	1,058,095	17
Durham University	University	516,634	166,634	350,000	4
DICE	University	1,065,430	800,000	265,430	9
UNEP-WCMC	UN agency	4,202,000	2,353,128	1,848,872	35
Hadley Centre	Government Institution	630,000	335,106	294,894	5
Fauna &Flora International	International NGO	735,407	600,000	135,407	6

Bird Life International	International NGO	250,000	125,000	125,000	2
Total		12,119,471	5,541,773	6,577,698	100%

1.12 **Project summary**

The Governments of Chad, the Gambia, Mali, Sierra Leone and Togo, will work collaboratively in leading a regional project addressing the links between Climate Change and protected areas. The proposed project will build capacity for understanding and managing Protected Areas (PAs) for the threat of Climate Change (CC) by: combining and distilling existing information from disparate sources; undertaking new research to contribute to the body of knowledge; borrowing from other fields and innovating to develop new management approaches; and ensuring that discussion, training and learning are taking place to support a strong cadre of PA managers in the region. Three other countries- Burkina Faso, Cote d'Ivoire, Ghana, will be involved in trans-boundary aspects. During initial consultations, five other countries, namely, Guinea, Liberia, Niger, Nigeria, and Senegal[1] have expressed interest to participate in the regional consultations.

Vulnerability is a function of exposure, adaptive capacity and resilience. With regard to Climate Change, West Africa is highly vulnerable: exposed, with low levels of adaptive capacity, and limited resilience already under heavy pressure from many sources, both natural and anthropogenic. The globally significant biodiversity found in the region are heavily threatened, and are likely to be placed under increasing pressure in the near future by the changing regional climate. The regional PA systems are currently struggling to provide adequate coverage to the habitats and species they contain, and the pressures on them are only set to increase. The current state of knowledge about the effects of CC on protected areas is limited. These areas are heavily studied from both theoretical and practical perspectives, but to date there have been no significant, large-scale initiatives designed to address these issues. An improved understanding of the types of impact that a changing climate will bring is a crucial step to strengthening management to deal with them. Stronger management techniques, drawn from both PA management elsewhere as well as other sectors of management, will support the implementation of enhanced approaches.

The project will target its investment towards preparing for enhanced PAs management for the future, thereby potentially adding significant value to all current and future PAs expenditure including a few pilot tests for the tools developed in the project. The wider global benefits from the project are three-fold. First, through increased adaptive capacity, the region's PAs can be expected to better conserve globally significant biodiversity. Second, through increased capacity to mitigate, the region's PAs can be expected to contribute to slowing down the effects of human actions on global climate. Third, through contributing new techniques, models and approaches to global science, other regions will be able to replicate the successes in West Africa.

[1] These countries were consulted as part of the project preparation phase. During implementation of regional activities, it will be possible to invite an even wider range of regional stakeholders, if the core countries are in agreement.

Acronyms and Abbreviations

AGRHYMET:	Agro meteorological and Hydro meteorological Regional Centre
BD-SO	Biodiversity Strategic Objective
CBD	Convention on Biological Diversity
CBRM	Community Based Resource Management
CC	Climate Change
CI	Conservation International
CCD	Convention on Action against Desertification in Countries Experiencing Serious Drought and / or Desertification (CCD)
CITES	Convention on International Trade in Endangered Species
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CEPF	Critical Ecosystem Partnership Fund
CSSL	Conservation Society of Sierra Leone
DICE	The Durrell Institute of Conservation and Ecology
ECOPAS	Ecosystèmes Protégés en Afrique Soudano-Sahélienne)
ECOWAS	Economic Community Of West African States
EOU	Evaluation and Oversight Unit EOU
FFI	Fauna and Flora International
GAWA	Green Actors of West Africa

GEF	Global Environment Facility
GIS	Geographic Information Systems
IBAs	Important Bird Areas
ICRAN	International Coral Reef Action Network
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
IUCN	International Union for the Conservation of Nature
IUCN SP	IUCN Species Programme
KBA	Key Biodiversity Area
LDCs	Least Developed Countries
MAB	Man and Biosphere
M&E	Monitoring and Evaluation
METT	Management Effectiveness Tracking Tool
MRV	Monitoring, Reporting and Verification
NAPA	National Adaptation Programme of Action
NBSAPs	National Biodiversity Strategy and Action Plan
NEPAD	New Partnership for Africa's Development
NGOs	Non Governmental Organization
PA	Protected Area
PACT 2020	Protected Areas and Climate Turnaround initiative
PAPACO	Programme des Aires Protégées d'Afrique du Centre de l'Ouest (IUCN PAs Programme for West and Central Africa)
USAID	United States Agency for International Development
PSC	Project Steering Committee
PIF	Project Identification Form
PIR	Project Implementation Reviews
PMU	Project Management Unit
PPG	Project Preparation Grant
PRECIS	Providing Regional Climates for Impacts Studies
RAF	Resource Allocation Framework
RAP	Rapid Assessment Program
SMART	Specific Measurable Attainable Realistic and Timely
SP	Strategic Programs
SSC	Species Survival Commission
STAP	Scientific Advisory Panel
STEWARD	Sustainable and Thriving Environment for West African Regional Development
TAG	Technical Advisory Group
TNC	The Nature Conservancy
TOR	Terms of Reference
UK	United Kingdom
UNDP	United Nations Development Programme
UNEP	United National Environment Programme
UNEP-DGEF	Division of Global Environment Facility Coordination
UNEP AEWA	UNEP Agreement on the Conservation of African-Eurasian Migratory Water birds
UNEP-WCMC	UNEP World Conservation Monitoring Centre
UNCCD	United Nations Convention to Combat Desertification
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDAF	United Nations Development Assistance Framework

UNFCBD	United Nations Framework Convention on Biological Diversity (CBD)
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
VA	Vulnerability Assessment
WAP	W-Arly-Pendjari
WB	World Bank
WCPA	World Commission on Protected Areas
WCS	Wildlife Conservation Society
WDPA	World Database of Protected Areas
WFW	World-Wide Fund for Nature
WHC	World Heritage Convention

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1 BACKGROUND AND CONTEXT

1. PAs are internationally recognized as a major tool in conserving species and ecosystems. Globally there has been an impressive increase in the total number of area PAs, from only 1000 in 1962 to some 102,102 in 2003. The West Africa sub-region, comprising of eighteen countries namely Cape Verde, Cote d'Ivoire, Nigeria, Benin, Burkina Faso, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Senegal, Sierra Leone, Togo, Chad, Sao Tome & Principe, and Mauritania, however has only an *estimated 55 millions ha or 6.3%* of the land area protected according to the World Database on Protected Areas (WDPA) 2003 . This is low compared to a global average of 12%. A major threat that could prevent PAs from working at their optimum performance is CC, and this region has not escaped the effects of climate change[2]. This project is therefore formulated with the aim of undertaking targeted research and assessments which will lead to development of better regional strategies that would eventually render PAs more resilient to effects of CC, and deliver better on their ecosystem services. Better managed PAs would also lead to enhancing socio- economic conditions of communities around them. The project also touches on training for PA managers, and information exchange between the participating countries.

Geographic Scope

2. Initially, as many as 15 countries in West Africa were invited to participate in this project. The ideal situation would have been to include countries that share physical boundaries so as to address trans-boundary issues in a meaningful way. Five countries (Chad, the Gambia, Mali, Sierra Leone and Togo) are participating in the core project as they are the ones that could afford the Global Environment Facility Resource Allocation Framework (GEF RAF) allocation required. An additional 3 countries (Burkina Faso, Cote d'Ivoire and Ghana) are engaged with the project at regional level. A further 5 countries (Guinea, Liberia, Niger, Nigeria and Senegal) have expressed interest in the trans-boundary aspects of the project, and in utilisation of the tools and approaches developed. A map of the region is provided as Appendix 16.

Protected areas in the 5 core countries

3. Table 1 below was derived from reports from baseline studies done during PPG phase and it gives a summary of the current state of PA information for the core countries, extracted from the WDPA (www.wdpa.org). The study rated the data for all project core countries as "in need of verification", and specifically recommended that the data for Chad and Mali is in need of verification by in-country experts and minor data improvements made.

[2] In the context of the models and data with which the project will work, climate change refers to changes in rainfall and temperature.

For Gambia, Sierra Leone and Togo, due to the relatively low levels of boundary data in the WDPA and that a full country update has not been performed for over 5 years, an urgent review of the current data is required.

Table 1: **Protected areas in the 5 core countries**

Country	IUCN Category	Total Number of National Sites	Total Documented Area (Ha)
Chad	II	2	414,000
	IV	7	11,080,000
Gambia	II	1	2,500
	IV	2	719
	Not Known	2	11,000
Mali	II	1	187,762
	IV	7	2,303,398
	Not Known	2	109,269
Sierra Leone	II	4	143,587
	IV	1	1,200
	Not Known	33	138,933
	VI	1	8,573
Togo	II	3	357,290
	IV	6	71,915
	Not Known	81	174,898

Trans-boundary PAs in West Africa

4. A study done at PPG phase summarizes the regional trans-boundary initiatives included in WDPA as shown in Table 2. The "W "Park is not listed in the table but a short account on it is given in Paragraphs 5 and 6 below.

Table 2: Trans-boundary PAs in West Africa

Country	Trans-boundary Protected Area Name	Protected Area Name	Category	Size (Ha)	Total Area (Ha)
Cameroon		Kalamaloue National Park	II	6,696	368,294
Chad		Mandelia Faunal Reserve	IV	138,000	
Nigeria		Chad Basin National Park	II	230,000	
Sierra Leone	Sierra Leone - Liberia Trans-boundary Peace Park	Gola North Forest Reserve	Not Known	75,000	255,000
		Gola East Forest Reserve	Not Known		
Liberia		Lofa Forest Reserve	Not Known	80,000	
		Foya Forest Reserve	Not Known	100,000	

5. The "W" Complex is a World Heritage Site, and is managed by 3 countries (Benin, Burkina Faso and Niger). Until 2008, the implementation of a regional management was supported by the EU-funded Project ECOPAS (French Ecosystèmes Protégés en Afrique Soudano-Sahélienne). Within Niger, the Park is listed as a National Park, IUCN Type II, and is part of a larger complex of Reserves and protected areas. These include the adjacent Dallol Bosso (Wetlands of International Importance (Ramsar) on the eastern bank of the Niger River and the partial overlap of the smaller "Parc national du W" (Wetlands of International Importance (Ramsar). The three parks are Birdlife International Important Bird Areas (IBAs) of types A1 and A3 (IBA codes IBA NE001, IBA BF008, and IBA BJ001).

6. These parks (which together form the "W" Regional Park) alone encompass an area of 10,300 km^2 but are embedded in a far larger complex of national parks, various forms of protected areas and peripheral buffer zones that cover some 50,000 km^2 (the "WAPO" ecosystem), a protected landscape that also includes the Arly and Pendjari National Parks and extends as far as the Oti-Monduri Total Reserve in Togo.

7. More information will be collected during project implementation on existing gaps as far as trans-boundary PA efforts are concerned.

Impacts of CC on PAs

8. The expected impacts of CC on the West Africa region will largely fall into three types: (a) changes in sea level; (b) changes in rainfall distribution and intensity, and temperature[3]; (c) changes in composition of ocean (but this project will not be examining MPAs). The effects that these impacts will have on the natural environment, and hence PAs, will be in **species and habitat distribution**, **ecosystem composition**, and **human population distributions and resource** CC , as detailed in the Intergovernmental Panel on Climate Change [IPCC] (2007) report[4]. The general conclusions on the PA management situation in the region are that PA management is currently at a low level of intensity and effectiveness, and is not well prepared for the intensified pressure from future CC.

9. In the context of PAs, developing coping strategies regarding changes from CC refers to a 3 pronged process that includes (a) identifying risks to PAs as a consequence of climate variability and change, and (b) planning for adaptive measures that should be undertaken and (c) ensuring that those risks are reduced to acceptable levels through adoption of long-lasting and environmentally sound, economically viable, and socially acceptable changes. This is primarily a targeted research project that will deal with only parts (a) and (b) of the coping strategy. The results from this GEF funded project will provide GEF with tools for adaptive management against CC that will inform future decisions at the GEF and funding of projects in related situations, as well as help develop a climate change resilient network of PAs in the region.

Importance of a regional approach

10. Given the foregoing account on the status of PAs in West Africa and in particular the 5 core countries, it is clear that most efforts for management of PAs are national. However, CC transcends political boundaries and national jurisdiction. It is imperative to address the issue using a regional perspective because the scale of impacts from CC is closer to regional than to national scale. For example, shifts in rainfall and temperature patterns traverse national boundaries, and these movements will be reflected in species distributions. Thus there is a clear need to analyse and address these issues at regional scale. Presently, regional interactions are confined to a small number

[3] the effect of temperature on flora and fauna as measured by acumulative degree days- is important and affects the life cycle of these organism .
[4] http://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch9.html

of country-specific initiatives which share experiences albeit in a limited way. An example is the United Nations Environment Program (UNEP) supported GEF project titled "Building Scientific and Technical Capacity for Effective Management and Sustainable Use of Dry-land Biodiversity in West African Biosphere Reserves Biosphere Reserves Project" and executed in Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, and Senegal, where players are brought together to regional meetings to share experiences. While these types of activities are important, it is time to go further and develop strategies for a regional approach to making PAs resilient to CC . This will, in turn, mitigate adverse socio- economic results to the region. These existing initiatives will be of high value to the current project. The project will seek to support the ongoing work of existing institutions, for example AGRHYMET and ACMAD in the region.

11. This project proposes to build capacity in technical and scientific areas relating to the assessment of impacts from CC, and planning for the management of those impacts. By focusing on assessments at regional scale, and building capacity of the main actors in national PA management, the project will deliver (a) an increased level of understanding and awareness across the region; (b)a regional-scale strategy which integrates with national policies, and; (c) an increased capacity to implement and monitor that strategy for the benefit of the region's protected areas (d) in selected areas piloting using the policies recommended by the project, preferably on a corridor or trans-boundary scenario.

12. Threats from CC operate over long periods and impacts are normally discussed over 50 to 100 years, and longer. It is not realistic to plan a project for such a long timeframe for many reasons, not least the number of variables which are likely to alter over such a period. This project has been designed for implementation within a standard 'project-sized' time period. However, this project has been designed to have impacts over as long a timeframe as possible, by focusing on a long-term perspective for the analysis and assessments, by documenting the experience and processes, and by making the methodologies and tools as replicable as possible. The tools developed by the project will aim to present the best available current information and forecasts, and to combine those data, producing outputs which are timely, accessible, and understandable. These outputs will be used to stimulate discussion and negotiation, and to foster a collaborative approach at regional scale to planning for adaptation of these effects.

13. The country selection reflects the diversity of environmental and cultural factors in West Africa. The impacts of climate change will be felt at scales which exceed the capacity of individual countries to adequately respond on their own, and a regional scale set of responses are therefore advisable, The core project countries will be joined by additional regional countries (some funded with project funds, others with co-financing) to provide a more cohesive, contiguous coverage, particularly for discussion and analysis of transboundary conservation options.

14. The project will contribute to more resilient regional networks of protected areas in the face of threats from climate change. This will play an important role with regard to poverty alleviation, as PAs provide, among other benefits, valuable ecosystem services, and also frequently function as engines of economic growth through the provision of natural assets for tourism, as well as extractive industry. The ecosystem services provision impacts on the production of goods and services, on which a large number of local livelihoods depend.

