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ABBREVIATIONS AND ACRONYMS

BIOMAC	Réseau de Biodiversité Marine et Côtière / Network for Marine and Coastal Biodiversity
CCLME	Canary Current Large Marine Ecosystem
CNSHB	Centre National des Sciences Halieutiques de Boussoura
CRODT	Centre de Recherches Océanographiques Dakar-Thiaroye
CSRP	Commission Sous Régionale des Pêches
DAPLM	Direction des Aires Protégées et du Littoral Mauritanien
DEFCCS	Direction Eaux et Forêts, Chasse et Conservation des Sols
FIBA	Fondation International pour le Banc d'Arguin
IBAP	Institut de Biodiversité et les Aires Protégées
IMAO	Mangrove Initiative in West Africa
NACO	National Consultancy on Forestry Extension Service and Training
NFP	National Focal Point
NGO	Non Governmental Organization
PETROSEN	Petrole Senegal
PNBA	Banc d'Arguin National Park
UCAD	Cheikh Anta DIOP University
IUCN	World Conservation Union
UNESCO	United Nations Educational, Scientific and Cultural Organization
WAAME	West African Association for Marine Environment
WARO	West Africa Regional Office
WI	Wetlands International
WWF	World Wildlife Fund

SUMMARY

Project staffing and institutional cooperation

- **Project Staff Recruitment**

A Project Coordinator (Mr Mamadou Sow) and a Project Community Liaison Officer (Mr Richard Dacosta) have been recruited by IUCN and Wetlands International respectively. These two staff backed up by senior programme staff in the IUCN West Africa Regional Office and Wetlands International West Africa Office are responsible for the implementation of the project.

- **Partnership kick-off workshop**

The practical arrangements for the running of the project were defined during a workshop with participants from the IUCN and Wetlands International West Africa offices. These arrangements are described in a Memorandum for the implementation of the project. This Memorandum defines the mechanism of collaboration between IUCN and Wetlands International, on the one hand and between the Project and National Focal Points, on the other hand (see Appendix 1). The workshop also considered partnerships to be developed with other sub regional projects and the positioning of IMAO within the second phase of the PRCM.

National Level Engagement

- **Selection of National Focal Points**

Key institutions, their supervisory ministries and focal points therein have been identified and selected in each of the countries in the project region, along the West Africa Coast. These focal institutions and individuals will be critical linkages for the project in the coming years, ensuring free flow of information and guidance. Their activities began during the semester with the identification of national consultants for the baseline studies and engagement at the regional level through participation in a region workshop.

Establishment of Regional Information Baseline

- **Baseline studies**

A baseline of information on Ecology/Climatology, Socio-Economy, and Mapping to underpin transfer of community based knowledge and policy development has been established. Studies have been conducted by consultants, selected in consultation with national focal points. These have been subject to review and consolidation during national stakeholder workshops which included the key resource persons in each country. The baseline for Forestry and Policy, has been initiated under the supervision of IUCN in Senegal, the Gambia and Guinea Bissau. Reports are still in preparation in Mauritania, Guinea and Sierra Leone. National consolidation workshops are scheduled for the next semester.

Regional Launch of Project

- **Regional workshop**

The project has been formally launched through a regional workshop held from November 27 to 29, 2007 in Saly, Senegal. It gathered 81 participants representing the largest possible panel of actors involved in mangrove management; notably parliamentarians, administrators, partners of the PRCM, technicians and researchers, national NGOs, grass-roots professional organizations, industrialists and journalists.

- **Refinement of project aims and activities**

Discussions and consultations with stakeholders during the regional workshop have enabled refinement of the Project goals and activities for the coming period. This information is currently being assimilated into the project work plan for the coming years. The meeting shared experiences in the field of conservation and sustainable use of mangroves and reflected on the major issues related to the management of mangrove resources within the PRCM region. Consultations with the actors defined a road map for the activities to be undertaken as part of the development of the regional Charter, the strategy and the action plan for an integrated management of the mangrove.

