



# Climate Change and Protected Areas in West Africa

CCPAWA

Changement Climatique  
et Aires Protégées  
en Afrique de l'Ouest

Project Overview  
Aperçu du projet



# Plan of the presentation

- UNEP-WCMC
- Climate change and protected areas
- The project
  - Aim
  - Map
  - 4 components
  - Timeline
  - Outputs
  - Organisation chart

# Plan de la presentation

- PNUE-WCMC
- Le changement climatique et les aires protégées
- Le projet
  - But
  - Cartes
  - 4 composantes
  - Chronologie du projet
  - Résultats attendus
  - Organigramme

# UNEP World Conservation Monitoring Centre

- ◆ **UNEP-WCMC:** The biodiversity arm of UNEP, Cambridge, UK
- ◆ **Mission:** “To evaluate and highlight the many values of biodiversity and put authoritative biodiversity knowledge at the centre of decision-making”
- ◆ **Type of Work:**
  - Conservation data analysis
  - Policy analysis
  - Private sector support
- ◆ **PNUE-WCMC:** La branche biodiversité du PNUE, Cambridge, GB
- ◆ **Mission:** “Evaluer et souligner les multiples valeurs de la biodiversité et mettre les connaissances sur la biodiversité au centre de la prise de décision”
- ◆ **Type de travaux:**
  - Analyse de données de conservation
  - Analyse de politiques
  - Support au secteur privé



# Protected Areas

- ◆ PAs: major tool in conserving species and ecosystems
- ◆ West Africa region: 6.3% of land area protected
- ◆ Rich biological heritage (diversity, endemism)
- ◆ Ecosystem services
- ◆ In some countries: data are in need of verification

# Les Aires Protégées

- ◆ APs: un outil majeur dans la conservation des espèces et des écosystèmes
- ◆ La région de l'Afrique de l'Ouest: 6.3% des terres protégées
- ◆ Un héritage biologique riche (diversité, endémisme)
- ◆ Services écosystémiques
- ◆ Dans certains pays: données ayant besoin d'être actualisées

# Climate Change

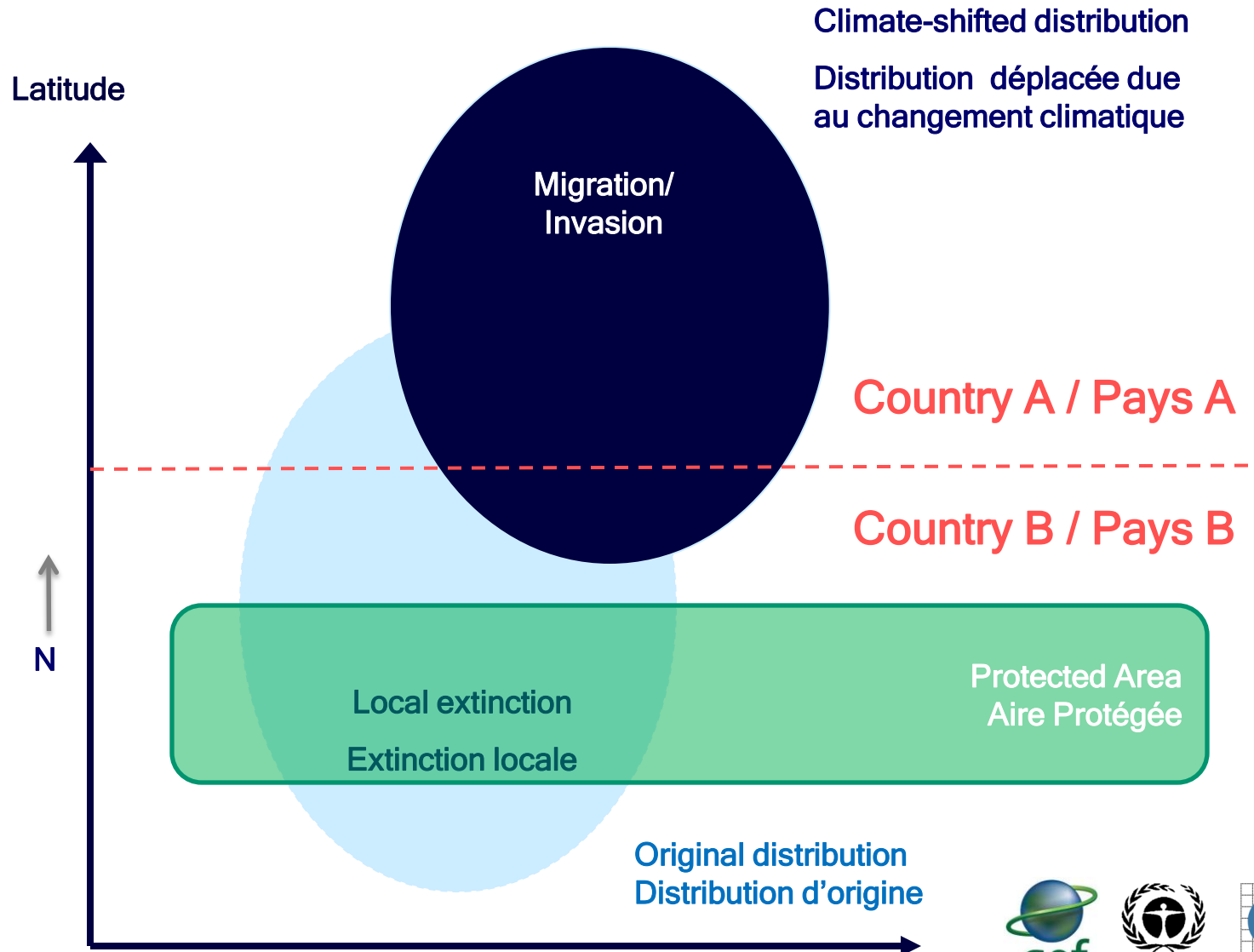
- ◆ Expected impacts:
  - Modification of precipitation
  - Change in temperature
  - Sea level rise
- ◆ In turn, this will affect:
  - Species and habitat distribution
  - Ecosystem composition
  - Human population distributions
- ◆ As a consequence, PAs and their ecosystem services are under threat