2.2 GLOBAL SIGNIFICANCE

The West Africa PAs and their importance

15. As one of the few conservation projects with a regional outlook, this project will seek to eventually benefit the West African sub-region although it will be piloted in a few countries. The sub-region is endowed with a rich biological heritage at the ecosystem level, ranging from the Sahara Desert and associated habitats, Sudano-Sahelian grasslands and transitional woodlands, to humid lowland and montane forests of the Guinea-Congolian biogeographical region, and coastal mangroves along the Gulf of Guinea. At the species level, its avian diversity stands out with an estimated 350 species. The humid forest ecosystem, which covers 420,000 km^2 spanning six coastal countries, is considered one of the world's most unique eco-regions for high levels of endemism especially among plants, butterflies, amphibians, birds, and mammals. Endemic species flagships include the six species of duikers, five species of primates, and the pygmy hippopotamus (*Choeropsis liberiensis*). In addition the lowland forests of West Africa are home to more than a quarter of Africa's mammals, including more than 20 species of primates. Major species flagships in the sub-region include the elephant (*Loxodonta africana cyclotis*)

and western chimpanzee (*Pan troglodytes verus*). In addition, the Gulf of Guinea coral reef hotspot encompasses the four islands (Annobón, Bioco, São Tomé and Príncipe) of the Gulf of Guinea, off the West African coast. While the pilot countries will not include the islands, coastal biodiversity in the participating countries will be addressed. Major threats from coastal development, sediment pollution from logging, over-fishing affect such coastal ecosystems.

16. Apart from benefits to the ecosystem and species diversity found in the region, this project will be of benefit to the entire region and beyond in terms of the tools, and methodologies, and frameworks produced which could be used in other regions with similar challenges.

2.3 THREATS, ROOT CAUSES AND BARRIER ANALYSIS

Threats

17. This project is conceived with the intention of mitigating or forestalling threats that plague PAs, reducing their effectiveness to provide ecosystem services and their role in *in situ* conservation. Thus in the absence of this intervention, the current business-as-usual scenario[5] will continue to present significant threats to global and regional biodiversity, and to the economies of the region's countries (both project and non-project countries). Two main threats have been identified:
    a) PAs will not be able to provide vital ecosystem services to maximum capacity. There are three elements:
        i. In-situ protection for the conservation of habitats and other species will suffer. There will be degradation of protected areas, which could lead to the irrevocable loss of globally significant biodiversity.
        ii. PAs will no longer play a buffer role to protect surrounding communities from environmental shocks: these populations will be more vulnerable, and this is particularly important in the context of increased pressures arising from CC.
        iii. National economies will suffer as a result of degraded PAs. They currently provide a wealth of quantified and un-quantified benefits: for example, directly through tourism revenue and resource use/extraction values; or indirectly through cultural and existence values.
    b) A second major threat is that the ability of PAs to contribute to carbon sequestration will be reduced.

Root causes

18. The root causes which underlie these threats are:
    i. CC: is a principle root cause of these threats: the increase in variability and unpredictability of global climate will have impacts across the world. In West Africa, rainfall patterns will be disrupted, sea levels are likely to rise, and temperatures will increase, but the detail of these effects cannot be accurately predicted.
    ii. Reduced capacity of PAs to adapt to CC**:** Reduced effectiveness of PAs systems in the region, leaving them unable to provide the wide range of options they have the potential to deliver, for adaptation to the changing climate, and continued provision of critical ecosystem services. The subsequent loss of ecosystem service provisions would have a significant impact on human wellbeing.
    iii. Heavy existing pressures – population, food crisis, poverty, industrial development adjacent to parks
    iv. Poor connectivity: regional cooperation is limited, and is relatively small-scale (linking countries, rather than harmonising the region). For example, species migration not allowed.
    v. Limited understanding of scale of impacts**:** Effect of CC on species distributions and ecosystem compositions is similarly poorly understood.
    vi. Limited human capacity for management or science relating to CC: This is a key problem with many areas of government in developing countries. Without strong leadership, good decision-making, and capable technical staff- management of PAs and recovery from effects of CC will remain an illusion. However, there is now a rapidly increasing support from external donors for CC related initiatives. The

[5] See Sections 2.6, 3.7 and Appendix 3 for detailed descriptions.

National Adaptation Programmes of Action (NAPA) series of reviews is an excellent and important first step.

vii. CC is a hard issue to address and manage**:** Three reasons (1) effects may take a long time to be felt (2) uncertain what they will be, and (3) uncertain of best way to manage them. The project will propose solutions particularly for the second two issues.

iv. Lack of regional governance structures**:** Unlike other regions, West Africa does not currently enjoy strong regional fora for discussion and negotiation on regional issues. Some in roads are being made however. For example the Economic community of West African States (ECOWAS) has been involved in discussions on regional issues such as Climate Change. From 14-16 September 2009 a recent "Regional Conference on Protection Challenges to Climate Change in West Africa", In what is now the "Lome Declaration on Climate Change and Protection of Civilians in West Africa" called for :

   a. Human rights-based approach to address climate change challenges in the region.
   b. Establishment of a special fund specifically to help address climate change-induced impact on affected part of the population.
   c. Called for measures to protect climate-affected persons, especially women, children and the youth in order to preserve the full enjoyment of their fundamental human rights.
   d. To ensure a better protection of the West African population, the participants further agreed that a regional platform should be established for data based development and information exchange among ECOWAS

Barriers analysis

19. The project will adopt a barrier-removal approach, as the route to addressing the threats outlined above. The main barriers identified during project formulation are as follows:

i. Poor levels of data and information, poor data management: There is no ongoing, routine monitoring of the impacts of CC on PAs. There is also a lack of current data on PAs. There is lack of data management structures at regional and national levels **(**monitoring): In many instances, routine data collection is undertaken by PA authorities at either site or national levels.

ii. Lack of understanding of linkages between PAs and CC**:** There is need to understand how vulnerable they are, and how best to manage for CC, particularly with regard to human populations.

iii. Lack of organized and regionally harmonized training on the effects of CC on PAs, and measures that could be taken to make PAs resilient to effects of CC

iv. No regional body to coordinate large-scale responses to CC:

v. National policy environments not conducive to effective regional-scale action**:** There is limited financial and political support for protected areas management. Policy environment at national levels is aligned to manage these emerging threats:

2.4 INSTITUTIONAL, SECTORAL AND POLICY CONTEXT

Institutional context

20. This is a regional project involving 5 core countries and 3 more that will participate in regional activities. Its success will be based on bringing together global overall coordination, regional and national implementation. This means it must have global, regional and local institutions as main players in project execution. Relevant government institutions at National, Ministerial and Protected Area levels will be represented. In addition, civil society groups, such as NGOs and academia will be involved in the broader consultations (for more detail see section 2.5 Stakeholder mapping and analysis).

Countries

19. All countries have national legislation relating to protected areas management, which are implemented in country-specific manners. Gambia, Mali, Sierra Leone and Togo have all undertaken the development of a NAPA, to develop a strategy to manage CC. All countries are participating in the New Partnership for Africa's

Development (NEPAD) processes which constitute a commitment at the highest level to managing climate change.

20. In addition Chad, the Gambia, Mali, Sierra Leone, and Togo have ratified all international and regional conventions related to climate change and protected areas including:
    - African Convention on the Conservation of Nature and Natural Resources (Algiers) / 1968
    - UNESCO Convention on World Cultural and Natural / 1972
    - Washington Convention on International Trade in Endangered Species of Wild Flora and Fauna and Flora (CITES) / 1975
    - Abidjan Convention on the conservation of the marine environment and coastal / 1981
    - United Nations Framework Convention on Climate Change (UNFCCC) / 1992
    - United Nations Framework Convention on Biological Diversity (CBD) / 1992
    - Convention on Action against Desertification in Countries Experiencing Serious Drought and / or Desertification (CCD) / 1994
    - Kyoto Protocol /1998
    - The Convention on Wetlands of International Importance (Ramsar Convention) / 1971

21. There are significant difficulties in implementing these conventions however, and these include:

    i) lack of human and financial resources;
    ii) severe shortage of monitoring and statistical data;
    iii) significant deficiencies in implementing legislation in particular as regards the definition of national standards;
    iv) lack of measuring instruments adapted to the needs

Country context –National Biodiversity Strategy and Action Plan (NBSAPs)

22. All the participating countries have NBSAPs that articulate measures that should be taken to make sure PAs deliver , especially as the principle method of *in situ* conservation. The Second and Third National Reports to the Convention on Biological Diversity (CBD) from these countries also contain sections on what they have been doing on PAs. NBSAPs for these countries can be found as follows: Gambia - http://www.cbd.int/doc/world/gm/gm-nbsap-01-en.pdf, Mali - http://www.cbd.int/doc/world/ml/ml-nbsap-01-p1-fr.pdf,, http://www.cbd.int/doc/world/ml/ml-nbsap-01-p2-fr.pdf, Sierra Leone - http://www.cbd.int/doc/world/sl/sl-nbsap-01-en.pdf, Togo - http://www.cbd.int/doc/world/tg/tg-nbsap-01-fr.pdf, Chad - http://bch-cbd.naturalsciences.be/tchad/ch-fra/implementation/documents/strategy/ch43.htm

UNEP-World Conservation Monitoring Centre (UNEP –WCMC)- (fit with UNEP WCMC programming)

23. As the project main executing agency, the UNEP WCMC has the right background and is the biodiversity assessment and biodiversity policy support arm of the United Nations Environment Programme, the world's foremost intergovernmental environmental organization. The Centre has been in operation for over 25 years, providing objective, scientifically rigorous products and services to help decision makers recognize the value of biodiversity and apply this knowledge to all that they do. The Centre's core business is locating data about biodiversity and its conservation, interpreting and analysing that data to provide assessments and policy analysis, and making the results available to both national and international decision makers and businesses.

WCMC's approach to CC issues

24. UNEP-WCMC's CC and Biodiversity Programme provides decision makers with policy-relevant information and analyses on the interactions between CC and biodiversity. This includes work regarding the impacts of climate change on biodiversity, the role of ecosystems in CC mitigation and the role of ecosystems in CC adaptation, as well as the possible impacts of biodiversity of adaptation and mitigation activities.

25. Recent work includes: analysis of carbon storage and loss in protected areas globally; spatial analyses of carbon and biodiversity at global and national scales to identify potential co-benefits from The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries [UN-REDD] (including two workshops carried out with participants from China and Tanzania); 3

literature reviews for the CBD Ad Hoc Technical Expert Group on Biodiversity and CC; a UNEP Rapid Response Assessment on the role of ecosystems in CC mitigation (*The Natural Fix*); a report on the issues and potential outcomes of COP15 on biodiversity and natural resources; and a report on the environmental benefits of REDD mechanisms. The programme is also working on Monitoring, Reporting and Verification (MRV) for REDD and REDD+ as well as on the carbon and biodiversity impacts of bio-fuels and on ecosystem based adaptation. UNEP-WCMC is a participant in the UN-REDD Programme, providing information, tools and analyses to facilitate informed decision making on REDD implementation for multiple benefits.

UNEP-GEF and GEF

26. The project fits within the UNEP priority on Ecosystem management, environmental governance and CC.
    a) Under Climate Change (Subprogramme 1), it addresses:
        i. Output A - Adaptation, planning, financing and cost-effective preventive actions are increasingly incorporated into national development processes that are supported by scientific information, integrated climate impact assessments and local climate data, and
        ii. Output E - Country policymakers and negotiators, civil society and the private sector have access to relevant climate change science and information for decision-making/
    b) Under Ecosystem Management (Subprogramme 3) it addresses:
        i. Output A - The capacity of countries and regions increasingly to integrate an ecosystem management approach into development and planning is enhanced, and
        ii. Output C - The capacity of countries and regions to realign their environmental programmes and financing to address the degradation of selected priority ecosystem services is enhanced.
    c) Under Environmental Governance (Subprogramme 4) it addresses:
        i. Output D - Improved access by national and international stakeholders to sound science and policy advice for decision-making

27. Within UNEP GEF it addresses the Biodiversity Focal area and to some extent the Climate Change Focal area. UNEP GEF is well suited for this type of project in the following ways:-
    a) Operating in a multi-country and regional set up: UNEP GEF has a large portfolio of projects that span many countries and/or regions. This initiative will operate in regional, multi country, and trans-boundary situations, and will promote regional collaboration, harmonization of policy including financing plans for PAs. Common practices will be promoted across countries.
    b) Brokering multi-stakeholder consultations between major players and Conventions. In this initiative, UNEP GEF will bring together its contacts in the Conventions such as CBD and its associated conventions such as (i) CITES (ii) Convention on the Conservation of Migratory Species of Wild Animals (CMS) (iii) Convention on Wetlands (popularly known as the Ramsar Convention (iv) World Heritage Convention (WHC), UNESCO Man and Biosphere (MAB), and which will assist the countries in this initiative. This is clearly in UNEP's unique niche as it hosts several of these bodies, in addition to UNEP AEWA.
    c) Employment of sound Science and Technical Analysis and development of tools and conceptual frameworks: this will be called for especially in making sure investments are not negated by CC and its CC effects to ecosystems is one of the sub programmes of the wider UNEP.

27. In addition, the project fit is consistent with the GEF-4 Strategy for biodiversity and supports the strategic objective BD-SO#1 "To catalyze sustainability of PA systems". The catalytic effect will especially be realized as the 5 countries come together to determine best options for management of PAs, which can either be implemented individually or in trans-boundary scenarios. (In the absence of Tracking Tools specifically applicable to this project, Activity 4.4 will present options for a framework to deliver such tools). The project addresses the following strategic Programs:

    a. SP 1: "Sustainable financing of PA systems at the national level". Activity 2.5 includes a review of PA financing methods in the region
    b. SP 2- "Increasing representation of effectively managed marine PA areas in PA systems"

Component 2 will address gap-filling and identification of new areas that should be protected both at national and at trans- boundary level, for both marine and terrestrial areas.

c. SP 3- **"**Strengthening terrestrial PA networks":
The outputs from all 3 components of this project will inform decision making on types of governance, financing and expansion of PAs in the pilot countries and will serve to strengthen representation, networking and overall management of PAs in the participating countries as pilots. Identifying Climate proofing issues in the region and operationalizing adaptive measures in some selected PAs will further strengthen the PA network in the countries.

Programmatic approach for West Africa (introduced by the GEF)

28. This project is part of a new programmatic approach that was adopted by the last GEF Council in April 2008 (DOC/C.33/6, March 21, 2008). This approach is an attractive tool for allocating GEF resources in a more strategic and results-oriented manner. The program will underline the fundamental roles of the GEF in terms of it as a co-financing mechanism, promoter of innovation, and the dissemination of good practices. Synergies will be built between the donors and initiatives aimed at achieving similar objectives.

2.5 STAKEHOLDER MAPPING AND ANALYSIS

29. An important activity during PPG Phase was to identify main stakeholders and co-executing agencies. Due to the emphasis this project has in PAs, the main Executing Agency is the UNEP WCMC which was established in 2000 as the world biodiversity information and assessment centre of UNEP the United Nations Environment Programme. UNEP WCMC has a programme on Parks and PAs under which this project will be executed. UNEP- WCMC is based in Cambridge in the United Kingdom (UK), and so it was necessary to link with another entity that has offices in the region, namely, the International Union for Conservation of Nature Programme des Aires Protégées d'Afrique du Centre de l'Ouest (IUCN PAPACO) West Africa. The latter will co-execute the project to bring the countries together in regional meetings and oversee country based work.

30. **In-country partners**: The project will be executed in collaboration with a range of country based partners, mainly from national governments and PA agencies. Specifically these will be
    - Ministère de l'Environnement, de l'Eau et des Ressources Halieutiques (Chad),
    - Department of State for Forestry & Environment (Gambia),
    - Ministère de l'Environnement et de l'Assainissement (Mali),
    - Forestry Division (Sierra Leone)
    - Ministère de l'Environnement et des Ressources Forestières (Togo).