- **Raised awareness**

Undoubtedly, the regional workshop raised awareness on the many roles of and threats to mangroves in the region amongst stakeholders present at the meeting and the general public and has acted as an important mechanism for motivation and engagement. The solemn commitments made by parliamentarians during the closing session provide evidence of the will for engagement, at the highest level, of the participants. Good media coverage to a large audience in Senegal and the region ensured heightened awareness of the problems of mangrove management in the sub region. The workshop highlighted that sectoral approaches to mangrove management and use lead to a degradation of the multiple ecological functions and economic values of the mangrove. Furthermore it showed that a systemic approach, within a sub regional framework is important to addressing emerging problems, notably climate changes, transnational networks and polluting extractive mining industries. The participants realised that balance development in this area depends on the synergy of the different actions as well as sustainable methods for exploitation and conservation of mangroves.

INTRODUCTION

In March 2007, the World Conservation Union IUCN (West Africa Office – WARO) signed a memorandum of understanding with Wetlands International for the implementation of the project entitled Initiative Mangrove en Afrique de l'Ouest¹ – IMAO. The memorandum was the result of the agreement of the MAVA Foundation to finance the said project for a term of three years starting from 2007.

The project seeks to improve the livelihood and security conditions of mangrove dependent communities from Mauritania to Sierra Leone by:

- a. Raising awareness of the status and value of mangroves;
- b. Facilitating efforts aimed at restoring mangroves and
- c. Improving and harmonizing mangrove management policies through a negotiated process.

The main partners in implementing this project are IUCN West Africa Regional Office (WARO) and Wetlands International (Africa Programme) within the framework of the Regional Coastal and Marine Conservation Programme (PRCM).

The project contract was signed at the end of 2006 with the intention that it would start in 2007. Once contract negotiations between Wetlands International Headquarters and the local partners had been finalised and staff recruited for the two key positions, the start date became effectively the beginning of July 2007 following a kick-off workshop at the end of June between the main partners.

Kick-off workshop

In order to establish the working arrangements between the two main organisations cooperating on this project a kick-off workshop was held on 28-29 June at IUCN Dakar. This meeting gathered the Project Coordinator Mr Mamadou Sow, the Community Liaison Officer Mr Richard Dacosta with senior technical staff Mr. Martin N'GANJE of IUCN West Africa Regional Office, Ms Mame Dagou DIOP of Wetlands International Africa Programme and Mr. Matar DIOUF from IUCN Senegal.

¹ Mangrove Initiative in West Africa

The practical arrangements for the running of the project were adopted. They are recorded in the Implementation Agreement of the IMAO project (see Appendix 1). They relate essentially to:

- A collaboration mechanism between IUCN and Wetlands International, Africa Programme on the one hand and
- On the other hand between the National Focal Points of the Project.

The partnerships with other mangrove programmes, notably CCLME were also addressed as were the links with the different programmes of the PRCM especially within the BIOMAC network. It has also been recommended to aim to integrate the project into the second phase of the PRCM.

Work planning to the end of the year was undertaken and a Gantt Chart prepared to the end of the year (See Table 1 below). The plan was that this reporting period would act as an inception period to engage with partners and stakeholders in the region and undertake baseline studies to collect and analyse information on mangrove ecosystems. This would enable the rationale of the project to be adjusted and refined where necessary and the baseline information on which the project's interventions would be based to be collated and subjected to analysis. This period culminated in the regional workshop that took place in November 2007. The Gantt Chart for planning is shown on the following page and is based on the log frame included in the project contract.

Table 1: 2007 Gantt Chart MANGROVE INITIATIVE PROJECT	2007					PERSON INVOLVED
	A	S	O	N	D	
Activities						
Compile a map-based assessment of all available information on mangrove locations and values						
Consult regional, national institutions						Focal points, national and regional partners
collection existing data, satellite images and resources						Focal points, national and regional partners
Develop GIS platform						GIS expert
Gap analysis and development of thematical maps						Focal points, GIS expert
Collate all immediately available information on community locations in the PRCM region where best (and worst) practices are known						
Develop ToR, select consultants and sign contracts						Focal points and consultants
collection existing information						Focal points and consultants
Information analysis						Focal points and consultants
Create a register of contacts and potential mentors						Focal points and consultants
Undertake specific studies on mangrove economy and ecology through stakeholders						
Develop ToR, select consultants and sign contracts						Liaison Officer
Undertake studies						Focal points and consultants
Compilation of data and reporting						Focal points and consultants
Report review and finalisation						Focal points and consultants
Strengthening of national and regional policies Inform. of national institutions, partners and selection of the FP per country						
Drafting of ToR, selection of consultants						Project Coordinator
Field works including :						
Analysis of the institutional framework						Focal Point and Consultants
Analysis of the biophysical framework						Focal Point and Consultants
Status of mangrove resources						Focal Point and Consultants
Analysis of the socio-economic framework						Focal Point and Consultants
National workshops						