# Le changement climatique

- ◆ Impacts attendus:
  - Modification des précipitations
  - Changement des températures
  - Augmentation du niveau de la mer
- ◆ A son tour, cela affectera:
  - La distribution des espèces et des habitats
  - La composition des écosystèmes
  - Les populations humaines
- ◆ En conséquence, les APs et leurs services écosystémiques sont menacés

# Climate change impacts on biodiversity

## Impacts du changement climatique sur la biodiversité



Adapted from / Adapté d'après Cheung, 2009



# What is the aim of the project?

- a) IDENTIFY risks to PAs as a consequence of climate variability and change
- b) PLAN for adaptive measures that should be undertaken
- c) ENSURE that those risks are reduced to acceptable levels

# Quel est le but du projet?

- a) IDENTIFIER les risques pour les APs en conséquence de la variabilité et du changement climatique
- b) PLANIFIER des mesures adaptatives qui devront être mises en place
- c) S'ASSURER que ces risques sont réduits à des niveaux acceptables

# Project Characteristics

- ◆ The project relates to:
  - Climate change (CC) and PAs
  - Scientific tools and capacity building to use these tools
- ◆ Important characteristics:
  - Regional approach: 5 countries
  - Length of project : 5 years (2011-2015)
  - Total cost: \$15.6m
    - ◆ \$3.5m GEF
    - ◆ \$12.1m co-financing