31. The in-country partners will also include the following national meteorological departments. Although the project is focused on biodiversity, these national offices will be included where possible in the discussions on monitoring and interpreting climate change:

    a. Direction des Ressources en Eau et de la Météorologie (Chad)
    b. Department of Water Resources (Gambia)
    c. Direction Nationale de la Météorologie du Mali (Mali)
    d. Meteorological Department (Sierra Leone)
    e. Direction de la Météorologie Nationale (Togo)

32. There are several Global Climate Models (GCM) and Regional Climate Models (RCM) that are in use in modeling for climate change scenarios http://www.ipcc.ch/ipccreports/tar/wg1/380.htm. The PRECIS model is an RCM nested to the UK Had global model but has the capacity to be localized as required for the this project

www.narccap.ucar.edu/users/user-meeting-08/talks/PRECISandExamples.pdf.. The PRECIS modelling tool for generating regional scale climate change scenarios was selected for its emphasis on capacity building at regional and national levels. It is founded on the principles of building capacity and it incorporates significant training for each country ("training-of-trainers" approach"). The inclusion of national meteorological offices throughout will be crucial to the successful achievement of the project goal. In the initial stages, the national data collection exercises will provide good opportunity for interaction of the MET officers with the project. While this project is not concentrating on statistical analysis for climate data, additional collaboration with the University of Reading, UK, will be established to make sure meteorological stations in West Africa connect with the Interactive Statistical Package (INSTAT) team at the University of Reading.. In addition more collaboration will be established with the AfDB project mentioned in Table 4 (j) which is doing training for meteorological stations , includes data analysis and climate modelling.

33. These are the lead agencies in each country, through whom the project will principally work. There are other institutions which were identified as important for sourcing databases, and giving expert advice during implementation. In this category are:
    i. WDPA and Proteus Partners – for protected areas data,
    ii. United Nations Development Programme (UNDP) – for capacity building at regional and national scales,
    iii. IUCN Species Programme – species impact modelling, Red List species status assessments,,
    iv. Birdlife International and Durham University – for species impact modelling and national activities (esp. in Sierra Leone)
    v. Hadley Centre – for coordination on climate modelling, and impacts
34. Through numerous consultations, the Project Preparation Grant (PPG) arrived at the above 5 institutions as the best suited for collaborating with UNEP WCMC in the execution.

IUCN – PAPACO:

35. The IUCN's Protected Areas Programme for West and Central Africa is headquartered in Burkina Faso, and promotes the conservation of biodiversity through improved methods of managing PAs. It aims to initiate a framework to "label" a representative number of PAs, which are recognized for the quality of their management. With long experience of supporting PA work in the region, particularly through capacity building, IUCN-PAPACO is a strong field implementation partner.

DICE:

36. The Durrell Institute of Conservation and Ecology takes an inter-disciplinary approach, breaking down the barriers between the natural and social sciences to train conservationists who think practically and innovatively about the challenges that lie ahead. This includes research and training on systematic conservation planning.

Durham University:

37. Durham University manages and undertakes research on the role of climate and habitat in determining species distributions, including how environmental change impacts upon factors such as biodiversity and causes range shifts in both native and invasive species. Much of the research involves ecological modelling using spatially explicit models and Geographic Information Systems (GIS), often incorporating remote-sensed data, and also experimental manipulations in the field.

Birdlife International:

38. Birdlife International is a global alliance of conservation organisations working together for the world's birds and people. A team of scientists from Birdlife, with the University of Durham, and other partners, have modelled impacts of CC on the distributions of terrestrial breeding birds in sub-Saharan Africa. They have shown that

turnover of species in the continent's IBA network is likely to be substantial, but the network as a whole remains robust under projected CC.

Hadley Centre:

39. The Met Office Hadley Centre is the UK's foremost climate change research centre. They produce world-class guidance on the science of climate change and provide a focus in the UK for the scientific issues associated with climate change, and provide in-depth information and advice on climate change issues: their climate projections were the basis for the Stern Review on the Economics of Climate Change.
40. The Providing Regional Climates for Impacts Studies (PRECIS) system was developed at the Hadley Centre, in order to help generate high-resolution climate change information for as many regions of the world as possible. The intention is to make PRECIS freely available to groups of developing countries in order that they may develop climate change scenarios at national centres of excellence, simultaneously building capacity and drawing on local climatological expertise. These scenarios can be used in impact, vulnerability and adaptation studies, and to aid in the preparation of National Communications.

IUCN Species Programme:

41. The UK office of the Species Survival Commission (SSC) is based in Cambridge and houses three international programmes. These are: Freshwater Biodiversity Assessment , Red List Programme (responsible for the compilation, management and production of the IUCN Red List of Threatened Species), and Wildlife Trade Programme. They have undertaken work on determining a species' individual susceptibility to climate change, which depends on a variety of biological traits, including its life history, ecology, behaviour, physiology and genetic makeup. This information can significantly strengthen the modelling of likely impacts of climate change on protected areas.

AGRHYMET:- Agrometeorological and Hydrometeorological Regional Centre- **C**entre Regional de Formation et d'Application en Agrométéorologie et Hydrologie Opérationnel (FRENCH),

42. AGRHYMET is a specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS). The AGRHYMET Regional Centre (ARC) was created in 1974. It is a specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) composed: Chad, Burkina Faso, Cape Verde, Gambia, Guinea Bissau, Mali, Mauritania, Niger & Senegal. Its main objectives are to contribute to achieving the food security and increased agriculture production for the improvement of natural resources management in the Sahel region. It functions as a regional Centre of Excellence in West Africa, with focus on training officers from Sahelian countries and elsewhere; regional databases; management and dissemination of information on natural resource monitoring across the Sahel; and documentation on agrometeorology, crop protection, environmental monitoring, desertification, natural resource. Although focused on Sahelian countries (Chad, Gambia, Mali within the project), it represents an important resource, and capacity which is highly relevant to project implementation.

ECOWAS: Economic Community Of West African States (CEDEAO in French)

43. The Economic Community Of West African States (ECOWAS) is a regional group of fifteen countries, founded in 1975. Its mission is to promote economic integration in "all fields of economic activity, particularly industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial questions, social and cultural matters", Among these various activities, a recent ECOWAS declaration on climate change recommends "The establishment of a regional platform for the development of a database and exchange of information amongst the ECOWAS member states and Mauritania".
44. In particular , the so called "LOME declaration" was reached at during the Regional Conference on protection related challenges to climate change in West Africa, organized by the United Nations in close collaboration with

the **ECOWAS** and the Government of Togo, and was held on September 15th & 16th 2009 at Lomé, Togo. Among other things, the Lome Declaration recommended

a) The promotion of the use of a Human Rights Based Approach to address climate change challenges in the sub-region ;

b) The creation of a special fund to respond to the climate change induced impact on affected populations ;

c) The establishment of measures to protect the various categories of populations affected by climate change, including migrants, and especially, women, youth, children, disabled people and other vulnerable groups, in order to preserve the full enjoyment of their fundamental human rights ;

d) The drafting of a new legal instrument aimed at ensuring protection for climate change displaced persons, residing outside their country of origin.

ACMAD: African Centre of Meteorological Application for Development

45. ACMAD is the Weather and Climate Centre with African continental competence. It was created in 1987 by the Conference of Ministers of the United Nations Economic Commission for Africa (UNECA) and the World Meteorological Organisation (WMO). ACMAD has been operational in Niamey since 1992. ACMAD is composed of the 53 countries that form the continent of Africa.

2.6 BASELINE ANALYSIS AND GAPS

Preparatory activities

46. During the PPG phase, a series of consultations and reviews was undertaken with the aim of creating strong linkages between the project executing agency and the project stakeholders. As a regional project, this is challenging: the distances are large, and logistics are relatively undeveloped. These risks have been identified and mitigation actions planned.

47. Through the series of national visits, consultations were undertaken with wide range of stakeholders, to understand the current activities, and to examine needs and expectations. These were supported with a regional inception meeting, with representatives from all 5 countries. Finally, through support from the CBD Secretariat, a workshop on trans-boundary conservation in the region was held in Cote d'Ivoire. At this meeting an additional 8 countries were introduced to the project.

48. The summary of the experience of the baseline studies is that all project countries are undertaking PAs management to some extent. A common feature is a lack of planning for CC: this is not a result of lack of will, but rather a clear lack of data, information, tools and techniques. Data management capacity is weak – the data that is collected is rarely shared at a national level, and even more rarely at a regional level. The WDPA represents is an exception to this, although the quality of data it holds for the region is noted as being low.

49. NAPAs provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to CC – those for which further delay would increase vulnerability and/or costs at a later stage. These have been completed for 3 of the 5 countries, but none identify PAs as a linkage. There is therefore a need to develop robust models to demonstrate both their vulnerability and their ability to be part of the solution

International interest

50. During initial consultations, a total of 13 countries have expressed interest in this project although only 5 are in the core project. The concepts addressed by the project are well understood: climate change exists, and is already having impacts. Those impacts are likely to increase, but the countries are lacking tools to analyse their types, locations and severity all keen to use the tools we develop to help build resilience of their protected area networks to the impacts of climate change. In addition, a project currently under development with the title "Communities and Coral Reefs: Managing for Resilience in the face of Climate Change" lead partners: UNEP-WCMC, International Coral Reef Action Network (ICRAN), UNEP, UNDP, IUCN) is the most advanced of a number of additional initiatives which have expressed interest in utilising the models, tools, techniques, guidance and information this West African project will produce. This represents already an excellent opportunity to maximise replication of the benefits from this investment

51. This proposed GEF project will be the first project to bring a large number of countries in one region to discuss PAs and CC and related issues which is an important milestone. The table below (Table 3) is a summary of main issues discussed, gaps identified and conclusions reached from baseline studies. Table 3 also shows how these issues are reflected in the project design.

Table 3: Summary of issues and gaps discussed at PPG

Observation/Issue	**Reflected in project design**
A: poor data available for many domains (e.g. PAs and biodiversity, also climate change)	Data collection prioritised, and additional research on threatened species. Capacity building on CC data to ensure best use of available sources. Knowledge management and communications activities designed to maximise sharing and impact of the existing data, and to promote collaboration with other institutions in gathering of new sources.
No data easily available for some domains (e.g. climate scenarios)	Working with key research institutes (E.g. Durham University, Hadley Centre), project will generate (where necessary) and simplify access to climate data at relevant national and regional scales.
Poor data management in countries	Data management structure designed through Component 1, to underpin all data collection and analysis
Poor links between global and national data set	Data portal to play this role
Limited understanding of links between communities, CC and PAs	As input to regional planning and assessments, additional field and desk research will be undertaken on this subject
Poor policy harmonisation at national level	Project will support promotion of integrated approach to managing CC and PA, and provide communications materials
Lack of regional strategy	Regional planning will be supported in this project
Lack of capacity	The regional workshop noted that limits in human capacity (staffing) cannot be directly addressed through the project activities, but major investments will be made to maximise value of existing staff through regional networking, simplified information management and communication systems for both national and regional use,
Limited funds for PA	The project will play a major role (through Protected Areas and Climate Turnaround Initiative [PACT2020] initiative and others) in promoting the value of PAs as an important measure to counter and manage CC.

2.7 LINKAGES WITH OTHER GEF AND NON-GEF INTERVENTIONS

52. Table 4 gives a list of GEF funded projects and other initiatives that are on-going in the countries that are participating in this project, and how they complement the proposed project. This project will work closely with all the ongoing initiatives to eliminate any overlap and duplication and to create specific collaboration as outlined in Table 4.

Table 4: Ongoing relevant initiatives on PAs in West Africa and elsewhere

Existing project /initiative	How proposed project will be complemented
a. National governments: For each of the 5 core countries, the primary partner for the project is the national government. Each has a different approach to management of PAs, but all have common areas.	All have ongoing PAs management work, including data collection and planning activities. These are of high importance to the project, and will play a role as both inputs to project execution, as well as forming an entry point for communications and awareness work.
b. IUCN Mali: The country office of IUCN has good capacity for management and implementation of conservation initiatives. They are currently managing projects related to tracking trans-boundary elephant migrations with neighbouring countries, as well as supporting government policy development processes.	The office provided high quality logistical and technical input to the regional inception meeting. With strong links to government and civil society groups, as well as the IUCN PAPACO office, they are well placed to support implementation of national activities in Mali.
c. Conservation Society of Sierra Leone (CSSL): A national NGO, and Bird-Life partner, CSSL has a number of collaborating partners and with them educate, advocate, research and carries out site actions with the Wildlife Conservation Branch of the Ministry of Agriculture, Forestry and Food Security, Ministry of Fisheries and Marine Resources, Ministry of Lands, Country Planning and the Environment, Ministry of Education, Youth and Sports. CSSL also work with other Environmental Non-governmental organisations both National and International (ENFORAC, RSPB, International, Wetlands International and CI)	Good links to all sectors of conservation activity in Sierra Leone. This will be of high value in terms of implementing in-country activities, including data collection, planning workshops, stakeholder consultations.
d. Proposed Project - Communities and Coral Reefs: Managing for Resilience in the face of Climate Change: Would address a critical need to align current science, development and institutional processes for the immediate implementation of local management strategies that strengthen the adaptive capacities and reduce the vulnerability of ecosystems and communities that are increasingly stressed by climate change.	This project would be implemented between 2011 and 2015, and would focus on coral reefs. This offers an excellent opportunity to promote the use of the methodologies developed under this project, for use in other ecosystems and regions, particularly those which are highly threatened by climate
e. A UNEP supported regional project involving Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal, entitled "Building Scientific and Technical Capacity for Effective Management and Sustainable Use of Dry-land Biodiversity in West African Biosphere Reserves", focusing on generation of Management Information to Improve Conservation and Sustainable use of Biodiversity Conservation and Sustainable Use of Biodiversity, and Strengthening Capacity and Institutional Co-ordination to Effectively Manage Biosphere Reserves.	The UNESCO project has already begun a five country cooperation on Biosphere reserves, and has been giving a platform for information exchange. Management options suggested by the UNEP project will be explored in the policy aspects of Component 3. The UNESCO project has on the ground pilot activities involving local communities and these will be part of the wider studies this project will undertake in component 2 activity 2.1. The Biosphere Reserves project has created a catalogue of policy recommendations for uptake by decision makers on management of the reserves. This proposed project will use this catalogue as a base for its work on policy matters on