stock-taking and gap analysis workshop						
Design Stocktaking Workshop & identify location						Project team
Select & invite participants						Project team
organise pre workshop						Project team
Hold workshop						Project team
Edit, translate, print & disseminate workshop report						Project team
Bi annual reports (technical and financial)						
Prepare, print & disseminate					***	Project Coordinator

Selection of national focal points

The project aims to conserve and restore mangrove ecosystems and mangrove-based livelihoods in coastal West Africa. It will be necessary to secure a strong baseline of environmental, socio-economic and policy information to underpin and guide the related community-level field interventions and policy work. Success will therefore rely heavily on the Project's ability to engage with stakeholders in each of the countries along the West Coast mangrove zone. IUCN and Wetlands International decided that the best way to ensure strong and prolonged engagement would be through the engagement of national focal point organisations to work through and secure involvement of key stakeholders in civil society and government.

During the kick-off workshop, an institution responsible for mangrove conservation and management was identified in each country of the sub-region to play a focal role (see the Table below). For each of these a National Focal Point (NFP) was selected who will be the contact person for the project (See Table 2 below). He / she is commissioned, among others, to organize meetings, inform the authorities and other actors about the activities of the project and report to the project coordination. For example, during the start of the baseline studies, the NFPs have contributed in the selection of consultants, the consolidation of the reports submitted by them and facilitated the organization of national workshops as well as the identification and mobilization of participants in the regional workshop.

The Ministers supervising these institutions have also been contacted by the Mission Head of IUCN in Senegal to raise their awareness of the IMAO initiative and the requested role of their institutions. This tactic has already paid dividends in ensuring a strong representation of each country at the recent regional workshop and strong participation at each of the national workshops that have taken place. However, despite the commitment and good will of Focal Points to support the project, their efficiency has in some cases been limited. In budget planning for the reporting period the positions were not provided with strong support and this has proved to be restrictive. During the current period of planning, the Project partners are reviewing this issue and how best it can be resolved.

Country	Institution	Name of the Focal Point	Contacts
Senegal	Direction des Eaux et Forêts, Chasse et Conservation des Sols (DEFCCS)	Mame Mory DIAGNE	mamemory@yahoo.fr Tel : 00221 33 831 01 01 Mob : 00221 77 641 42 85
Mauritania	Direction des Aires Protégées et du Littoral Mauritanien	Mohamed Lémine Ould Ahmédou Chérif	melcherif2010@yahoo.fr mob : 00222 630 27 86
Gambia	Forests Division	Muhamed JAITEH	modikaba2002@yahoo.com Tel : 00220 987 96 95 Mob : 00220 439 17 48
Guinea Bissau	Institut de la Biodiversité et des Aires Protégées (IBAP)	Cristina Schwarz DA SILVA	Schwarz.cristina@gmail.com Mob : 00245 672 81 65
Guinea	Direction Nationale des Eaux et Forêts	Ibrahima BANGOURA	iboubang2003@yahoo.fr Mob : 00224 64 22 85 69
Sierra Leone	Forests Division	Mohamed HASSAN	hassanrmohamed@yahoo.com Mob : 00232 766 873 82

Table 2: List of National Focal Points

I. BASELINE STUDIES

In line with the work plan, the baseline studies have been initiated under the following themes: Ecology/Climatology, Socio economy, Mapping, Forestry and policy. These studies are a comprehensive inventory of all the information available about mangroves in each country synthesised at a regional level. They are essential to meeting the overall objective of the project to conserve and restore mangrove ecosystems and mangrove-based livelihoods in coastal West Africa. As well as providing an important information resource for mangrove conservation and management planning they will underpin the activities of the project to support mangrove ecosystem restoration and regional policy development. The Project has therefore engaged at the national level in each of the sub-regional countries to collect information and synthesise it.