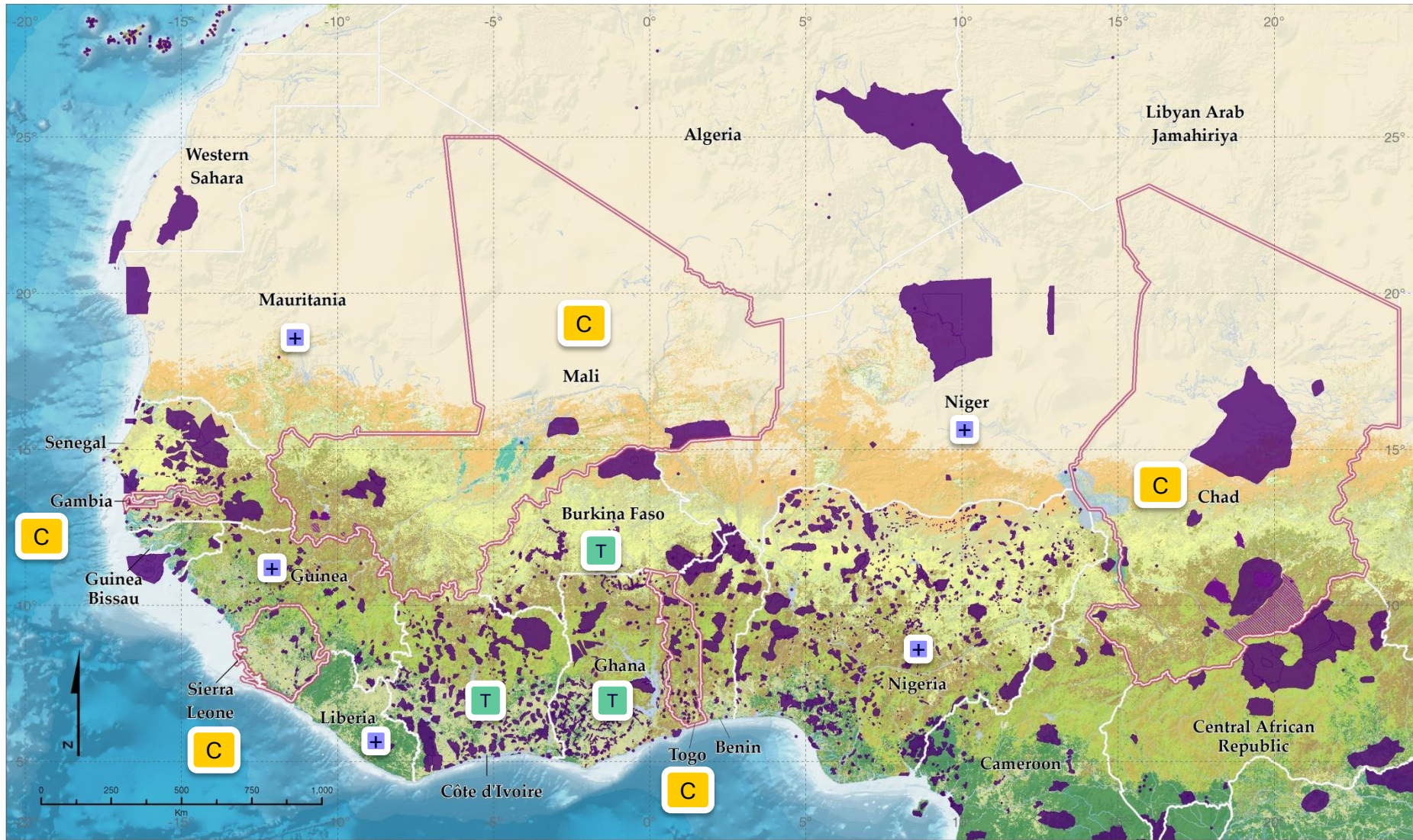
# Caractéristiques du projet

- ◆ Le projet a attrait:
  - Au changement climatique et aux APs
  - Aux outils scientifiques et au renforcement des capacités pour utiliser ces outils
- ◆ Caractéristiques importantes :
  - Une approche régionale: 5 pays
  - Durée du projet : 5 ans (2011-2015)
  - Cout total: \$15.6m
    - ◆ \$3.5m GEF
    - ◆ \$12.1m cofinancement



# Protected Areas within West Africa

## Les Aires Protégées en Afrique de l'Ouest



Protected Areas / Aires Protégées



WDPA



Non WDPA



Sources: World Database on Protected Areas (WDPA),  
UNEP-WCMC, December 2010  
Coordinate System: Geographic (WGS84)  
Map compiled by: UNEP-WCMC  
Date printed: January 2011  
Map code: REG\_PA-2

Contact email: [protectedareas@unep-wcmc.org](mailto:protectedareas@unep-wcmc.org)  
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# Project Components

## Composantes du projet

- C 1: Vulnerability analysis  
Analyse de vulnérabilité
- C 2: Ecological gap analysis  
Analyse des carences écologiques
- C 3: Policy support, pilot projects and training  
Renforcement des capacités et sensibilisation
- C 4: Communication, Monitoring and Evaluation  
Communication, Suivi et Evaluation

# C1 Vulnerability assessments and risk reduction strategies

## Analyses de la vulnérabilité et stratégies de réduction des risques

- ◆ Data review
  - ◆ National data collection
  - ◆ Climate change modeling
  - ◆ Vulnerability assessments of species, PAs, and also socio-economic vulnerability
- ◆ Révision des données
  - ◆ Collectes de données nationales
  - ◆ Modélisation du changement climatique
  - ◆ Evaluations de la vulnérabilité des espèces et des APs, et vulnérabilité socio-économique



## C2 Ecological gap analysis and spatial planning

### Analyse des carences écologique et planification spatiale

- ◆ Effect of CC on communities and PAs
  - ◆ PA coverage and connectivity for regionally important areas
  - ◆ Update the status of globally threatened species
  - ◆ Map legal and policy frameworks
  - ◆ Review resource management practices
- ◆ Effet du changement climatique sur les communautés et les aires protégées
  - ◆ Couverture et connectivité des aires d'importance régionale
  - ◆ Statut des espèces menacées
  - ◆ Cartographie des cadres juridiques et politiques
  - ◆ Révision des pratiques de gestion des ressources

## C3 Policy support, Pilot projects and training

### Soutien politique, projets pilotes et formations

- ◆ Training: 3 regional and 2 national workshops per country
- ◆ Pilot corridor management plans
- ◆ Support for policy implementation
- ◆ Long term monitoring system as part of PA management
- ◆ Formations: 3 ateliers régionaux et 2 ateliers nationaux par pays
- ◆ Programmes de gestion de corridors pilotes
- ◆ Soutien à la mise en place de mesures politiques
- ◆ Système de suivi à long terme dans le cadre de l'aménagement du territoire