	Community Based Resource Management (CBRM). The Biosphere Reserves project has been working with communities living around the reserves for co-management of the sites with reserve authorities. This project could use these communities for assessment of efficiency of governance systems in the countries that are common to both projects.
f. CI has had a project for creating Corridors in West Africa. CI's Rapid Assessment Program (RAP) and West Africa program-Recommendations included a design of a biodiversity corridor between Côte d'Ivoire and Liberia, to link Tai National Park in Côte d'Ivoire with Sapo National Park in Liberia, by identifying areas between them that can be protected or managed in an ecologically sustainable manner.	Even though this proposed project will not work in Cote d'Ivoire and Liberia, it will follow up on these recommendations from the CI project to learn about the basis used for corridor formation.
g. A UNDP supported regional project involving Benin/Burkina Faso and Niger tilted "Enhancing the Effectiveness and Catalyzing the Sustainability of the W-Arly-Pendjari (WAP) Protected Area System" that aims at supporting communities to undertake sustainable Protected Areas management emerged around the WAP complex, and to install a *sustainable regional level co-ordination mechanism within the WAP PA system is effective.*	The proposed project will not work with these countries but will seek to learn from the work on the WAP PA system.
h. A GEF endorsed, WB and GTZ supported, project in Cote d'Ivoire titled "Supporting the revival of the conservation in Cote d'Ivoire" (PARC-CI) has main components of policy and Institutional strengthening for Protected Area Management and Oversight, with Improving Management of Selected Protected Areas, and Support to Operationalize the Foundation for Parks and Reserves. **i.**	Cote d'Ivoire is one of the countries that will participate in the current project in the regional consultations, and the experience of the WB project will be brought to bear on this project. In addition, Cote d'Ivoire shares Trans-boundary protected areas with Burkina Faso, Ghana, Guinea and Liberia, and would therefore play a key role in defining possible connectivity areas to strengthen the regional PA system resilience to the impacts of climate change.
j. A UNEP supported GEF project involving Fiji, Cameroon, Tanzania entitled "Coastal Resilience to Climate Change: Developing a Generalizable Method for Assessing Vulnerability and Adaptation of Mangroves and Associated Ecosystems". The project is developing a vulnerability assessment method and process for developing adaptation strategies that is generalizable, by engaging in targeted scientific research; developing and implement adaptation strategies, including implementing pilot initiatives to strengthen the livelihood security of human communities in	The proposed project will liaise very closely with the Coastal Resilience project- to share international scientists working on the coastal resilience project as advisors and also to make use of the generalizable adaptation model from the ongoing project

project areas through sustainable resource uses.	
k. **African Development Bank** funded International project: "Institutional Support to African Climate Institution Project"	The objective of the project is to strengthen the capacities of African regional climate centers to generate and disseminate climate information to support economic development in the continent. This proposed project will work with the AfDB project to maximize the use of existing capacity in climate change analysis and monitoring.
l. Working in 17 countries, IUCN has attempted on improving management effectiveness of PA in West Africa.	By having IUCN PAPACO as the main executing agency in the region, the current project will build on a number of experiences IUCN has already had as explained in Section 3. Funds available for the IUCN project will be used as leverage for this project.
m. Fauna & Flora International (FFI) is working in both Liberia and Guinea and has recently started the implementation of a Darwin funded project to improve the collaboration between stakeholders associated with Mount Nimba across three sectors and three national boundaries to reduce threats to biodiversity from both subsistence pressures and large-scale mining operations. Specifically, this project will seek to integrate the environmental mitigation strategy of the three mining multinationals working in Nimba, providing a holistic approach to biodiversity conservation and livelihoods in the region. Linkages to CC adaptation and mitigation measures will be explored as well. In addition FFI is implementing a NORAD funded project to support the Government of Liberia in developing a national REDD strategy that aligns with the national Poverty Reduction Strategy and Forest Sector Reform process. Within the framework of the latter project, REDD pilot activities are being explored in the Southeast of Liberia, including the transboundary region between the Ivory Coast and Liberia.	Valuable lessons will be drawn from FFI's experience in Guinea and Liberia; in particular in relation to evolving REDD piloting activities and multi-stakeholder governance issues in trans-boundary regions.
n. IDRC Projects in West Africa and the region	IDRC is implementing a group of special projects funded under a joint IDRC/DFID initiative to address climate change . These initiatives will provide valuable contextual information, and greater detail on the social aspects of the changes experienced. This information can be leveraged through the analytical tools and frameworks the proposed project will produce, to increase the value of the biodiversity- and climate-focused work. Some of IDRC's projects include: **i. Adapting Fishing Policy to Climate Change with the Aid of Scientific and Endogenous Knowledge (West Africa)**

	This is a research project to be completed in 2011. and aims aims to improve fishing practices and policies in the face of climate change in six countries - Cap Verde, Gambia, Guinée, Guinea Bissau, Mauritanie and Sénégal. It will do so by facilitating twice-yearly meetings at three levels (sub-regional, national and local), bringing together political decision-makers, researchers, representatives of fisher associations and managers of projects and programs. The researchers will gather scientific and endogenous knowledge that will allow the participants to explore together various possible scenarios and evaluate different adaptation strategies. **Resilience and the African Smallholder : Enhancing the Capacity of Communities to Adapt to Climate Change** This is a multi country project in (Mali | Mozambique | Tanzania | Uganda | Zambia | Southern Africa | Zimbabwe) and aims to enhance the ability of households, communities and relevant institutions to respond to changing circumstances with a view to reducing future threats to food security and environmental integrity. It will do so by working with farmers to identify improved farming technologies, and translating the results into action plans at the appropriate institutional level whether local or national. **ii. Building Livelihood Resilience to Alleviate Poverty in Semi-arid Areas of West Africa – West Africa** This project will support an action research project for building resilience and improving livelihoods in dairy-horticulture systems in the West African countries of Mali, Niger and Togo. Researchers will work at farm-level to adapt production systems to the local context, and at (input and output) market level to identify opportunities for introducing business development services and upgrading value chains while conserving the natural resource base. Learning platforms will be designed to identify, test and share livelihood resilience innovations. **iii. Climate Change Adaptation in Africa** This grant will support the establishment of a program on vulnerability and adaptation to climate change in Africa. The program will be directed by an advisory board consisting of donor representatives and senior African citizens and scientists. It will be carried out by a coordinator in Dakar and program staff in IDRC`s regional and head offices. It is expected that successful components of the program will eventually be devolved to African organizations. **iv. Resilience and the African Smallholder : Enhancing the Capacity of Communities to Adapt to Climate**

	Change This project (Ghana | Mali | Mozambique | Tanzania | Uganda | Zambia | Zimbabwe) aims to enhance the ability of households, communities and relevant institutions to respond to changing circumstances with a view to reducing future threats to food security and environmental integrity. It will do so by working with farmers to identify improved farming technologies, and translating the results into action plans at the appropriate institutional level whether local or national. **v. Support Fund for Local Adaptation Strategies** The Climate Change Adaptation in Africa (CCAA) research and capacity development program aims to improve the capacity of African countries to adapt to climate change in ways that benefit the most vulnerable. This project (Burkina Faso | Mali | Senegal) seeks to strengthen the leadership and technical and organizational capacity of grassroots communities in the area of adaptation to climate change.
o. UNEP supported National Communication project to the UNFCCC	As part of the national Communication for UNFCCC, UNEP in collaboration with UNDP and UK will be holding PRECIS training fro West Africa and the training will be held in **AGRHYMET** in Niamey from May 2010. This training will prepare the national officers for the second round of traiing on climate modelling to be done by the PA project.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1 PROJECT RATIONALE, POLICY CONFORMITY AND EXPECTED GLOBAL ENVIRONMENTAL BENEFITS

53. Well managed and well designed PAs will play a major role in the future challenges from CC. have several important characteristics: they represent clear units of land that can be managed, they are often held to be the best available mechanism for in-situ conservation of biodiversity, and they already cover over 13.9% of the earth's terrestrial surface. These represent significant reasons for focusing on PAs as key elements of responses to CC.

54. The project addresses the critical nexus between PAs and CC, which is currently poorly understood and receives a low level of interest. The project in addition must address related concerns such as institutional, social, and economic conditions that either govern or are affected by dynamics in CC in the core countries, and by extrapolation in the West Africa region in general.

55. Besides their spatial extent, PAs can contribute to both of the two main responses to CC: adaptation and mitigation. Mitigation involves both reducing further loss of the carbon that is present in vegetation and soils, and increasing the amount carbon dioxide sequestered from the atmosphere. For both of these, PAs can provide protection to the vegetation which is central to both these effects. For Adaptation, PAs are relevant for maintenance of ecosystem integrity, for buffering local climate impacts, reducing risks form extreme climatic events, and for the provision of ecosystem services.

56. While the nexus between PAs and CC is not yet well understood, there are significant (and growing) bodies of knowledge for each separately. The proposed project will (a) bring together the relevant components of what is

understood about PAs, and CC (b) develop new strategies for managing the PAs; (c) build capacity for implementation at national and regional levels, and; (d) undertake a few pilots to test the tools developed in the project and (e) through deliberate information and dissemination mechanisms avail the tools to the West Africa region as a whole.

57. The process followed will be to:-

    - Firstly assess the vulnerability of the region's PAs to CC. A species-focused approach will be adopted, principally because there is already substantial work ongoing, which is either aligned, or can be adapted, to relate to PAs.
    - From these assessments of vulnerability, will be derived a series of maps at different spatial scales, which detail where the most vulnerable areas are located, and what the likely scale/intensity of threats will be. This will require the development of a specialised approach, as well as an effective mechanism for communicating the information.
    - These assessments and mapping will then be used as the foundation for large-scale conservation planning for the region. This planning will be drawn from regional predictions of threats, and then distilled into national action plans for implementation across the PA networks.
    - Running throughout is a significant component of capacity building, awareness, and policy support. This underpins, and ensures maximum impact from, all activities.

Uniqueness of this project

58. There are several ongoing GEF-funded projects (see Table 4 above) some of which are operating in the same countries as in this proposed project. The proposed project is unique in that it is centred on a regional approach, using climate proofing PAs – an emerging concept that can improve management of PAs and improve livelihoods of those around them. Knowledge on how to mitigate climate change effects on PAs is germane to improving of PAs management. The project is also different in that it combines the undertaking of science based assessments, analyses, frameworks, reviews and creating methodologies, but culminating in operationalization of the systems put in place by this project at least in pilot cases. In most cases, "a regional framework" modality of working will be adopted, but domesticated to individual countries where this is called for. The project is also a platform for knowledge management, information sharing, capitalization, and networking and recommendations and awareness materials to be produced by this project will be shared at regional level.

59. The principle global benefits are two-fold. First, enhanced management of the PA system at regional and national level in West Africa will help protect the globally significant biodiversity found there, both over the short-, and longer-term. Second, as the first large-scale project of its kind, the approaches, tools and techniques developed in the project's pilot sites will be relevant to many other situations across the world. Replication is a central part of the project's design, and investment will be made to ensure that the salient messages from the project are well publicised. For more information on Global Environment Benefits refer to Section 2.2, paragraphs 13 and 14 above.

3.2 PROJECT GOAL AND OBJECTIVES

60. **PROJECT GOAL**: Conservation and sustainable management of representative PA ecosystems in West Africa is enhanced through strengthened assessment and adaptation to the impacts of CC.

61. **PROJECT OBJECTIVE**: Enhanced regional (trans-boundary) and national PA management through strengthened scientific and technical capacity in: a) assessment of CC related risks, b) development of planning and guidelines for adaptation, and c) mainstreaming risk-based adaptation into PA management.

62. The project has been designed to be executed in 4 components. They operate in an integrated fashion, with complementary activities at regional, national and local levels. The GEF project funds will be used at both

regional and national level. Both regional and national activities will be complemented with co-financed funds. Harmonization of the two levels of implementation is a key area of activity for the project, and significant efforts will be directed to "shrink the gap" between international level science, and field-level implementation.

3.3 PROJECT COMPONENTS AND EXPECTED RESULTS

COMPONENT 1: VULNERABILITY ASSESSMENT AND RISK REDUCTION STRATEGIES FOR EXISTING PA SYSTEMS (WITH REGARD TO CLIMATE CHANGE:

63. **Component 1** will undertake assessments related to making PAs cope with Climate Change in the 5 pilot countries using a number of management responses at regional, national and local levels. These responses will include (a) assessing vulnerability of PAs; (b) assessing and modelling future CC scenarios through appropriate tools and guidelines; (c) developing adaptive strategies for those at most risk; and (d) determining how to apply adaptive management responses and developing tools for monitoring the results of adaptation strategies. In essence, Component 1 deals with developing the 'hard' data, technical models and science behind Climate Change and PAs, to identify the scope and scale of likely impacts. To do so, the following 4 activities will be undertaken

Activity 1.1: Data review and gap filling strategy

64. This study will revisit the conclusions from the PPG baseline study completed by a team from UNEP-WCMC during project formulation, to examine current data availability situation, (on PAs, status of protection corridors, trans-boundary PAs, potential for new trans-boundary PAs and/or corridors and CC preparedness on a national and regional scale) and summarise the situation for presentation at the first regional meeting. This will guide the regional inception meeting in determining a list of regional data priorities which can be addressed in the data collection activities under C1. Specifically, this activity will be executed to ensure that (i) the project begins implementation using the best available data, and (ii) that data collection resources (both GEF and co-financed) are deployed in a harmonised fashion. UNEP WCMC will engage a consultant for this activity.

65. The main output from this activity will be a report on status quo regarding required data, and pointing out all the gaps that need addressing.

Activity 1.2: National data collection

66. This activity will involve national level data collection in each of the 5 core countries. These will focus on the priority data areas as agreed at regional level in the PPG Phase. The detail of each national study is to be decided on a needs-basis, and according to the regionally-agreed priorities. The main areas to be covered should include: PA boundary information, categories, and management effectiveness, type of PA financing used, conservation goals, species distribution, habitat distributions. Not all of these will be addressed in each country, but examples of the activities to be undertaken include: field-surveying protected area boundaries or digitising existing maps of PAs, locating and collecting data from national databases on species and habitat, carrying out management effectiveness assessments for selected PAs, locating/accessing human population density/census information.

67. Data collection is costly, so this activity will be funded by GEF Funds but complemented by national co-financing, and will be implemented in collaboration with other ongoing national initiatives. Each country will hold national data stakeholder workshop at the start of the study, to determine what additional needs exist, the ongoing data collection activities that can be combined with, as well as facilitating an exchange of data at the national level. These meetings will also serve as national inception meetings for the project. Subsequently, and using GEF funds, each of the 5 core countries will engage national consultants to undertake the data collection

but coordinated and guided by IUCN in the region. The national studies country based data will be collated at regional level by IUCN PAPACO, and will then form the baseline for project monitoring.

68. The main output from this activity will therefore be improved baseline data based on consolidated data from the five countries on PA boundary information, categories, and management effectiveness, type of PA financing used, conservation goals, species distribution, habitat distribution and human population.

Activity 1.3: Preparation for Modelling: Review of approaches and collation of input data

a) Review of available VA approaches

69. There are a wide range of vulnerability assessment (VA) methodologies available, and one of the activities in Component 1 will be to conduct an expert review to analyse and recommend the best approach. This initial desk study, to be done by a consultant engaged by UNEP WCMC, will be relatively rapid, but is an important step to ensure the project proceeds on the basis of the best available methodologies and data. It will incorporate information on data availability, methodological options, and as such is closely linked to Activity 1.1. The consultant will present the findings at the inception meeting, where they will also facilitate a training and information sharing session on VA modelling. This will contribute to the remaining activities under C1, and ensure that the regional participants share a common understanding of the aims and likely outcomes of the project.

70. The main output of activity 1.3 (a) will be a report (review) of the approaches used VAs, including a recommendation of the best approaches for this project

b) Climate scenario modelling

71. The current approach to CC projections focuses on the development of different change scenarios, as tools for testing and exploring different futures. Uncertainty is inherent in modelling CC impacts, and scenarios are the most convenient way to address this. The assessment of PA' vulnerability to CC will require a range of projections for the likely impacts of CC on the region, in terms of changes in rainfall amount, distribution (spatially and temporally), temperature variations and trends.

72. Scenarios have already been developed and are available at global scale through various initiatives, including the 2007 IPCC report[6]. For increased relevance at finer scales (e.g. national, or even individual PA scale), downscaling of the global models will be required, to account for smaller scale topographical and environmental variations. For sustainability, the use of the PRECIS model[7] is preferred for this purpose. PRECIS was developed by the UK's MET Office/Hadley Centre, in order to help generate high-resolution CC information for as many regions of the world as possible. It is based on the Hadley Centre's regional climate modelling system, but is designed to run on a low-cost desktop computer. It can be easily applied to any area of the globe to generate detailed CC projections. PRECIS is freely available to groups of developing countries in order that they may develop Climate Change scenarios at national centres of excellence, simultaneously building capacity and drawing on local climatological expertise. These scenarios can be used in impact, vulnerability and adaptation studies, as well as to aid in national reporting to UNFCCC. The PRECIS data requires 3 months of processing time to produce a climate scenario. The Project Management Unit (PMU), IUCN PAPACO in collaboration with the Hadley Centre, will undertake this activity.

[6] http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html

[7] http://precis.metoffice.com/

73. The main output from activity 1.3 (b) will be a climate scenario modelling for PAs at National level using PRECIS model

Activity 1.4: Vulnerability Assessments

74. Two major modelling initiatives, from IUCN Species Programme and Birdlife International, will partner with the project to develop a framework for assessing the vulnerability of regional species to CC. Through this framework, detailed regional-scale data layers will be produced under different climate scenarios, and will show what the likely species distributions will be. Given that the PAs are most often (in theory, at least) proclaimed for the conservation of biodiversity, projecting the distribution of key species into the future, and overlaying with PAs data, will give us a clearer idea of how effective a particular PAs network might be. This activity will be performed by both IUCN Species Programme and Birdlife International, through Terms of Reference (TORs) developed for them by the project PMU.

75. The work being undertaken by IUCN Species Programme, and which will be integrated with this project is premised on the notion that a species' individual susceptibility to climate change depends on a variety of biological traits, including its life history, ecology, behaviour, physiology and genetic makeup. Species that are in greatest danger of climate-change driven extinction are those with high susceptibility to climatic changes, that also have distribution ranges that will experience large climatic changes and where their adaptive capacity is low.