The work collecting information and data held in documentation centres, research institutions, development projects and public services has been undertaken by junior consultants. These pieces of information have then been processed by senior regional consultants so as to produce regional syntheses.

During field work in the six countries and the national workshops in Forestry and Policy (Mauritania, Guinea Conakry and Sierra Leone) scheduled during the semester January-June 2008, these studies will be completed and updated so as to better focus the activities of the project. These additional studies will be financed by the remaining budget of the baseline studies and carried out by Senior Consultants who will deliver the final thematic reports

Table 3 The number of studies carried out by topic in the different countries (at the time of reporting).

Country	Ecology/ Climate	Socio-economy	Mapping	Forestry/ Policy	Total
Mauritania	1	1	1	1	4
Senegal	1	1	1		3
Gambia	1	1	1		3
Guinea Bissau	1	1	1		3
Guinea	1	1	1	1	4
Sierra Leone	1	1	1	1	4
Total	6	6	6	3	21

The first three themes have been addressed by junior Consultants within a short period of time. Consequently, the project Coordination has undertaken additional work to improve the quality of the documents. Following finalisation of the reports, national workshops have been organised to ensure greater consolidation and ensure buy-in to their results from national stakeholders. Overall, 24 reports have been produced so far as part of the Baseline study activities. . A short overview of each of the main regional thematic reports is provided below to give a flavour of the work being carried out.

1. Ecology / Climatology Study

Mangrove extent and status

The objective of this study is to collect all the information available about the biophysical framework and analyze the behaviour of the ecosystem with regard to the effects of climate change. It was necessary to make a summary of the adjustment strategies applied by the different actors involved in the mangrove conservation process. This analysis of the ecology and climate aspects responds to two requirements of the project document:

- A register at regional level compiled of community best practices and key stakeholder representatives
- Gap analysis identifying national and regional supporting actions required

To date descriptions of the mangrove resource in each of the countries (including status, areal cover, species composition) has been compiled, the main processes driving their formation and maintenance described and the main threats to them identified. Table 4 below provides a summary of some of the information collected per country.

Country	Mangrove area, km²	Number of mangrove species	Estimated change between 1980 and 2006	% space classified in protected areas
Mauritania	2,09	3	Regeneration	62.5
Senegal	1 287	7	Moderate degradation.	42.5
Gambia	581	7	Slight degradation	3.5
Guinea-Bissau	2 999	6	Regeneration	35.5
Guinea	2039	7	Moderate degradation	0.2
Sierra Leone	1052	6	Moderate degradation	14.5

Table 4 : Summary of Mangrove Status in the Project area

In general the reports of different countries have indicated some decline or degradation of the mangrove forests. The West African coastal countries generally accommodate some of the highest population densities in the region. Within these countries the coastal area often has the highest density it is this area that is occupied by mangroves and is also under intensive use by industry. This combined with rapid growth, high poverty, low development indices, poor natural resources governance and unregulated access to coastal resources calls for urgent, holistic and coordinated action in the region to ensure the sustainable management of these much threatened resources.

The main factors contributing to changes in mangrove cover that have been identified in the study include:

- Population growth
- Economic activities
- Political change and trends
- Climate change
- Changes in upstream habitat

Some of the main threats driven by these factors include:

- Agriculture and aquaculture (rice, shrimp, fish)
- Unsustainable gathering, fishing and hunting
- Construction works
- Deforestation/Desertification
- Fuel wood and charcoal
- Sewage and pollution
- Land based sources of pollution
- Waste disposal
- Sand mining
- Urban and tourism development

It should be realized that almost all the above threats are either directly or indirectly associated with anthropogenic activities. It is therefore obvious that people are the cause and the victims.

The work of the consultants, the consolidation of the Coordination and the inputs of national workshops have enabled to make an inventory of the mangrove in the different countries (Appendix 2)

Climate Change and Mangroves

The draft report also contains a number of interesting and important conclusions regarding the status of climate change in the region and its likely effects on mangrove ecosystems and the services they provide. It highlights that climate change in West Africa is already underway and that it is one of the most vulnerable regions of the world. For instance most of

the countries have experienced a marked decline of about 25% rainfall since 1968-1972, and most of the water courses can be observed to be experiencing a remarkable decrease in average discharge. Over the past 40 - 50 years, high climate variability in particular drastic and unreliable rainfalls has been associated with increased desertification and more and more food insecurity. As a result associated impacts in the mangrove area are likely to increase in the future and a change in mangrove distribution patterns is likely as decreased freshwater and associated changes in coastal water quality make an impact.