## C4 Knowledge management, communication and M&E

### Gestion des connaissances, communication et S&E

- ◆ Development of a communication strategy for an efficient project implementation
  - ◆ Knowledge management: website and data portal
  - ◆ Regional framework for long term monitoring of the effects of CC on Pas
  - ◆ CC impact monitoring tool for individual PAs
- ◆ Développement d'une stratégie de communication régionale pour une mise en œuvre efficace du projet
  - ◆ Gestion des connaissances: site web et portail de données
  - ◆ Cadre régional pour le suivi à long terme des effets du CC sur les APs
  - ◆ Outil de suivi des impacts du CC sur les APs individuelles

# Progress

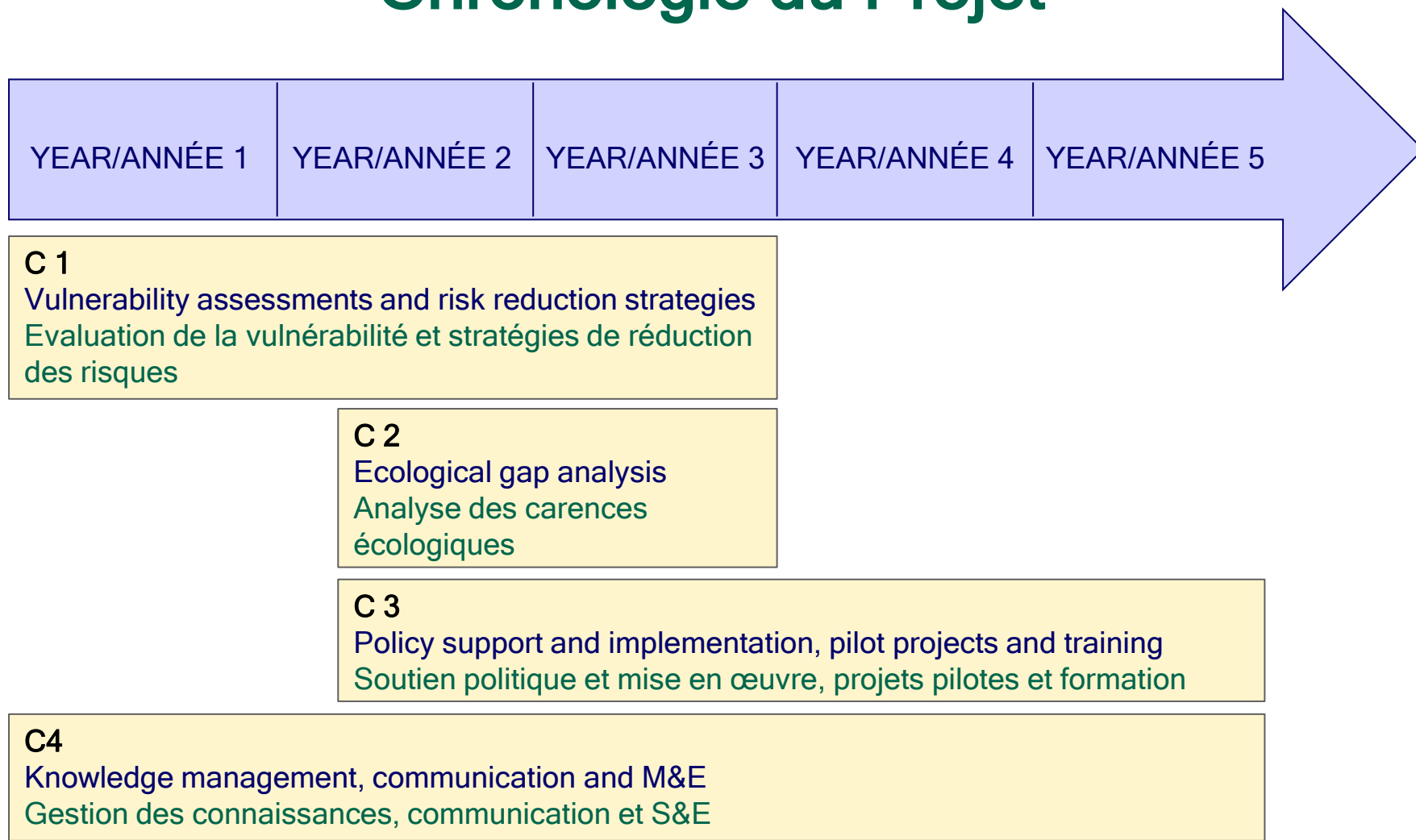
- ◆ Project Preparation Grant (PPG)  
*Completed*
- ◆ Full proposal approved by UNEP  
GEF *July 2010*
- ◆ Start implementation of full project  
*Now*
  - Inception meeting
  - Data review
  - National data collection
  - Climate change modelling
  - Communication strategy
  - Knowledge management  
(website)