76. As one of the major innovations in the project, this set of activities will be closely monitored, with significant resources being invested under Components 3 and 4 on training, communications and awareness to ensure maximum replicability both within the region, and on a global scale. Activity 1.4 there will be three parts as follows:

(a) Modelling species response to Climate Change

77. The IUCN Species Programme (IUCN SP) is developing assessment tools to identify the species that are most susceptible to CC and the areas in which they occur. Some species are much more susceptible to CC impacts than others due to their life history, and their ecological, behavioural, physiological and genetic traits. The risk of extinction increases markedly when species experience both high susceptibility to CC and large climatic changes. The Species Programme at IUCN has identified five groups of traits that are believed to be linked to increased susceptibility to CC. In the course of this work, information about these traits has been collected for the world's birds (9,856 species), amphibians (6,222 species) and warm-water reef-building corals (799 species)[8]. The identified traits are:
    a. Specialized habitat and/or microhabitat requirements
    b. Narrow environmental tolerances or thresholds that are likely to be exceeded due to CC at any stage in the life cycle.
    c. Dependence on specific environmental triggers or cues that are likely to be disrupted by CC.
    d. Dependence on interspecific interactions that is likely to be disrupted by CC.
    e. Poor ability to disperse to or colonize a new or more suitable range.

78. In addition, Bird-Life International and Durham University have been conducting more detailed modelling for bird species, and assessing the continued effectiveness of networks of PAs under projected 21st century Climate Change. This team has carried out similar analyses for bird species in Southern Africa, to assess the expected effectiveness of the PA network. These two approaches are complementary, and well integrated, working at different scales to give breadth and depth to the analytical framework.

79. Working with partners at research institutions (Durham University and Bird-Life International) internationally and in the region, the UNEP WCMC will work with IUCN- SP and Bird life to model how key species for the regional and national PAs networks respond to Climate Change. Some key areas will be selected in each of the 5

[8] http://www.iucn.org/about/work/programmes/species/our_work/climate_change_and_species/

countries for analysis. Since Bird-Life and IUCN-SP are already modelling these kinds of impacts; the project will expand on this work, and expand it with some innovative interpretation approaches.

80. The main outputs from activity 1.4 (a) will be (i)a framework for assessing the vulnerability of regional species to Climate Change a model showing how species in the region are likely to respond climate change and (ii) A species based model: a model showing how species in the region are likely to respond climate change

b) Vulnerability assessments of protected areas

81. UNEP WCMC will organize a separate analysis, involving a similar team (UNEP-WCMC, IUCN-PAPACO, IUCN-SP, Durham University, Bird-Life) to the previous activity (Activity 1.4. a) and will develop a methodology to assess the vulnerability of individual PAs to impacts from CC taking vulnerability as a function of exposure, sensitivity and adaptive capacity. The initial assessment will assume exposure is represented by the climate scenario modelling of 1.3. (b), sensitivity by species assessments in 1.4.(a,) and adaptive capacity by the monitoring work of component 4. Where additional data exists on human pressures, legal frameworks, governance types, and other environmental variables, this will be included in the analysis.

82. The process of combining these layers will be developed, refined and tested at the regional meetings. It is assumed that the value of the approach will not depend solely on the scientific merits of the methodology alone, but on its ability to address the needs of the stakeholders. For this reason, a draft of the approach will be presented to the regional group for testing and improvement, making use of the dynamic approaches developed in this project are used.

83. The outputs from this activity will be (i) a methodology to assess the vulnerability of individual PA to impacts from CC. (ii) VAs for the region detailing which PAs are most likely to be impacted by CC and why a regional map of the PA network AND showing their vulnerability to CC. This will be available for exploration in digital format on the project data portal, where different layers can be added. (iii) For each country a hard copy map will be produced showing a national level perspective of the regional data. These maps will highlight areas of vulnerability.

c) Adding different layers to the map

84. Once the map layers of vulnerability of PAs to CC impacts have been prepared, they will be overlaid with the map layers of existing PA networks and coverage, to determine the extent to which the current regional network is prepared to manage CC impacts. Where available, the PA coverage will be combined with measures for management effectiveness, and other proxies (e.g. legal framework, governance) which can help to determine the preparedness of different areas. This will be carried out by the same team responsible for the vulnerability assessments, in partnership with data managers from the WDPA team.

85. The main output from activity 1.4 (c) will be a range of maps (5 national, 1 regional, others produced with co-finance) detailing areas of vulnerability, and layered with other parameters such as legal framework, governance etc.

Species approach:

86. During PPG phase, the majority of data and models were found to relate to the species level. Though the larger scale modelling would undoubtedly give better coverage and representation, the limited nature of work in this field would likely render any project investment less productive than by building on the existing models, and using the strongest datasets available. Where good data and models do exist for ecosystem and habitat scale modelling, they will be used during implementation. (A preliminary implementation activity will be to quickly revisit the PPG studies and confirm any developments made in the interim). In addition, some of the datasets, already incorporate elements of habitat-scale assessments (e.g. the Important Plant Areas component of the KBA data).The ecosystem approach will be more fully utilised in terms of response strategies: the mapping, discussion and training will all focus on the broadest, most inclusive scales of activity.

COMPONENT 2: GAP ANALYSIS/ STUDIES AND SPATIAL PLANNING (RELATED TO CREATION/EXTENSION OR DEMARCATION OF NEW OR EXISTING PAS TO DESIGN PROTECTED AREA NETWORKS THAT ARE ECOLOGICALLY REPRESENTATIVE AND CLIMATE PROOFED)

Activity 2.1: Research on links between CC, PAs and Communities

87. This activity acknowledges the importance of the deep reciprocal links between human populations and PAs. In addition to the biodiversity values which are prominent throughout the project, PAs are also highly important in ecosystem service provision, for economic benefits, and for social cultural values. Gender concerns will be addressed in this component in particular, segregated benefits to men and women.

88. This activity will assess the effects of CC and climate variability on community activities and their effect on PAs. In addition, it will implement the recommendations of baseline study done in PPG phase which carried out comprehensive background research on these linkages. That study made the following recommendations: (i) sensitise stakeholders about the likely impacts of CC; (ii) strengthen the capacities of the populations most likely to be impacted; and (iii) develop scenarios and propose adaptation solutions for each type of scenario.

89. The main tasks under this activity are (a) additional research based on expert interviews in each country and analysis of actual scenarios from the ground to provide real life scenarios. IUCN-PAPACO has been undertaking analyses on these issues in the region, and is in a good position to carry out new work and synthesise the results. This will also be in support of, and supported by, ongoing research and communications work by International Institute for Environment and Development (IIED), International Institute for Sustainable Development (IISD) and UNDP Regional and Country offices. IUCN- PAPACO will however work in conjunction with Government Ministry partners, to carry out an assessment on effects of CC on community activities and their effects on PAs in the 5 core countries. Thus each country will have a 2 person team, one from IUCN and one from the Government Ministry (or their representative). The PMU will develop TORs for these activities in each of the 5 core countries and subcontract the work to IUCN and government Ministry staff accordingly. IUCN will be responsible for consolidating a comprehensive 5 country report which will be the main output of this activity.

90. The main output from this activity will be a consolidated assessment/ analysis (based on 5 country analyses) on the effects of CC and climate variability on community activities and conversely the effects of those affected communities on PAs.

Activity 2.2: Assessments for PA coverage and connectivity for regionally important areas (forest, savannah, and desert).

91. One of the problems reported in several documents is that countries have concentrated on forests and game reserves when forming protected areas, but have largely ignored other types of ecosystems such as savannah and desert ecosystems. This activity will undertake country based assessment of these gaps in each of the 5 countries and come up with a report on how best to have the different types of ecosystems represented in PAs. Specifically there will be the following steps:

    a An assessment for PA coverage and connectivity for regionally important areas (forest, savannah, and desert). This activity to be undertaken by country representatives in conjunction and coordinated by IUCN PAPACO).

    b IUCN PAPACO/UNEPWCMC will then develop maps to show extent of the possible trans-boundary/corridor PA placements. In addition draft agreements will for at least 2 trans-boundary or corridor PA systems and establishment of ideal new corridors to join national or trans-boundary classical PAs (National Parks)

    c IUCN PAPACO and UNEP WCMC will draft an implementation framework for the execution of the 2 trans-boundary PA corridors.

92. The main outputs from this activity will be: (a) An assessment for PA coverage and connectivity for regionally important areas (forest, savannah, and desert). (b) Maps to show extent of the possible trans-boundary/corridor PA placements (c) Draft agreements will for at least 2 trans-boundary or corridor PA systems and (d) an implementation framework for the execution of the 2 trans-boundary PA corridors.

Activity 2.3: Updating national assessment of the status of threatened species

93. Following the methodology developed for the IUCN Red List, the project will undertake an updated assessment of the status of threatened species within each of the countries, and for the region. On a per country basis, all information relevant to a species' conservation status is collected, including: species distribution; population trend information; habitat, ecology and life history information; threats to the species; and conservation measures currently in place. This data will be reviewed for each country and from this individual assessments of major priorities for each country can be made.

94. This activity will be closely managed and will be a partnership with IUCN-SP, Bird-Life, and Durham University but in collaboration with country representatives. TORs for the activity will be developed by the PMU and the work will be contracted to the two institutions, and to country representatives with IUCN- SP being the principle executor of the activity. The output will be an updated report for the status of threatened species for each of the 5 core countries
95. The main output from this activity will be: Assessment report of the status of threatened species within each of the countries, and for the region.

Activity 2.4: Mapping of legal and policy frameworks / and development of regional level policy recommendations

96. A regional-scale exercise will be undertaken to map the legal and policy frameworks for each country, and to derive a regional-scale GIS layer of this information. This would be focused on legal aspects relating to environmental management, for example, land tenure arrangements distributed across a country, land-use options available, government/state ownership of land, or degree of communal access to land or resources. Harmonisation between the contextual situations in the different countries will be necessary in order to make use of the layer at regional scale.

97. The mapping of legal and policy frameworks is a relatively new field, but one which will provide innovative and important input to the regional and national strategy development processes, by spatially describing the constraints facing decision-makers, for example, in terms of land-use options. This is particularly relevant to assist regional-level planning, whereby decision-makers and planners will be able to incorporate an understanding of legal constraints to their discussions.

98. The activity will come up with regional level policy recommendations, and draft policy documents for domestication and uptake by individual countries, including innovative management systems for PAs and biological corridors (e.g., Community Based reserves, private sector participation) will be developed. The activity will hinge strongly on (a) assessment results from other programs such as the IUCN program, or fresh assessments where necessary and: (b) results in activities in component 1 and 2 in this project. The Policy recommendations will be discussed in regional workshops and will further be used in the last stages of the capacity building and policy support pilots and in training activities in Component 3. The main executing institution for this activity will be IUCN PAPACO.

99. This main outputs from this activity will be (i) regional level policy recommendations (ii) draft policy documents for domestication and uptake by individual countries, including innovative management systems for PAs and biological corridors (e.g., CB reserves, private sector participation)

Activity 2.5: Review of global resource management practices to identify existing CC management strategies (including, but not limited to PA management).

100. Given the common problems reported by the project countries, there are also problems evident with existing PAs management approaches: lack of sufficient budget, lack of human capacity, lack of political support and control. These issues will persist in the face of increasing pressure on resources, and as such, a broad perspective of the current situation is required in order to effectively address the future issues of CC.

101. This activity will research a broad range of possible options for managing PA for CC impacts, which can then be incorporated into regional and national strategy development and with a view to **developing best approaches to manage PAs for CC**. Two main threads will be followed: (1) Compare PA management approaches in the region with other approaches used globally experience; (b) Review the PA financing methods in the region.

102. An important input will be a review of existing resource management practices (globally and in the PA). The review will look for examples of management practices which are applicable to the context of West Africa and the management of CC. Also, techniques from the field of 'change management' will be incorporated into the study, and training will be delivered on this subject under Component 3. The PMU and IUCN PAPACO will be responsible for this activity.

103. The main output from this component will be: research results on a broad range of possible options for managing PA for CC impacts, with respect to a comparison (i) PA management approaches in the region with other approaches used globally experience; (ii) Review the PA financing methods in the region.

COMPONENT 3: POLICY SUPPORT & IMPLEMENTATION, PILOT PROJECTS AND TRAINING

Activity 3.1 Training

104. Training modules will be developed for regional and national delivery, as described in the table below. The schedule, the training manual and materials, and an audio or video version of the training, will be available from the project website. Collaboration with the African Development Bank project will ensure relevant training is done for Met stations on data analysis.

105. Training-of-trainers will be utilised as the preferred approach for transferring skills and knowledge from regional to national scales.

106. The proposed training outline is outlined in Table 5.

Table 5: Proposed training outline

Description	**Regional or National**	**Delivered by**
CC scenario development (output interpretation and science)	Both	Hadley Centre
Change management	Regional (TOT session)	Change management consultant (To be selected

		during inception)
GIS for conservation management	Regional (TOT session)	UNEP-WCMC and DICE
Systematic conservation planning	Both	Regional consultant / DICE
Vulnerability assessments (methodologies and interpretation)	Regional (TOT session)	Durham University
Assessing species vulnerability to CC	Regional (TOT session)	IUCN – Species Programme
Country training for all above courses		Conducted by those trained at regional level

107. In summary the project will conduct training sessions during the following workshops

a 3 regional training workshops conducted on effects of CC on PA and methods of increasing adaptive capacity of the PAs.
b 2 training workshops conducted per country.

108. Outputs from Activity 3.1 will be: (i) training modules regional and national for the 6 categories of training given in the Table 5 above (ii) 3 regional training workshops conducted on effects of CC on PA and methods of increasing adaptive capacity of the PAs, and 2 training workshops conducted per country. During selection for training an inclusive process will be followed, ensuring gender representation, and including all relevant social groups.

Activity 3.2 Pilot corridor management plans, involving new governance models, communes, decentralization and traditional authorities and local population empowerment (2 pilots)

109. This activity will be based on recommendations from Activity 2.2 (b). In year 4 of the project, two areas recommended for corridors will be selected for implementing the recommended governance models, and involvement of local communities. IUCN PAPACO will coordinate this activity in collaboration with Ministry Government representatives. The aim of this activity is to test whether the recommended governance model, and the creation of the corridor is manageable. This activity will involve the following steps:

i. finalization of the management plans for the two selected corridors/or trans-boundary PAs
ii. national meetings with relevant national and trans-boundary authorities
iii. signing of agreements for the management of the corridors or trans-boundary areas
iv. commencement of the implementation of the agreements

110. The main outputs from this activity will be: (i) finalized management plans for the two selected corridors/or trans-boundary PAs (ii) national meetings with relevant national and trans-boundary authorities culminating with signing of agreements for the management of the corridors or trans-boundary areas (iii) implementation of the agreements is commenced by end of year 4 and into year 5.

Activity 3.3: Policy implementation support (two pilots)

111. Adoption of the methodologies developed, and information generated, is a key aim of the project. It's important to note that this is a broad outcome, to which the whole project contributes: in particular, the national data review meetings and national planning exercises will play a large role in the development of nationally-relevant policies, based on regional scale realities. Policy implementation will be undertaken by national

governments, with the project providing support under this activity, for example, in the form of additional legal drafting, stakeholder consultations, or planning meetings.

112. In two countries, (to be determined during Y1 of project implementation), the project will support adoption of the long-term monitoring system into routine management, and the national vulnerability assessment as part of routine spatial planning. For this, the monitoring system will be adapted by the project if necessary, to reflect national context. The national VA will be converted into a format compatible with national planning. The implementation will be funded through GEF financing and complemented by government co-financing.

113. The main output from this activity will be: Long-term monitoring system is adopted into routine management, and the national vulnerability assessment as part of routine spatial planning for two selected countries.