In addition to the changes in rainfall, climate change affects all atmospheric variables such as atmospheric pressure, temperatures, evaporation, hydrological regimes, sea level, magnitude and frequency of storms and carbon dioxide concentration. Combining this information with the trend of decline in mangrove cover related to anthropogenic impacts makes it obvious that the mangrove ecosystems are very threatened. Despite this bleak assessment there are definitely both positive and negative impacts of climate change on mangroves, the degree of which will depend on local and global variability. The balance between anthropogenic pressures, sedimentation and erosion as well as the rate of sea level rise will be crucial as to how mangroves respond to climate change. It is also worth noting that the report emphasises that despite this, studies that scientifically associate the consequences of climate change to mangrove loss are still not sufficiently available.

The report also shows that it is generally accepted that the carbon content of the mangrove forest soils is more than 5 times higher than the carbon content of tropical rainforests soils. Therefore, positive management, conservation and rehabilitation could contribute substantially to the sequestration of carbon dioxide.

Strategies to preserve the mangrove ecosystems of the zone

The draft report has also identified strategies and related activities to address the preservation of mangroves. In general these make the rural dwellers the main actors with respect to managing the mangrove resources. Participatory approaches are required in order to involve local communities in planning, decision-making, organization and administrative processes. Socio-cultural, economic, and ecological transformation processes do not perform linearly. Therefore, intervention planning and implementation must be flexible, iterative, and process-oriented. This is because the long-term sustainability of the approach will involve minimal investments and adoption of appropriate low-cost technologies and techniques for both the forest protection and development.

The regional report has defined a framework (Appendix 3) indicating a set of activities to be undertaken. Summarised, the main strategies are:

- Inventory of all relevant components of the mangrove ecosystem in each country
- To protect, rehabilitate and manage designated mangrove forest ecosystems and wildlife
- To manage accordingly areas required for eco-tourism and recreation
- To identify means for promotion of social awareness and acceptance of forests and wildlife as important elements for socio-economic development
- To manage adjacent upland areas as buffer zones
- To plan and promote other integrated utilization of mangrove ecosystems and protected areas for livelihood
- To improve the capacity of the concerned local communities

These activities have been formulated based on the outcomes of the work sessions of the Ecology/Climate Group during the regional workshop.

2. Work of the consultants in Socio economy

This study will provide a gap analysis of knowledge regarding the socio-economy of mangrove areas and the identification of key host communities that will be suitable for engagement later on in the development of experience transfer. It will be particularly important in terms of orientating demonstration of rehabilitation at the community level. To achieve these aims, the knowledge of the ethnic make-up of the project area is just as important as understanding their relation with natural resources. Likewise, the review of the impacts of man's activities provides information about the types of actions to be undertaken, the strategies put in place both by public powers and local populations. The report is currently in draft format and should be completed by the end of January 2008. Below are a few of the preliminary conclusions from this report:

▪ The socio-demographic framework of the area,

The coastal zone in the region is disproportionately important as a zone of habitation. This places coastal mangrove resources under particular pressure. In Guinea, the population of Low Guinea is estimated at 2.570.000 inhabitants in 1995. In Senegal, in 2002, seven out of ten were living in the coastal area. In Guinea Bissau, the coast concentrates 65% of the population. In the Gambia, the coastal population is estimated at 1.400.000 inhabitants, while in Sierra Leone it is equal to 5.000.000.

The population of these different countries is made up of many ethnic groups which have social values deeply rooted in the use and conservation of natural resources. The mangrove ecosystems are associated with cultural and human traditions of communities living with the mangrove. Therefore it is important in many instances to take into account local knowledge in planning for the sustainable management of mangrove ecosystems. For instance, in Guinea, formerly inhabitants living along the coast had like anywhere else in Guinea a civilization living in a sustainable way with the mangrove systems resulting in its protection. In the Tristao islands, for instance, the prohibitions related to holy forests are known by all the communities and everyone complies strictly with them. However, since the 1960s this relationship has changed and different threats have been brought to bear which have forced local communities into over-exploitation or changed long-established patterns and intensities of use.