# Progrès

- ◆ Phase préparatoire (PPG)  
*Complétée*
- ◆ Projet approuvé par PNUE FEM  
*Juillet 2010*
- ◆ Début de la mise en œuvre du projet  
*Maintenant*
  - Réunion de lancement
  - Révision des données
  - Collectes de données nationales
  - Modélisation du changement  
climatique
  - Stratégie de communication
  - Gestion des connaissances  
(site web)

# Project Timeline

## Chronologie du Projet





## Main outputs

- (1) Tools for assessing vulnerability of Protected Areas to climate change
- (2) Strategies to strengthen resilience of PAs to CC impacts
- (3) Capacity building for using these tools and strategies

## Principaux résultats attendus

- (1) Des **outils** pour évaluer la vulnérabilité des aires protégées au changement climatique
- (2) Des **stratégies** pour renforcer la résilience des APs aux impacts du CC
- (3) Le **renforcement des capacités** afin d'utiliser ces outils et stratégies

# Key partnerships

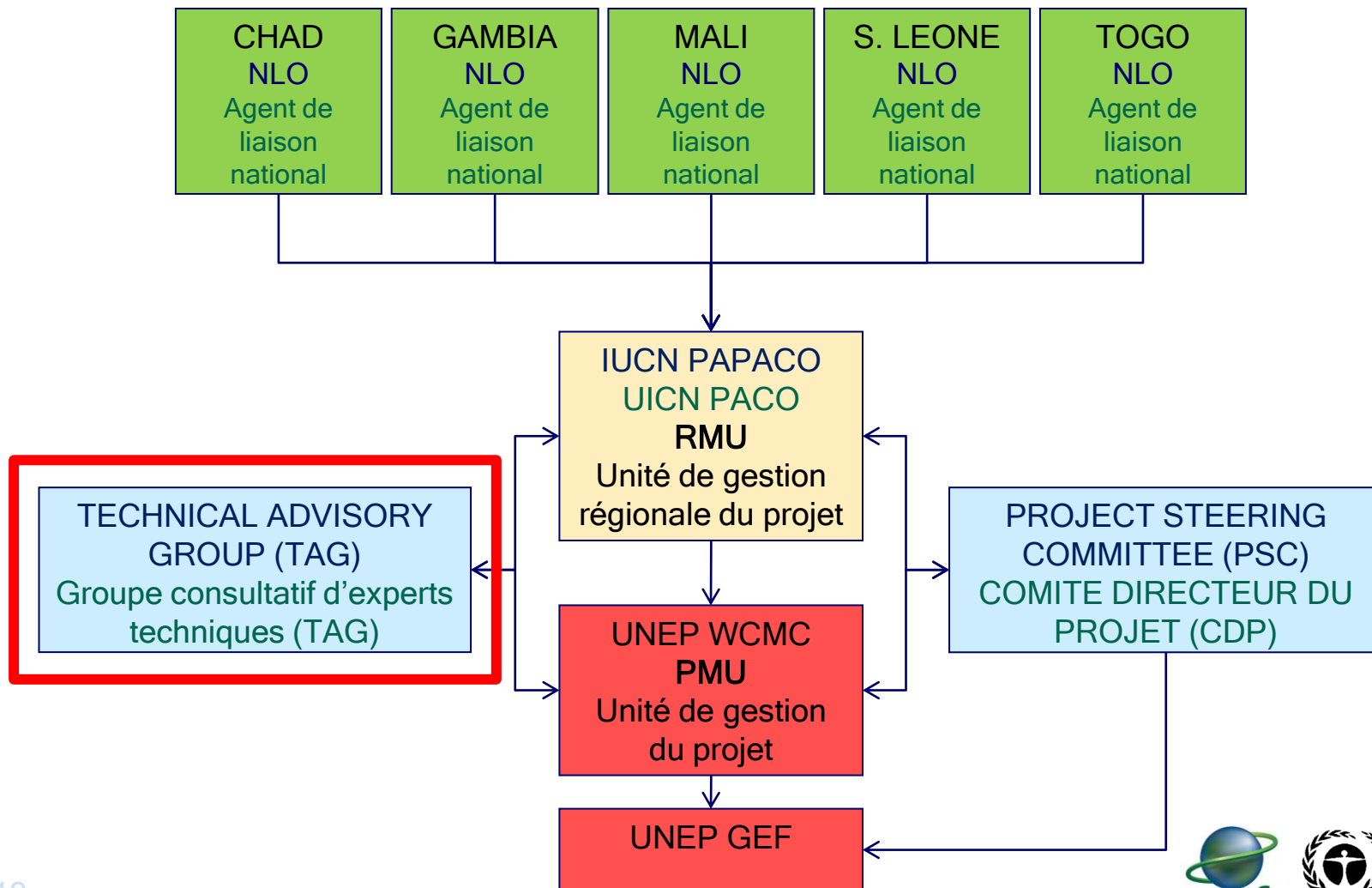
- ◆ National governments:
  - 5 core countries
  - At least 3 other countries
- ◆ IUCN
  - PAPACO (Burkina Faso)
  - Species Programme (GB)
- ◆ NGOs
  - FFI
  - Birdlife
- ◆ Academic institutions
  - Durham University
  - DICE
- ◆ Others
  - Hadley Centre
  - ?