COMPONENT 4: KNOWLEDGE MANAGEMENT, COMMUNICATION AND M&E

Activity 4.1: Regional inception meeting /evaluations

114. . A regional inception meeting to launch implementation of the project will be held. This meeting will be an opportunity to review planning with both core country representatives, to present data situation, to conduct initial training on CC science and data. It will focus on the 5 core countries, but will include additional regional partners, through co-financing, for discussions on regional approaches, and training. project evaluations will be done at Mid term and end term.

115. Outputs from this activity will include: (i) an inception workshop report (ii) report on initial training on CC science data (iii) revised log-frame and M&E framework (iv) evaluation reports from Mid term and end term evaluations.

Activity 4.2: Development of a Communications Strategy

116. With its strong emphasis on capacity building, the proposed project is a relatively long-term collaborative initiative to develop capacity within the countries in the West Africa region, to understand, generate and manage the information and scenarios which relate CC to PA. The communication strategy will be developed by PMU, with support from external communications consultants, and will detail approaches to communicate: (to its partners/itself, to its immediate stakeholders, and to the wider group of global stakeholders) what the project is doing, and what will do. The PMU will develop the communications strategy early in implementation, to guide the development of materials that will be developed throughout the project lifespan. This will include the promotion of the approaches followed and project experiences, to broad regional and international audiences, especially to generate support for trans-boundary initiatives. The communications strategy will include further recommendations for, and harmonisation with, the ongoing activities on knowledge management.

117. A major new initiative under the WCPA recently convened a PAs and CC Summit. This "Protected Areas and Climate Turnaround", or 'PACT 2020', is supported by many key players in the field including: UNDP, UNEP, IUCN/WCPA, TNC, WCS, the World Bank and the World Wide Fund for Nature (WWF). Access to these agencies will be simplified through this initiative, and will markedly increase the impacts of communications activities undertaken through the CCPAWA project.

118. The main output from activity 4.2 will be: a communication strategy document for the project

Activity 4.3: (a) Knowledge management

119. This project is designed to operate over a large geographic scale, and one of the most important roles in project implementation is to keep national, regional and international partners up-to-date with activities across the project. The central point for all knowledge, information and outputs generated by the project will be the project website. All outputs from the project will be made available through this site, and it will include sections on archival stores of project communications/emails, project reporting and progress records, project plans and timetables, data and information collected and generated during activities including monitoring results,

monitoring guidelines, training manuals, training resources and videos, project 'people' (participants and project management teams), as well as copies of (or links to, as appropriate) valuable and relevant external resources. Terms of use for information and data collected on the portal will be derived from those covering the existing data, and presented for discussion at the project inception meeting. Where possible negotiations will be undertaken with the aim to allow access to as wide an audience as possible. Work in the area of technology and knowledge management is well developed, and there are a number of private sector service providers already working with the project partners who can be contracted to undertake development work, if in-house capacity is not available among the project partners.

120. Knowledge management is much broader than simply electronic communication. IUCN-PAPACO has a strong experience in implementing effective knowledge management initiatives in the region, including the regular "La Lettre des Aires Protégées en Afrique de l'Ouest" newsletter.

121. Feedback and continuous two-way dialogues are a key to achieving long-term sustainable benefits from the project. There is strong emphasis on the data portal for exchange of data and knowledge, as well as communications to maintain a steady flow around the project's network. There are many networks currently in operation, some in nascent form, and the project will work with these, to ensure long-term sustainability,

122. The main output from Activity 4.3 (a) will be: (i) project website

Activity 4.3 (b) Data portal

123. The project will develop a data portal, which will be central to data management and analysis activities throughout the project. It will link closely to the project website, to maximise stakeholder interactions with and around the data. It will provide access to the data for the project, such as PA boundaries, species distributions, as well as national boundaries, and other base layers necessary for map production. The portal will have a mapping application, allowing users to easily put together a wide range of outputs based on the information collected thorough the project and its partners. As the project progresses, the level of complexity, and value, of the outputs will increase.

124. UNEP-WCMC has long experience in the development and management of this type of system, for example with the WDPA. This activity will build on this experience with innovative, cutting-edge knowledge management and networking techniques such as those being incorporated into the redeveloped WDPA system. It will be possible for project participants to see who else is engaged in the project, who has access to different data, and to exchange ideas and information.

125. Crucially, this portal will allow access to all the outputs, and potentially scenario interface, for exploring different CC scenarios and their impact on the PA network of the country or region. This will contribute significantly to the sustainability of the project outputs, as well as simplifying replication in other areas. The electronic resources will be designed to encourage up-scaling by other users, with the intention that additional regional or global scale initiatives will be interested to adopt the system, and contribute to maintenance over the long term. This activity will be a partnership with UNEP-WCMC/WDPA.

126. The main output from activity 4.3 (b) will be: Data portal for stakeholder interactions with and around the data.

Activity 4.4 (a): Development of a Regional Framework for long-term monitoring of impacts of CC on PAs

127. Long term monitoring is important for long term implementation. While there are many tools available for monitoring PAs, there is no available tool to track the impacts of CC on PAs, and to track preparedness for change. In addition, although individual countries carry out routine monitoring of their protected areas, there is no harmonised regional approach for monitoring at a large scale. These activities will address these gaps. Specifically, following a review of existing monitoring approaches, a framework will be proposed for long-term monitoring of protected areas, including cross-border aspects. This framework will be reviewed at regional meetings, and agreed upon as the basis for harmonised reporting. The regional group will be asked to agree on a small set of core indicators, which can then be expanded on at national level by individual countries. This

activity will be done by the project PMU. In addition, this activity will review options and make recommendations for aligning this with a performance tracking mechanism for project monitoring.

128. The main outputs from Activity 4.4 (a) will be: A generalized regional framework for Tracking impacts of CC on PAs, (to track preparedness for change).

Activity 4.4(b): Development of CC impact monitoring tool for individual PAs

129. The PMU, in partnership with the regional country partners, will develop an additional module for the WB/WWF Management Effectiveness Tracking Tool (METT) which will gather valuable information on the impacts of CC in PAs. It will provide a consistent approach for long-term monitoring of these impacts at site level. The METT is currently in use across the world, in the assessment of the impact of PA areas initiatives on management effectiveness. The add-on module may include indicators on: habitat condition assessment, existence of a CC plan, species vulnerability assessments, overall PA vulnerability assessment, local CC data availability.

130. The tool will be developed early in project implementation, in order to be implemented by project mid-term, to contribute to the progress monitoring. The project portal used throughout implementation will be important as the repository and analytical hub for this monitoring data. Countries will be able to enter their data into the portal, download local copies of all entries, as well as analysis and other outputs, which can then assist them in ongoing routine management of PAs, and in managing change.

131. The main output from Activity 4.4 (b) will be: An additional module for the GEF Management Effectiveness Tracking Tool (METT) for individual PAs which will gather valuable information on the impacts of CC in PAs.

Activity 4.5: Guidelines publication for managing PAs for CC

132. Drawing from the outputs of the regional planning and review meetings, and the PA management approaches review, a set of guidelines will be developed by the PMU (in partnership with IUCN) to guide PA managers in the best approaches to manage for CC. The aim is to capture lessons for other users across the globe: including PA managers, planners, decision-makers, economists. It will also summarise experience for others within project countries, who may not have been directly involved with implementation – in this way it can address the risk of high staff turnover, and low institutional memory.

133. This activity will promote adoption of the methodologies developed within countries, and institutionalisation of some of the approaches. The project, through its partners and implementing teams, will provide clear guidance on the threats and potential solutions to CC. This will build on existing publications, for example, the recently published Arguments for Protection series publication. The Guidelines publication will be relevant to a global audience, summarising the experience of the project in preparing to manage PA for CC. Both IUCN and UNEP-WCMC are experienced in the production of such publications.

134. The main output of Activity 4.5 will be: A publication "Guidelines for PA managers: The best approaches to manage PAs for Climate Change".

Summary of OUTPUTS and OUTCOMES

135. Table 6 shows a summary of outputs and outcomes from this project and indicative GEF budget according to activity.

TABLE 6: SUMMARY OF OUTPUTS AND RELATED OUTCOMES

Activity	Indicative GEF budget	SPECIFIC OUTPUT(s)	OUTCOME

Activity 1.1:		**Outputs 1.1** A report (on the status quo) regarding required data, and pointing out all the gaps that need addressing.	Baseline for future monitoring of CC effects on PA systems in West Africa
Activity 1.2		**Output 1.2** Improved baseline data based on consolidated data from the five countries on PAs boundary information, categories, and management effectiveness, type of PA financing used, conservation goals, species distribution, habitat distribution and human	
Activity 1.3 a		**Output 1.3** (i) A report (review) of the approaches used in Vulnerability Assessments including a recommendation of the best approaches for this project	
Activity 1.3 b		**Output 1.4** i) Climate scenario modelling for PAs at National level using PRECIS model	Better understanding at national and regional level of the potential effects of CC on biodiversity and ecosystem services
Activity 1.4 a		**Output 1.5** (i)A framework for assessing the vulnerability of regional species to CC: a model showing how species in the region are likely to respond to CC **Output 1.6** (ii) A species based model: a model showing how species in the region are likely to respond to climate change	
From activity 1.4 b		**Output 1.7** (i) a methodology to assess the vulnerability of individual PAs to impacts from CC. **Output 1.8** (ii) (i) VA for the region detailing which protected areas are most likely to be impacted by CC and why. A regional map of the PA network AND showing their vulnerability to CC. This will be available for exploration in digital format on the project data portal, where different layers can be added. **Output 1.9** (iii) For each country a hard copy map will be produced showing a national level perspective of the regional data. These maps will highlight areas of vulnerability.	
Activity 1.4 c		**Output 1.10** (i) A range of maps (5 national, 1 regional, others produced with co-finance) detailing areas of vulnerability, and layered with other parameters such as legal framework, governance etc.	
Activity 2.1		**Output 2.1** (i) A consolidated assessment/ analysis (based on 5 country analyses) on the effects of CC and climate variability on community activities and conversely the effects of those	-Potential for the establishment of trans-boundary PAs assessed, maps

		affected communities on PAs.	drawn and discussed by participating countries authorities -Methods of Improving effectiveness of PA management, including trans-boundary management collaboration better understood -Status of globally threatened species updated and better understood- to facilitate better future planning for their management - Effect of CC instigated community activities on PAs better understood (baseline would be a special study).
Activity 2.2		**Output 2.2** (i) An assessment for PA coverage and connectivity for regionally important areas (forest, savannah, and desert). (ii Maps to show extent of the possible trans-boundary/corridor PA placements (iii) Draft agreements will for at least 2 trans-boundary or corridor PA systems and (iv) an implementation framework for the execution of the 2 trans-boundary PA corridors.	
Activity 2.3		**Output 2.3** (i) Assessment report of the status of threatened species within each of the countries, and a consolidated report for the region.	
Activity 2.4		**Output 2.4** (i)a regional level policy recommendations (ii) draft policy documents for domestication and uptake by individual countries, including innovative management systems for PAs and biological corridors (e.g., **CB** reserves, private sector participation)	
Activity 2.5		**Output 2.5** Research results on a broad range of possible options for managing protected areas for CC impacts, with respect to a comparison PA management approaches in the region with other approaches used globally experience; (ii) Review the PA financing methods in the region.	
Activity 3.1		**Output 3.1** (i) training modules regional and national for the 6 categories of training, namely, o CC scenario development (output interpretation and science) o Change management o GIS for conservation management o Systematic conservation planning o Vulnerability assessments (methodologies and interpretation) o Assessing species vulnerability to CC (ii) 3 regional training workshops conducted on effects of CC on PA and methods of increasing adaptive capacity of the PAs. and 2 training workshops conducted per country.	Improved capacity for addressing PA management with regard to CC. Increased awareness about the effects of climate change on PAs and surrounding communities and methods of mitigating negative effects Improved PA management as a result of applying some of the policy recommendations

Activity 3.2		**Output 3.2** (i) finalized management plans for the two selected corridors/or trans-boundary PAs (ii) national meetings with relevant national and trans-boundary authorities culminating with signing of agreements for the management of the corridors or trans-boundary areas (iii) implementation of the agreements is commenced by end of year 4 and into year 5.	
Activity 3.3		**Output 3.3** (ii) In two selected countries, long-term monitoring system is adopted into routine management, and the national vulnerability assessment as part of routine spatial planning.	
Activity 4.1		**Output 4.1** an inception workshop report report on initial training on CC science data Revised log-frame and M&E framework Project evaluation reports	Project Monitoring and Evaluation system with SMART indicators developed and implemented Monitoring plan for protected systems and selected PAs designed and implemented.
Activity 4.2 Activity 4.3		**Output 4.2** (i) A communication strategy document for the project (i) A publication "Guidelines for PA managers: The best approaches to manage PAs for Climate Change".	
Activity 4.4 (a) Activity 4.4 (b)		**Output 4.3** (i) A generalized regional framework for Tracking impacts of CC on PA, (to track preparedness for change). (ii) An additional module for the GEF Management Effectiveness Tracking Tool (METT) for Individual Pas- which will gather valuable information on the impacts of CC in PA	

3.4 INTERVENTION LOGIC AND KEY ASSUMPTIONS

136. The project aims to develop an approach for the region and for the individual countries, to model and predict the impacts of CC on their PA networks. The model will be based on existing information and approaches for modelling species' responses to CC, and the subsequent shifts in distribution which may be expected.

137. The geographic scale at which CC is likely to impact means that a regional solution is most appropriate. Interventions in individual countries may have value to specific contexts, for example in microclimatic zones, but will not be sufficient alone. A regional scale approach can make provision for planning which takes account of natural as well as political boundaries, with trans-boundary conservation as a cornerstone of the solution. The core project countries will meet with a wider range of trans-boundary partner

countries, to discuss the data and information, develop and test approaches to presenting and exploring that information, and begin consideration of a range of long-term, large-scale solutions.

138. Knowledge on how to mitigate CC effects on PAs is central to improving of PAs management. The project is also different in that it combines the undertaking of science based assessments, analyses, developing frameworks, reviews and creating methodologies, all of which are necessary to inform decision makers on what adaptive tools and measures to use to make the PAs deliver on their ecosystem services. In most cases, "a regional framework" modality of working will be adopted, but domesticated to individual countries where this is called for. The project is also a platform for knowledge management, information sharing, capitalization, and networking and recommendations and awareness materials to be produced by this project will be shared at regional level.

Key assumptions:

139. The project hinges on two key assumptions:-

a) There is sufficient consistency in the data available across the region: the development of a regional-scale strategy requires regional-scale datasets, which currently do not exist.

b) There is regional cohesion and support for a harmonised approach: As much as the five core countries have signed for this project- it remains to be seen to what extent each of them will be committed. Without strong existing legal frameworks to govern regional natural resources, the project will rely on developing sound national approaches which are aligned with a cogent regional strategy.

3.5 RISK ANALYSIS AND RISK MANAGEMENT MEASURES

140. Table 7: Risks, their magnitude and mitigation measures.

Risk	Magnitude	Mitigation
Insufficient data available for high-quality modelling	M	The quality of output from modelling processes depends to a large extent on the quality of input data on protected areas, species, landcover, human and economic indicators, and climate scenarios. There is currently a broad lack of good data for the project region. Project activities have been designed to fill these gaps as part of Component 1, focusing on biodiversity and protected areas. In addition, where possible the modelling approaches will be selected to require the simplest inputs. The emphasis in C2 and C3 on professional networking, workshops and capacity building will also ensure that the project delivers a wide range of benefits.
Heavy staff turnover within management and decision-making agencies	M	Emphasis in project implementation on long-term, sustainable delivery of tools. Modern, electronic communications and knowledge management approaches (website, wiki, email, multimedia/online training) will be combined with traditional (printed reports, meetings), to maximise the persistence of tools developed under the project. The training which forms a major part of capacity building will be both delivered in person to the current stakeholder groups, as well as being made available online for others both in the project countries, and broader.