- **The different types of uses of the mangrove and the impact of these activities on the ecosystem**

The riparian populations of the West African Seaboard draw substantial revenues from the exploitation of wood, fishing, rice farming, the extraction of salt and other activities, notably the collection of honey and medicinal plants. The most significant anthropological threats to mangrove areas are:

- **Clearing for Agriculture (rice) and aquaculture (shrimp)** in Sierra Leone, Guinea, Guinea Bissau, the Gambia, Senegal (Casamance)
- **Fish smoking** for sub-regional markets, driven by traders capable of mobilizing huge financial resources to operate several artisanal fishing fleets.
- **Saliculture (Guinea, Sierra Leone, Guinea Bissau)** Cooked salt, which requires large quantities of mangrove wood, is a lucrative traditional activity.
- **Shell-fish calcification (Gambia, Senegal)** may be compared to that of cooked salt in the south. However we have little data on this sector.
- **Urban domestic needs (Freetown, Conakry, Kamsar, Bissau, Banjul.)**In these cities, mangrove wood is used for domestic purposes as well as for building.
- **Rural domestic needs**

- **Sectoral economic and political instruments which have an impact on the resource and the management methods**

The macroeconomic framework, sectoral policies, and regulations governing management of coastal areas as well as the engagements of countries at an international level are highlighted in the report. The legal framework for mangrove management is scattered in multiple rules and regulations in most of the countries except Guinea Bissau which has prepared a mangrove law. The policy strategies are defined but at this level the topical issue is how to incorporate the management of mangrove ecosystems and coastal areas in development plans.

- **Relevant mechanisms to facilitate mangrove restoration**

The key to successful sustainable mangrove conservation, protection and management is that policy must be designed and implemented with local populations by focusing on their concerns. The incorporation of traditional rules, customs, local knowledge and education to environment in terms of management increases further the chances of success of the project. The probability of success will be increased if the project includes income generating activities. Under these conditions the constraints hampering the adoption of innovative alternative technologies for the exploitation and management of mangrove ecosystems are reduced.

Given the major impact of activities consuming mangrove wood, it is important to understand the different businesses. The role of the project will be to encourage the different countries to undertake the necessary studies. The outcomes of these studies will be essential for the policy negotiations and action plans at a regional level for the conservation of the mangroves covered by the PRCM.

3. Mapping and Geographic Information System

This study will compile a GIS map-based assessment of information on mangrove extent and values and uses (sustainable and unsustainable), such as the exploitation of firewood and fibre, of molluscs and crustaceans, fish and coastal values (related to tourism). A Consultant has been engaged to locate all the mangrove regions known and the associated communities on the basis of the information provided by the member countries of the PRCM. To date a regional report is available and the GIS booklet is in process of elaboration with completion scheduled for the beginning of the first quarter 2008. These products will serve as decision-support tools both for the benefit of the project and other institutions operating in the field of conservation of the West Africa coastal area.

The information is being compiled on a GIS platform for easy interface, access and use. The required geographic information relates to vegetation, the land use in and around mangrove areas, the local topography, the hydrographic network, the administrative density and division (region, department, province, rural community...), and the protection status of the mangrove area (Park, reserve, marine area, community space...). The Tables and Figures below summarise some of the information resources being accessed to compile the GIS.

Table 5 Different baseline maps of Senegal

Scale	Title of the map	Reference	Year of publication	Source	Projection / Ellipsoid
1.1.000.000^e 1/500.000^e	Road map of Senegal	-	1993	DTGC	Conic Projection Lambert Projection ; Clarke Ellipsoid 1866
	Road and tourist map of Senegal	-	1994	DTGC	
1/200 000^e	Saint-Louis	ND-28-II	1957	IGN – France	UTM 28 or 29 ; Clarke 1880
	Louga		1990		
	Thies	ND-28-XIV	2000		
	Kaffrine		1970		
	Sokone	ND-28-VIII			
	Nioro du Rip				
Ziguinchor					
1/50 000^e	Saint-Louis	NE-28-II	1991	DTGC	UTM 28 ; Clarke 1880
	Thies	ND-21-XIV			
	Sokone	ND-28-VIII3d			
	Ziguinchor	ND-28-II			
	Gandiole	1342 IV	1950	American Military Project	
	Saint-Louis	1343 III			
	Ndiago	1343 IV			