# Partenaires principaux

- ◆ Gouvernements nationaux:
  - 5 pays principaux
  - Au moins 3 autres pays
- ◆ UICN
  - PACO (Burkina Faso)
  - Programme Espèces (GB)
- ◆ ONGs
  - FFI
  - Birdlife
- ◆ Institutions académiques
  - Université de Durham
  - DICE
- ◆ Autres
  - Hadley Centre
  - ?

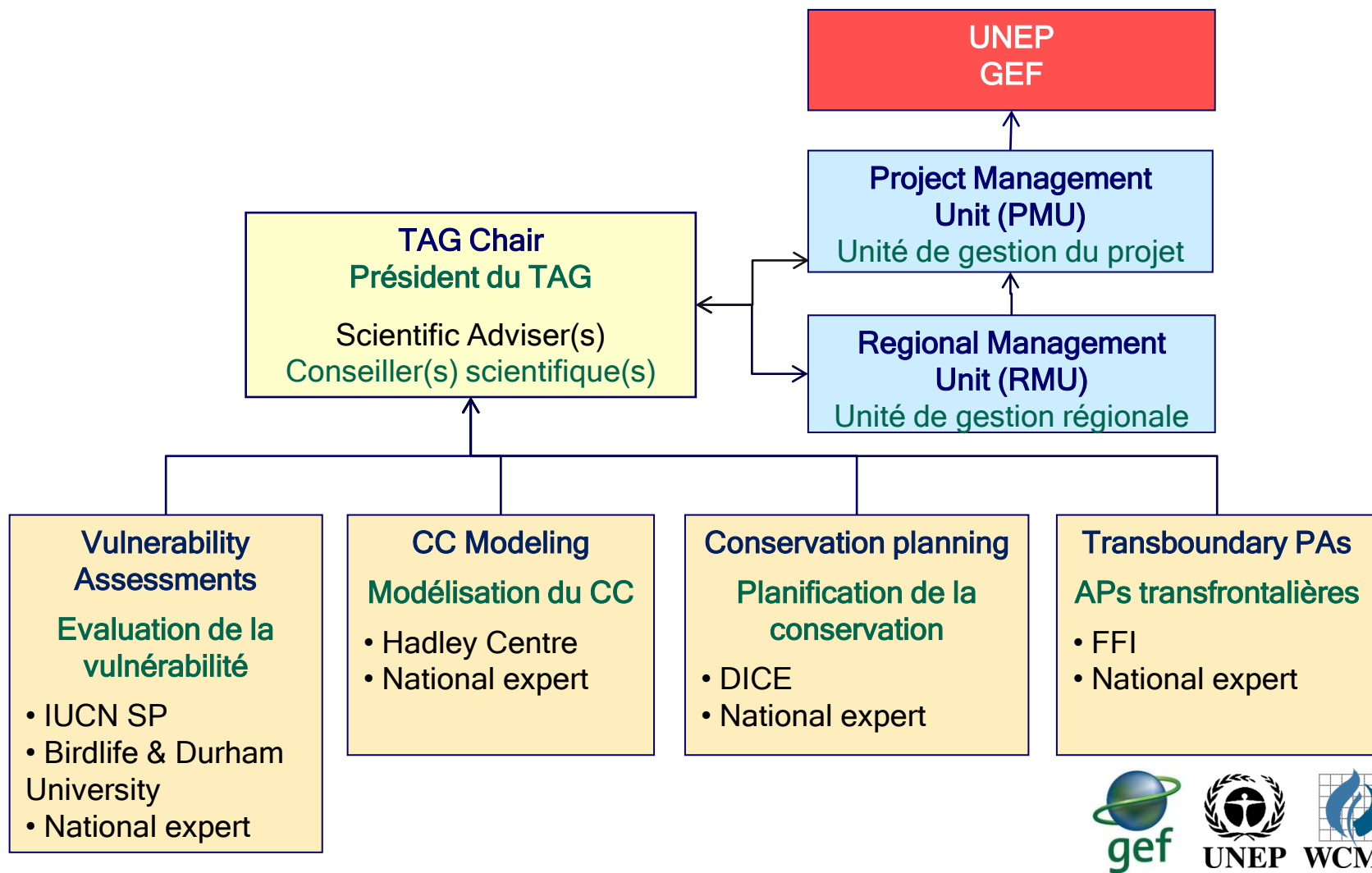
# Organisational Chart

## Organigramme



# Technical Advisory Group (TAG)

## Groupe consultatif d'experts techniques





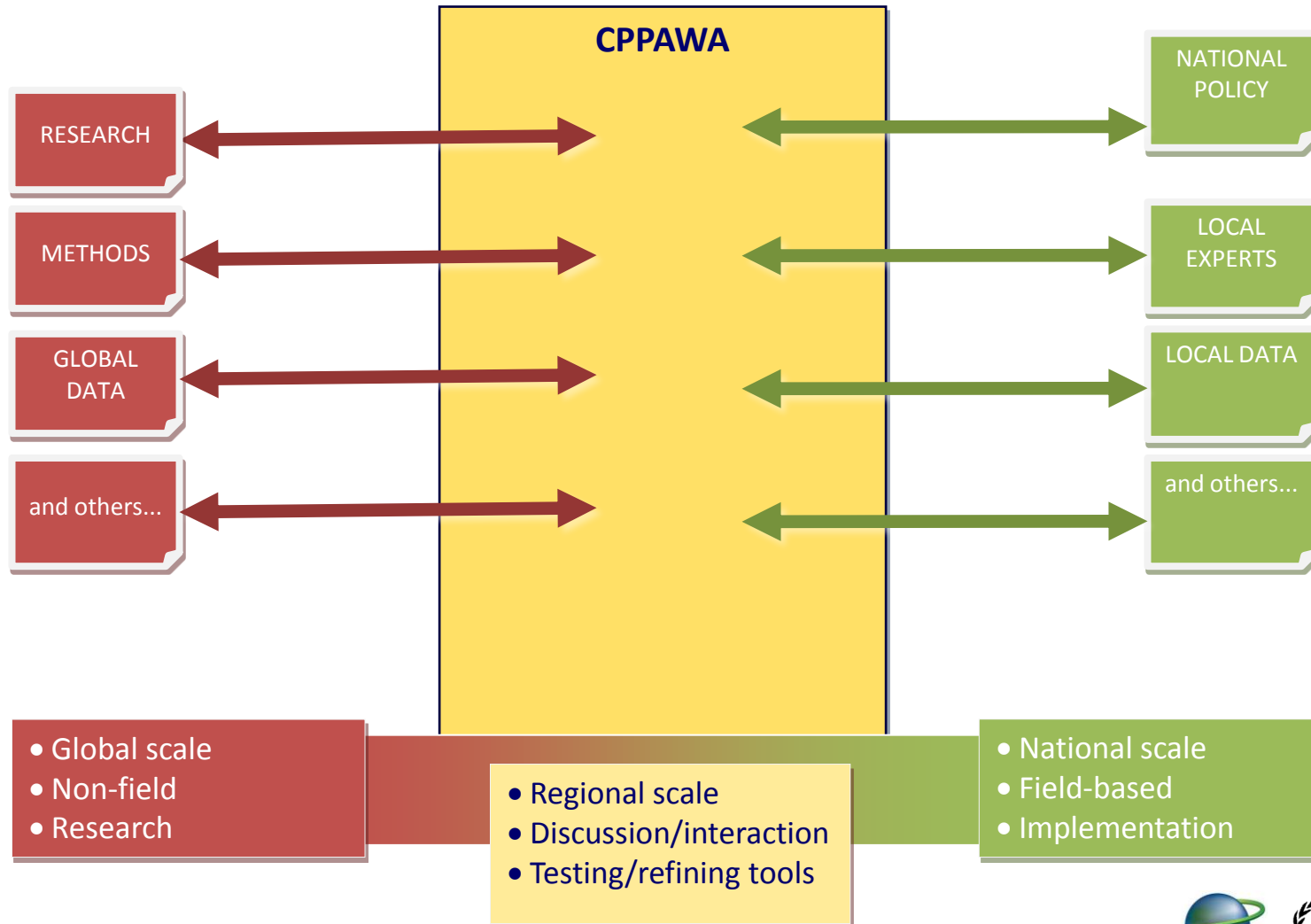


**A world where biodiversity counts**  
**Un monde où la biodiversité compte**

[www.unep-wcmc.org](http://www.unep-wcmc.org)

# Conceptual diagram

## Diagramme conceptuel



# Summary

- Science-based, regional-scale project in 5 core countries and wider participation from other countries
- Main outputs:
  - 1) Tools for assessing vulnerability of protected areas to climate change
  - 2) Strategies to strengthen resilience of PAs to CC impacts