Risk	Magnitude	Mitigation
Different management approaches in each country: the result is tools which are not sufficiently specific to be useful	M	The process proposed for development of the approaches involves close involvement with national managers and stakeholders. Tool-development in particular will be an iterative, interactive process. The 5 core countries represent an excellent sample of the region's countries, and exhibit great diversity in location, size, populations, cultures, and environmental aspects. However, the group is small and easy to work with. By focusing on a relatively small group of countries from across the region, the project has the opportunity to develop tools appropriate to all these stakeholders, while not being distracted by a large number of divergent opinions.
Different priorities in each country: The wide diversity of countries involved mean that it may prove complicated to secure consensus on a regional strategy, including regional priorities.	L	The issues relating to CC will have significant impacts on all sectors of all the countries involved. Although each will have different priorities at a national level, one main aim of the project is to promote the importance of a harmonised approach at regional scale, which will be undertaken through awareness and communications activities throughout implementation.
Language barriers: the regional and international stakeholders include a mixture of French and English speaking people and countries. Although many speak more than 1 language, there is no common lin*gua franca* across the region, and partial coverage through ad hoc interpretation/translation will not be sufficient for full project implementation.	L	This was identified during project inception meeting for PPG as a critical factor for effective implementation. It is, however, relatively simple to manage: particularly under Component 3, significant resources will be directed towards translation and interpretation services for all regional activities. National activities will be undertaken in national languages, and only translated as necessary for presentation at regional meetings.
Lack of high-level political support at regional level: There is no significant regional leadership on the issue of CC and PA. As such, there may be inertia towards developing such a strategy.	M	The initial focus on science-based tools to assist in analysis and explanation of situation and predictions for future will help by providing useful outputs, regardless of regional situation. In addition, the wide group of regional stakeholders brought together under the project will give substantial legitimacy to such a strategy. Piloting its activities in a small number of countries, the project will hope to provide a solid foundation for future regional strategy development involving a wider range of countries.
Lack of political support at national level: there are many competing priorities which face national governments, and the risk is that CC and PAS are not sufficiently prioritised	L	Each country has committed $600,000 in co-financing, which demonstrates their commitment to addressing the issues. The project outputs will be designed to have

Risk	Magnitude	Mitigation
		maximum political impact at national levels, by being easy to consume, representative of national realities, and also presenting a cohesive image of a necessary regional-scale set of solutions.
Slow government procedures/ Protocols in embracing the regional aspects under various categories: may interfere with the policy aspects to be addressed in component 3.	M	Agreements and multi country MOUs will be put in place upfront. Good communication between project partners will be used to prepare partners for up-coming activities, reporting on progress, and sharing experience between country partners.
Multi-country initiatives are complex and may hinder project progress: the complexity of implementation across the large distances presents significant risk to timely implementation	M	The project activities have been designed to integrate, without relying extensively on each other. This is clearest at the interface of regional and national activities. For effective implementation, the national inputs are vital, but for example, although the development of regional assessment methodologies would be enhanced by national input, if necessary it can proceed without it, and still produce good quality products or relevance to both regional and global scale. *Other aspects of communication and logistics are dealt with separately below.*
Logistical problems in implementation: The project site covers 5 individual countries as well as the region. Physical communications are expensive and complicated to organise.	M	Despite the high logistical costs, where appropriate, all activities will be implemented in project countries. Advance planning will help to reduce costs of late changes, and simplify the process of visas for travel.
Communication problems: the large distances mean implementation will be reliant on telephone and email communications, rather than face-to-face meetings	L	These technologies are improving, and the impact is likely to be limited. An up-to-date contacts database will be maintained as part of the project website, and participants (both directly and indirectly involved) will be frequently encouraged to check/update their details. The same type of web-based tools will be used to distribute materials, to ensure that all participants have good access to the relevant documents, and can easily share them with both their national colleagues, and their regional counterparts.
Country based political unrest/ wars in any one or more countries may affect the project: Since independence, many of the regions' countries have been plagued by corruption and instability, with notable civil wars in Sierra Leone, Côte d'Ivoire, Liberia and Nigeria, and a series of military coups in Ghana and Burkina Faso.	M	Use an international executing agency that can work on non-site based aspects while waiting for peace times. This includes both UNEP-WCMC (based in UK with links to international expertise), as well as the regionally-based IUCN-PAPACO office, with extensive regional field experience.
CC starts to have impacts before measures can be	L	Within the project lifecycle, the drivers of CC

Risk	Magnitude	Mitigation
put in place, shifting focus to short-term solutions: particularly in coastal areas, this is a strong likelihood, and anecdotal evidence is found across the region that the effects of CC are already being felt.		will not be directly impacted. However, efficient project implementation can help to rapidly appraise the situation in affected areas, and to predict and plan for the future. For example, by supporting existing coastal initiatives with information on likely species impacts, management approaches to adapt to changes over the longer term. By focusing on the medium- to long-term, and actively promoting its outputs, the project can expect to maintain focus on these time-frames.
Competing solutions offered by different sectors: CC is a cross-cutting issue, and as such is likely to be tackled from a number of angles	L	The main actions to address this risk are: effective communication, and integration with existing approaches at regional and national level. Focusing on provision of tools for assessing and explaining, rather than specific prescriptions for action will also assist.
National MET offices lack capacity to provide data: capacity in both PA management and climate change monitoring was found to be low in majority of countries.	L	Capacity building will be undertaken using the PRECIS model for downscaling global climate models, for regional and national use.

3.6 CONSISTENCY WITH NATIONAL PRIORITIES OR PLANS

Consistency with national priorities

141. All the participating countries have ratified the CBD, and have articulated their plans to create and sustainably manage their PAs in the NBSAPs. In the Third National Report to the CBD, each of the countries has expressed interest in meeting the 2010 Global Target regarding PAs, and some have articulated their own national targets. For example, in Gambia plans are underway to accord MAB status to Niumi National Park, Baobolon wetland Reserve and Tanbi wetland Complex with the assistance of IUCN and UNESCO (MAB) offices in Dakar. Mali has intentions to protect 15% of its territory by 2010. The areas of interest include large natural areas, highly threatened areas, and areas that are home to highly threatened species, including some wetlands may be added to the list of Ramsar sites.

Consistency with Sub- regional commitment for collaborative action

142. The issue of regional commitment is addressed in section 2.4 above (Institutional, policy and Sectoral context). Besides endorsing this project, the participating countries have demonstrated commitment for regional initiatives for conservation in the recent years. For example, regional conservation initiatives have been tried in the region and include; (a) The Upper Guinea forest region project that resulted in the formation of the Critical Ecosystem Partnership Fund (CEPF); (b) Creation of Green Actors of West Africa (GAWA) network for 11 countries; (c) Regional cross-border collaboration for chimpanzees and elephants mediated by IUCN, and, (d) The 'Sustainable and Thriving Environment for West African Regional Development' (STEWARD) by United States Agency for International Development (USAID).

3.7 INCREMENTAL COST REASONING

143. This project focuses on Regional scale activities on PA and CC which are not usually funded by individual countries. It is important therefore that GEF funds such activities to add to what individual countries are doing. The baseline situation is that each of the participating countries has numerous PAs many

of which have not been well demarcated and many are not sustainably managed. There is need for assessments on what should be done to create trans-boundary PAs or corridors to join existing ones. More importantly there is need to climate-proof these sites against the vagaries of CC in future. Left on their own, it is unlikely that each country will marshal the time, funds, and scientific expertise to attain what this project intends to give. The GEF alternative will therefore hasten the efforts and build on country efforts to cushion natural resources of global significance from being eroded further.

144. However, there is currently little focus at regional scales on understanding and managing the issues. The regional approach developed through the project has the potentially to catalyse investment in CC and PAs at national level, as well as to stimulate increased investment in regional-scale initiatives, particularly trans-boundary conservation.

145. In addition, the techniques developed will be useful for monitoring of future GEF projects. For example, a key activity under Component 4 (Monitoring) is to develop a CC module to add to the WB/WWF METT, which is currently mandatory for all GEF PAs projects. Appendix 3 elaborates further in incremental cost reasoning.

3.8 SUSTAINABILITY

146. Institutional Sustainability: The project's sustainability will be assured by building institutional and sectoral sustainability principally through the training that will be done in Component 3. Investment in capacity building includes training on a range of topics, including tools for VA, data management and use, CC science, methodologies for analysing change, PAs management and monitoring. Second, all the training materials will be digitised and made available at the same portal as the CC data. This is to counter the high level of key staff turnover in the project countries, and also to increase the reach of project activities: these resources will be made freely available, and promoted through regional and national initiatives. Thirdly, human capacity will be built by providing simple access to important information sources, the data to use with the tools: data on PAs, CC, and other key data layers developed and collected through project activities.

147. Focus on strengthening Networks: The technical sustainability of the outcomes of the project is dependent on the maintenance and management of the national communications infrastructure. One of the key roles the project can play is to bring together scientists with managers from across the region, to facilitate exchange between them, to improve cooperation and collaboration. The project is building on current and previous initiatives. These networks will need to be maintained after the CCPAWA project, but the elevated level of communication and interaction afforded through the project will greatly strengthen these networks.

148. **Financial sustainability**: Long-term financial sustainability is important for the continued collaboration of the West African countries on the issues addressed in this project. Component 3 has aspects on policy support – which are meant to make sure individual governments of the 5 core countries have long term policies to address the effect of CC on PAs . It is anticipated therefore that this commitment will result in national budgets being increased for PAs. The tools developed in this project will be a foundation on which future donor funding could be based, especially on a regional scale.

Anchoring the project in the United Nations Development Assistance Framework (UNDAF)

149. UNEP will make sure this project is anchored in the country UNDAF process, and thus will expose the results to the rest of the UN players in the region. This is crucial to making sure that the outputs and outcomes are visible to many other development agencies and therefore stand a better chance to attract more national and regional support.

3.9 REPLICATION

150. Wide value for approaches, techniques and lessons learnt : The issues the project is designed to address are so far not well studied in either the region, or at global level. The project will bring together expertise from different fields, with the opportunity to combine, innovate, and develop guidance for new approaches to managing PAs for CC. The analyses and solutions themselves which are developed for West Africa are unlikely to be directly relevant to other areas, but the approaches, techniques and lessons learned will have wide value. With a significant element of research-led innovation, there is an equally significant need to make the experience of the project replicable

i. The project website will play the role of central data, information and knowledge hub for the project. It will link not only data, but people, with different sections available to different audiences. This will allow the sharing of information, as well as wide-spread publication of results. The website will be managed by the project PMU at the UNEP WCMC, and will therefore be available to all stakeholders even after the GEF project is over.

ii. At least one major publication will be developed and published. This will include a set of guidelines on best practice for management of protected areas for CC, and will include descriptions of the approaches developed and followed under this proposed project.

iii. Networks of practitioners and experts in the region and wider will be engaged with to share the project experience, and publicise the successes. Of major importance is a recently launched global IUCN-WCPA initiative, PACT 2020[9]. This is a consortium involving: UNEP, UNDP, IUCN, World Bank (WB), CI, WWF, The Nature Conservancy (TNC), Flora and Fauna International (FFI) and others.

151. Replicability in the region: The project will specifically benefit other countries that have very high biodiversity richness and have not yet developed tools to address effects of CC on PAs and their harmonization on a regional scale. All the activities are designed with maximum replicability as an integral aim: for example, the training will be captured in multimedia format for easy distribution, the models and approaches will be well documented to aid sharing, and the project experience will be widely shared through electronic means (email, website, and social networking applications). Even though the project will just have begun, opportunities to make the project known to wider audiences through the 2010 'International Year of Biodiversity' will be capitalised on, which will ensure better chances of replicability.

3.10 PUBLIC AWARENESS, COMMUNICATIONS AND MAINSTREAMING STRATEGY

152. As a new area of study, there is great opportunity and responsibility to maximise the impact by good communication. This is a fundamental function of the project, and built-in explicitly to Components 4 (knowledge management strategy and communications strategy), but is evident throughout.

153. In order to maintain communication with the wide range of stakeholders at national and regional levels, a communications strategy will be developed in partnership with project stakeholders and a communications consultant, to advise on the most effective techniques to communicate the key messages coming from the project. This will be implemented and revisited throughout implementation. The key partners will include: ministries of environment (incl. protected areas managers), national climate change and meteorological services, development planning agencies, regional networks, development partners, and others.

154. In addition, a knowledge management strategy will be developed, to ensure that the project is making best use of its available information and knowledge resources. Given the wide geographic spread, it is critical to have an effective system for collecting, sharing and discussing these resources.

155. The project's outputs are primarily directed towards consumption by decision-makers, managers and scientists in each country, to assist them in their official capacities. The general public in the countries are important stakeholders, but it is not intended that this project communicate directly at this level. Specific communications at national level will be promoted through co-financing by each country.

156. As a regional project, the stakeholders will come from a wide range of countries. A principle strategy will be to make it as simple as possible for the national representatives to communicate about the project to other stakeholders in their countries. This includes ensuring that project information is up-to-date, comprehensive and available in the appropriate language (either French or English).

157. In terms of mainstreaming, the national strategies arising from Component 2, will be driven by the national government representatives, to address the national needs, fit with existing policy frameworks, and promote the importance of CC and PA in the most appropriate fashion.

[9] Footnote: The PACT2020 initiative collaborated on the production of a recent book entitled "Natural solutions: Protected areas helping people cope with climate change".

3.11 ENVIRONMENTAL AND SOCIAL SAFEGUARDS

a) Environmental safeguards

158. Environmental safeguards for a project refer to the inclusion of measures to make sure the project does not do any direct or inadvertent harm to the environment due to its activities and the *modus operandi* engaged throughout the project life span or beyond. The project aim is the exact anti-thesis for causing environment harm to the environment as it is addressing measures and development of tools to equip PAs, institutions and policy makers for addressing effects of CC on PA. In particular, care will be taken in making recommendations for corridor areas so that should this happen in the future there will not be any adverse effects on the communities or wildlife.

159. The project will promote consideration of long-term impacts on protected areas management, and will facilitate it through improved understanding, modelling and interpretation of the impacts. With emphasis on targeted research and capacity building, the direct negative effects from the project are expected to be extremely low. However, the planning and actions recommended through the project are expected to have significant, long-term benefits. All reports and outputs will be reviewed in a two-step process to ensure that effective safeguards are in place to identify and address any potential adverse outcomes from project activities. The first step is the project's Technical Advisory Group, comprised of world-class international and regional experts. The second step involves regional and national consultations, to ensure that only relevant and appropriate elements of regional strategies are adopted for national use, and only relevant and appropriate elements of national plans are fed back into regional strategy development.

b) Social safeguards

160. Social safeguards include measures to ensure that the project is sensitive to the needs and rights of communities, social groupings, and the society at large. Such needs include gender sensitivities, effects of the project on levels of income to the poor and marginalized groups, and transparency and inclusiveness in the project execution modalities. For this project social safeguards will be relevant for the following issues:

- Gender mainstreaming and inclusiveness: As much as this project is largely assessments and development of tools, and drafting of regional policies, it is important that such tools articulate the need to make sure that both men and women's needs are included in the management of PAs. For example both men and women should be well represented in training courses undertaken at country and regional levels. Policy recommendations from this project must articulate sensitivity to both men and women and where necessary stipulate gender dis-aggregated data collection. Project pilots should be formulated in a way to take cognizance of all social groups , including men, women, youth, rural poor, indigenous groups and the elite.

- Rights of communities and poverty alleviation: Where the project recommends placement of corridors or trans-boundary PAs as measures to mitigate effects of CC on the flora and fauna, it will be important to make sure that rights of communities living in these areas, and especially their capacity to make a living is not adversely affected by the project or the recommendations. The project will contribute to more resilient regional networks of protected areas in the face of threats from climate change. This will play an important role with regard to poverty alleviation, as PAs provide, among other benefits, valuable ecosystem services, and also frequently function as engines of economic growth through the provision of natural assets for tourism, as well as extractive industry. The ecosystem services provision impacts on the production of goods and services, on which a large number of local livelihoods depend."