Table 6 Thematic Maps of Guinea

Scale	Title of the map	Sheet/Area	Year of conception	Author
1/4.000.000 ^e	Geological map	French Guinea	1943	BRGM
1/2.000.000 ^e	West Africa geological map	Guinea	1960	
	Synthetic geological map		1984	PONSARD (J. F.)
1/1.000.000 ^e	Pedological survey	Guinea	1996	SENASOL
	Land-use map		1996	
	Agro-climactic areas map		2001	
	Benchmark of observation marks of the pedological survey map		2001	
	Geological map		1983	BRGM
	Priority dam sites		?	DNH
	1/500.000 ^e		Census map of mineral resources of Guinea	
1/500.000 ^e	Potentialities and possibilities to revive the forestry activity		1989	BDPA-SCET AGRI
	Inventory and soil classification map		1970's	SENASOL
	Geological map		1960's	
1/200.000 ^e	Geological survey	?	?	IGN - JICA
	Geological map	Guinea	1960	
1/50.000 ^e	Identification of watersheds		1990's	DNH
?	Land occupation map of the coast - Tristao – Rio Nunez - Boke – Tougnifily - Cap Verga – Koba - Koba – Soumbouya - Soumbouya - Salatouk	?	?	?

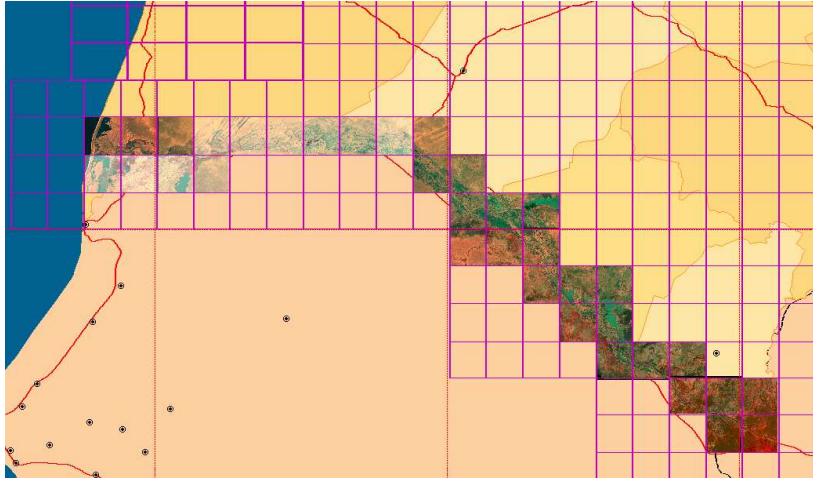


Figure 1 Coverage Landsat, 1999 in the south of Mauritania

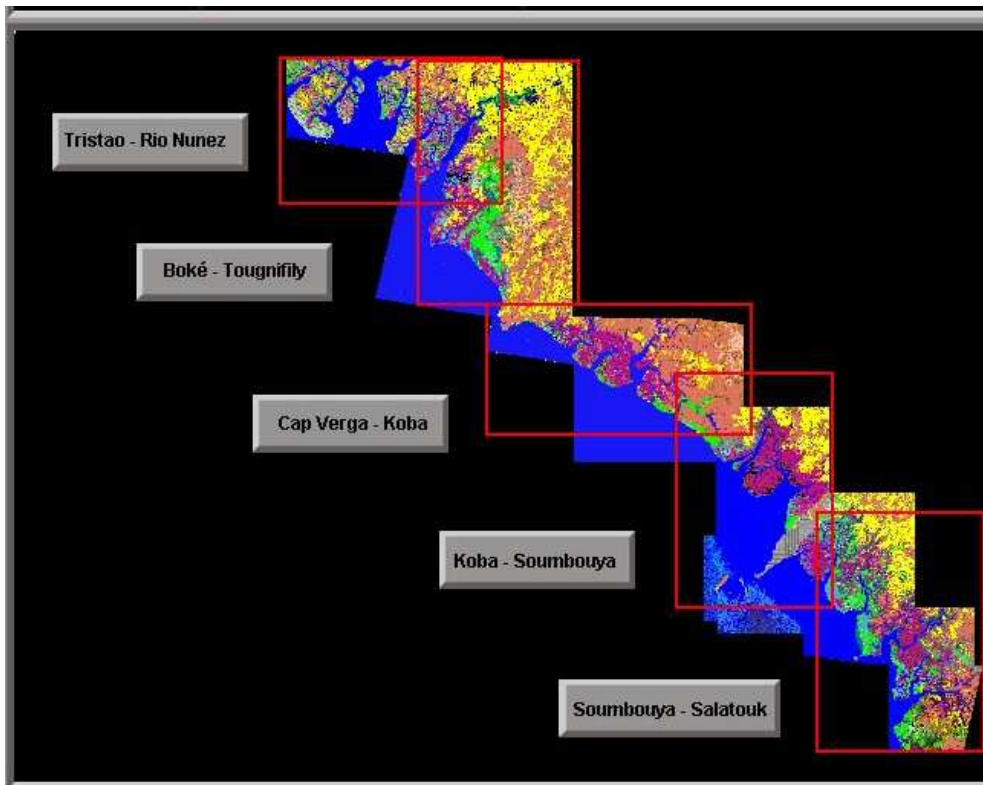


Figure 2 Overall plan of land occupation maps based on the pictures Spot of the coast of Guinea