# Résumé

- Science-based, regional-scale in 5 core countries and wider participation from other countries
- Principaux resultats attendus:
  - 1) Tools for assessing vulnerability of protected areas to climate change
  - 2) Strategies to strengthen resilience of PAs to CC impacts



## Climate-Proofing Protected Areas in West Africa Project (CPPAWA)



### Project Overview

The project will focus on developing science-based national and regional scale tools to support improved management of protected area systems in response to climate and other change impacts

## MLI\_PA-3: Protected Areas for the Republic of Mali

### National Protected Areas

#### IUCN Management Category

- II
- IV
- VI
- Not Known
- Proposed Protected Areas

### Internationally Protected Areas

#### Internationally recognized

- Wetlands of International Importance (Ramsar)
- World Heritage Convention (Natural, Mixed)
- UNESCO-MAB Biosphere Reserve

#### Cities

#### Rivers

#### Water Bodies

### Global Land Cover

- Irrigated croplands
- Rainfed croplands
- Mosaic Croplands/Vegetation
- Mosaic Vegetation/Croplands
- Closed/open broadleaved evergreen/semi-deciduous forest
- Closed broadleaved deciduous forest
- Open broadleaved deciduous forest
- Closed needleleaved evergreen forest
- Open needleleaved deciduous or evergreen forest
- Closed to open mixed broadleaved and needleleaved forest
- Mosaic Forest-Shrubland/Grassland
- Mosaic Grassland/Forest-Shrubland
- Closed to open shrubland
- Closed to open grassland
- Sparse vegetation
- Closed to open broadleaved forest regularly flooded
- Closed broadleaved forest permanently flooded
- Closed to open vegetation regularly flooded
- Artificial areas
- Bare areas



Coordinate system: Geographic (WGS84)

Map compiled by UNEP World Conservation Monitoring Centre (UNEP-WCMC)  
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## TCD\_PA 1: Protected Areas for the Republic of Chad

### National Protected Areas

#### IUCN Management Category

- II
- IV
- Proposed Protected Areas

### Internationally recognized

#### Internationally recognized

- Wetlands of International Importance (Ramsar)
- UNESCO-MAB Biosphere Reserve
- Cities
- Rivers
- Water Bodies

### Global Land Cover

- Irrigated croplands
- Rainfed croplands
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## GMB\_PA-2: Protected Areas for the Republic of Gambia

### National Protected Areas

#### IUCN Management Category

- II
- IV
- Not Known
- Proposed Protected Areas

### International Protected Areas

#### Internationally recognized

- Wetlands of International Importance (Ramsar)

#### Cities

#### Rivers

#### Water Bodies

### Global Land Cover

- Irrigated croplands
- Rainfed croplands
- Mosaic Croplands/Vegetation
- Mosaic Vegetation/Croplands
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# SLE\_PA-4: Protected Areas for the Republic of Sierra Leone

## National Protected Areas IUCN Management Category

- II
- IV
- VI
- Not Known
- Proposed Protected Areas

## International Protected Areas Internationally recognized

- Wetlands of International Importance (Ramsar)
- Cities
- Rivers
- Water Bodies

## Global Land Cover

- Irrigated croplands
- Rainfed croplands
- Mosaic Croplands/Vegetation
- Mosaic Vegetation/Croplands
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## Climate-Proofing Protected Areas in West Africa Project (CPPAWA)



### Project Overview

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## TGO\_PA-5: Protected Areas for the Togolese Republic

### National Protected Areas

#### IUCN Management Category

- IV
- Not Known
- Proposed Protected Areas

### Internationally Protected Areas

#### Internationally recognized

- Wetlands of International Importance (Ramsar)

- Cities

- Rivers

- Water Bodies

### Global Land Cover

- Irrigated croplands
- Rainfed croplands
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## Climate-Proofing Protected Areas in West Africa Project (CPPAWA)



### Project Overview

The project will focus on developing science-based national and regional scale tools to support improved management of protected area systems in response to climate and other change impacts



**BETTER UNDERSTANDING AND  
MANAGEMENT OF PROTECTED AREAS IN  
THE CONTEXT OF CLIMATE CHANGE**

- Identification of risks to PAs as a consequence of CC
- Planning for adaptive measures to minimise risks

Vulnerability to  
climate change  
assessments and  
risk reduction  
strategies

Gap analysis and  
spatial planning

- Training
- Pilot corridors  
and trans-  
boundary PAs
- Policy support

- Communication
- Knowledge  
Management
- Monitoring and  
Evaluation

Data  
collection

Climate  
modelling

Connectivity,  
species and  
community  
assessments

Review of  
management  
approaches

Monitoring  
tool to track  
future  
impacts

Guidelines  
on  
managing  
PAs