- Transparency in project execution: Due to the fact that the project involves assessments and development of tools at a regional scale, this project will be executed by a global body in collaboration with regional and national players. Transparency and proper representation of global, regional and national players is essential at all stages of the project, and in the distribution of funds. The project will actively promote the involvement, and development of solutions for all parts of society, including women, men, youth, indigenous communities, and marginalised groups. As such, the project is planned to: maximise participation by marginalised groups (including on the basis of gender and ethnicity); promote transparency through an emphasis on science- and evidence-based approached to planning and decision-making. One element of Component 2, in particular, involves further research into the links between people and protected areas, with a view to better reflecting these links in the modelling and strategy development activities. It includes incorporation of an innovative approach to modelling legal and policy frameworks, and greater detail of mapped information on the links

between people and resources. The national governments, with careful sectoral representation, will be the primary point of contact for each country, who will take the majority of responsibility for national level activity.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

UNEP GEF Implementation Agency

161. The implementing agency, UNEP- Division of the Global Environment Facility (DGEF) is primarily responsible for acting as the liaison with the GEF ensuring that resources are sourced from them in a timely manner and acts to ensure that project outputs are delivered on time. UNEP-GEF will be responsible for the following:-As the implementing agency of the GEF, UNEP-GEF supported the project to secure funding from the GEF.

a) UNEP-DGEF will also disburse GEF funds to UNEP WCMC after a legal instrument is signed between the two institutions.
b) UNEP-DGEF will monitor implementation progress through the submitted six monthly technical reports, and the six monthly financial reports submitted by UNEP WCMC.
c) In addition UNEP-GEF will participate in monitoring missions, annual steering committee meetings
d) UNEP-DGEF will further participate in the Project Implementation Reviews (PIRs) and the independent evaluations.
e) UNEP-DGEF is especially responsible to ensure adaptive management takes place throughout the duration of the project.
f) UNEP-DGEF is overall responsible to account to the GEF about the usage of GEF funds in this project, and ensure outcomes are achieved.

UNEP (WCMC) Executing Agency

162. The executing agency, UNEP-WCMC is responsible for managing the overall project execution. It will engage a project coordinator to be based in the WCMC offices in Cambridge. It will have the following responsibilities:

a. Will receive funding from UNEP-GEF for onward transmission to all sub contractors.
b. UNEP- WCMC will host the PMU- refer to Appendix 11for the TORs for the PMU.
c. UNEP WCMC will sub contract the co executing agencies, namely, IUCN PAPACO and the 5 Ministries in the core countries.
d. UNEP WCMC will receive all funds from UNEP-GEF including those for onward transmission to other contractors.
e. UNEP-WCMC will be responsible for delivery of the project outputs and outcomes.
f. UNEP- WCMC will be responsible for all reporting to UNEP_GEF, both for technical and financial reports, audit reports, procurement and assisting the independent evaluators to do their work. For the technical reports and financial reports, UNEP WCMC will receive reports from the sub contractors, and consolidate before submission to UNEP GEF
g. UNEP-WCMC will be part of the Technical Advisory Group (TAG)
h. Will be part of the Project Steering Committee (PSC)

IUCN-PAPACO

163. IUCN PAPACO based in Burkina Faso is the main executing partner for UNEP WCMC. It will have a coordinating officer paid by the GEF funds to oversee the implementation of activities in the region and in the five core countries.

a. Will receive funds via UNEP-WCMC.
b. IUCN- PAPACO will be responsible for delivery of clearly outlined packages of work, on behalf of UNEP-WCMC as outlined in Appendix 14 (Draft Procurement Plan).
c. IUCN- PAPACO will supply an officer to oversee delivery of this work.

d. IUCN- PAPACO will be responsible for providing input and support to UNEP-WCMC for the routine project reporting

e. IUCN- PAPACO will be part of the TAG

f. Will be part of the Project Steering Committee

Country coordinating officers

164. Each Country partner will have a coordinating officer with partially paid by the GEF Funds and partially by the co-financing. These country based officers will play the liaison role between regional and national activities. While the project is focused on regional-scale activities, the project resources will be spent within project countries, to the greatest extent possible (see [Appendices 1 and 2]). For example, there are a wide range of national level data collection, workshops, planning and review meetings which will be undertaken within each individual country. In addition, despite regional logistical complexities and expenses, regional meetings will be held in one of the regional countries.

g. The country officers will be appointed by participating governments.

h. They will be responsible for liaison and communication with both PMU (UK), Regional project managers (IUCN- PAPACO), and consultants

i. Of these, they should coordinate most closely with the regional managers at IUCN- PAPACO

j. They will provide assistance in procurement of national consultants, for arranging logistics of workshops and meetings, and coordinating with government for appropriate representation and

k. The country officers will constitute a National Steering Committee in each country, or preferably/ where possible, integrate it with existing steering committees or regular meetings.

21. Project Steering Committee (PSC)

165. The steering committee's role is to provide overall continuity between the Implementation agency, the Executing agency, the 5 countries who have allocated their RAF, the three 3 trans-boundary countries and the TAG. This group will meet once a year to review outputs, make recommendations on actions to be taken to efficiently complete the goals and objectives of the project and to provide advice to the executing agency and the implementation agency that will be the decision-making bodies. It will be chaired by one of the representatives from the 5 core countries, on a rotating basis. The PMU will provide the secretarial services to the PSC (see TORs for the PSC in appendix 11

Technical Advisory Group (TAG)

166. The technical working group will consist of Non Governmental Organizations (NGOs), Academics, GEF Scientific Advisory Panel (STAP) who will provide advice on the appropriate application of science the development of technical tools that will be developed as part of this project. This group will be chaired by a Senior Research Fellow at UNEP-WCMC who will also be part of the steering committee for the overall project. Meetings will largely be virtual and by telephone. Physical meeting for the TAG will be held back to back with PSC meetings to save on travel costs. The institutions involved in the TAG will be:

- UNEP-WCMC technical staff (CC , PA and Informatics programmes)
- University of Cambridge
- IUCN Species programme
- IUCN PAPACO (Burkina Faso)
- UNEP DGEF- (to attend only when required)

SECTION 5: STAKEHOLDER PARTICIPATION

167. There are different sets of actors at international, regional and national levels. The regional level is of key importance to the project in terms of implementation, but the links to other scales of stakeholders will influence all aspects of the project. Table 7 below shows the stakeholders and how they will be involved

Table 7: Stakeholder participation

Description	Contribution and Involvement in the Project
I: NATIONAL PARTNERS	
National governments: For each of the 5 core countries, the primary partner for the project is the national government. Each has a different approach to management of PA,	All have ongoing PA management work, including data collection and planning activities. These are of high importance to the project, and will play a role as both inputs to project execution, as well as forming an entry point for communications and awareness work. The respective Government Ministries which are listed in Paragraph 30 will appoint one officer responsible for this project.
IUCN Mali: The country office of IUCN has good capacity for management and implementation of conservation initiatives. They are currently managing projects related to tracking trans-boundary elephant migrations with neighbouring countries, as well as supporting government policy development processes.	The office provided high quality logistical and technical input to the regional inception meeting. With strong links to government and civil society groups, as well as the IUCN PAPACO office, they are well placed to support implementation of national activities in Mali. However their role will be decided between then and IUCN PAPACO.
Conservation Society of Sierra Leone (CSSL): A national NGO, and Bird-Life partner.	Good links to all sectors of conservation activity in Sierra Leone. This will be of high value in terms of implementing in-country activities, including data collection, planning workshops, stakeholder consultations. Will also participate in regional meetings.
NGOs	NGOs and sectoral partners will be invited to participate in national stakeholder meetings and some trainings
Universities	The academia is important for this project and will largely participate as sources of consultants and data gathering experts.
Media	Local media will be involved in the final stages of the project to publicize the results of the project, and to sensitize the respective societies about the policy recommendations from the project. This part will be taken care of by the communication strategies which will include local and regional media.
II: REGIONAL PARTNERS	
IUCN PAPACO[10]: Long-running programme of work on protected areas in the West and Central Africa regions. Implementation and policy support as well as research undertaken. Their programme on strengthening the effectiveness of protected areas management in West and Central Africa has just	As the principle execution partner for the project in the region, the PAPACO office represents an excellent network of contacts and vast regional experience. They will participate in the PSC. Comprehensive responsibilities of the IUCN PAPACO are given in Section 4 above.

[10] IUCN regional programme on protected areas in West and Central Africa

entered its second phase.	
III: INTERNATIONAL PARTNERS	
UNEP-WCMC: The biodiversity monitoring and information management arm of UNEP, the Centre has extensive experience in the management of global-scale datasets. Currently undergoing a major redevelopment, the World Database on Protected Areas, has been maintaining accurate protected areas data for nearly 30 years.	Overall in charge of the project execution. Will participate in the PSC and the TAG The WDPA data will be one of the most fundamentally important datasets for the CCPAWA project: all other analyses proposed depend on accurate PAs data. The baseline study reported on the data quality for the 5 core project countries, and activities have been designed to address the weaknesses identified. For a comprehensive list of the duties and responsibilities of UNEP WCMC, see Section 4 on institutional arrangements.
IUCN Species Programme: Research on attributes that determine species' vulnerability to CC. Linked to Red List management work. Have identified five groups of traits that are believed to be linked to increased susceptibility to CC.	Leading global expertise on modelling of impacts. This methodology is an important part of determining vulnerability of PA to CC, based on their species composition and will therefore be a great asset to this project.
Durham University, Birdlife International and Conservation International: Researching the application of vulnerability modelling to avifauna, to predict future distributions based on climate scenarios[11].	As this is more specifically focused on avifauna, the approach doesn't have the same breadth as that of IUCN Species Programme but could be consulted to give advice to the project.
The Hadley Centre based in the UK The Met Office Hadley Centre is one the world's foremost Climate Change research centres. They produce world-class guidance on the science of Climate Change and provide a focus for the scientific issues associated with Climate Change.	The hardly Centre's contribution will be good quality climate data for West Africa.
AGRHYMET is a specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS). The AGRHYMET Regional Centre (ARC) was created in 1974. It is a specialized institute of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS) composed: Chad, Burkina Faso, Cape Verde, Gambia, Guinea Bissau, Mali, Mauritania, Niger & Senegal	Comparative Advantage of AGRHYMET Over the years, the AGRHYMET Regional Centre has asserted itself as a regional Centre of Excellence in: - training officers from Sahelian countries and elsewhere; (link to training component) - regional agrometeorological and hydrological monitoring ; (data provision for models) - agricultural statistics and crop monitoring; (PA and agriculture – agricultural infringement into Pas, human /

[11] See Hole et all 2009. [Ecology Letters paper]

	wildlife conflicts) - regional databases; (linking MET centers to assess and track CC risks) - management and dissemination of information on natural resource monitoring across the Sahel; (could be useful in the capacity building and awareness raising component) - documentation on agrometeorology, crop protection, environmental monitoring, desertification, natural resource management, etc; -maintenance of meteorological instruments and electronic equipment; - strengthening interstate co-operation by sharing methodologies and technologies. Accordingly, the expertise of officers of the Centre is increasingly sought-after by bilateral and multilateral organizations (USAID, FAO, WHO, IRD, CIRAD, …). The AGRHYMET Regional Centre also takes part , in conjunction with the CILSS system, in international meetings on food security, sustainable development, natural resource management and desertification control.
ECOWAS	**ECOWAS:** The Economic Community Of West African States (ECOWAS) is a regional group of fifteen countries, founded in 1975. Its mission is to promote economic integration in "all fields of economic activity, particularly industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial questions, social and cultural matters",
ACMAD: African Centre of Meteorological Application for Development	ACMAD's mission is the provision of weather and climate information and for the promotion of sustainable development of Africa (notably within the context of national strategies for poverty eradication), in the fields of agriculture, water resources, health, public safety and renewable energy. To achieve its objectives, ACMAD: • prepares and disseminates products and services; • Ensures development and transfer of tools and technology to NMHSs; • monitors communications with users notably in rural communities; • networks with NMHSs and regional development aid institutions; • provides a window to technology partners, under conditions which are typical of the African

	situation; • supplements Member States' and partners contributions through a Resource Mobilisation policy; • is a «nursery» for sustainable development of Africa; • for ACMAD, climate and the environment are resources for development
IDRC	Regional Office for West and Central Africa (WARO) Contact - information: Jerome Gerard, Phone: (+221) 33 864-0000, ext. 2074, Fax: (+221) 33 825-3255, Email: jgerard@idrc.org.sn, Web: www.idrc.ca/braco IDRC's Dakar regional office brings together professionals of diverse origins who work along with the research teams from the region on different projects in the four main program areas of IDRC. In addition to this research work, the Dakar office also runs parallel activities such as exploring major evolution of trends in the region, developing new partnerships, disseminating information and communicating with development partners. Countries involved in IDRCs West Africa are: Benin, Burkina Faso, Cape Verde, Congo Brazzaville, Côte d'Ivoire, Gambia, Ghana, Guinea Bissau, Guinea Conakry, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo. IDRC is carrying out various CC related projects in west Africa- as shown in the table of collaborating projects – paragraph 49, table 4.
UNEP DGEF	a) UNEP –DGEF is one of the main implementing agencies of the GEF with and which supported the project to secure funding from the GEF. The role of UNEP DGEF is exhaustively articulated in Section 4 above.

SECTION 6: MONITORING AND EVALUATION PLAN

168. Standard UNEP monitoring and evaluation aspects will be implemented as follows**:**

a. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements) and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

b. The project M&E plan is consistent with the GEF M&E policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether

project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7.

c. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop.

d. Day-to-day project monitoring is the responsibility of the PMU but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

e. The PSC will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-DGEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

f. At the time of project approval 70% percent of baseline data is available. Baseline data gaps will be addressed during the first year of project implementation. A plan for collecting the necessary baseline data is presented in Appendix 5. The main aspects for which additional information are needed are baselines for individual land parcels for experimental and control land owners.

g. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the PIR. The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

h. A mid-term management review or evaluation will take place in June 2012 as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the special tracking tool developed in year one of this project, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 2.5 and section 5 of the project document). The PSC will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

i. An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard TOR for the terminal evaluation are included in Appendix 9. These will be adjusted to the special needs of the project.

j. A special tracking tool developed in year one of this project, developed to track effects of climate change on PAs will be used from Midterm onwards. This will be updated with use and will be made available to the GEF Secretariat along with the project PIR reports at midterm and end term intervals.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1 OVERALL PROJECT BUDGET

As shown in Appendix 1, the total budget of the increment amounts to US$**15,655,834.00**. This will be funded by a GEF contribution of US$ 3,536,363, and by a US$12,119,471contribution of non-GEF resources in the form of co-

7.2 PROJECT CO-FINANCING

The co-financing partners are as follows:

Cost to the GEF Trust Fund		3,536,363			23%
Co-financing partner	**Classification**	**Total**	**Cash**	**In-kind**	**%**
5 project countries	National government	2,700,000	200,000	2,500,000	22
IUCN PAPACO / Burkina Faso	International NGO	2,020,000	961,905	1,058,095	17
Durham University	University	516,634	166,634	350,000	4
DICE	University	1,065,430	800,000	265,430	9
UNEP-WCMC	UN agency	4,202,000	2,353,128	1,848,872	35
Hadley Centre	Government Institution	630,000	335,106	294,894	5
Fauna &Flora International	International NGO	735,407	600,000	135,407	6
Bird Life International	International NGO	250,000	125,000	125,000	2
Total		12,119,471	5,541,773	6,577,698	100%

7.3 PROJECT COST-EFFECTIVENESS:

169. This project will operate at a regional level bringing 5 countries to address similar PA issues simultaneously. The project will be cost efficient by producing replicable tools such as vulnerability assessment tools, adaptation models and conceptual frameworks for adaptation and methodologies for gap analysis for PAs. Cost effectiveness will also be realized by building capacities at regional level on PA management and Climate Change issues, - linking different initiatives in conservation, research, adaptation, Climate Change, and PA management. The gains from this investment will further be strengthened by leveraged funds from other similar initiatives in the region. The alternative of each country working on its own would be more expensive, time consuming and may not yield results in some of the countries that lack capacity.