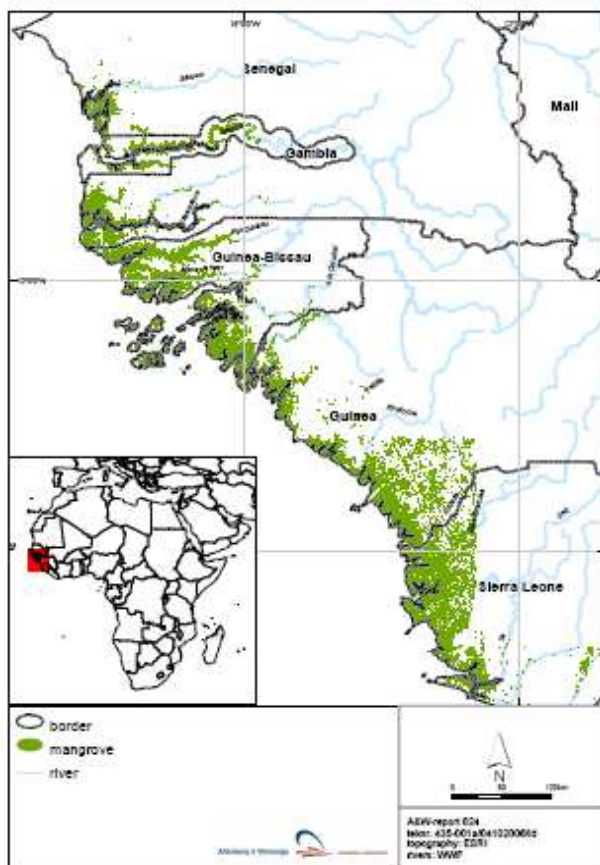


Figure 3 Spatial extension of the mangrove, Wetlands International (2006)

4. Forestry and policy

This study is currently underway and will be critical to underpinning the policy work and regional charter planned later on in the project. Consultants are addressing the biophysical framework of mangrove formations, analyzing the socio-economic, institutional and regulatory framework of the management of ecosystems in mangrove areas and collecting the proposals and strategic recommendations of the different stakeholders. These data are critical in order to understand the status of the mangrove as a forest formation being subject to economic exploitation. The knowledge of the traditional and/or official regulations existing in each country must serve as basis for the negotiation of the future regional charter. On the basis of this information and data, a document will be drafted on the conservation status of the mangrove of the sub region and strategies as well as the axes of intervention for a better management of this ecosystem.

Although the studies are not completed (the validation workshops have not yet been held), we notice that the tendency to degradation of the forest is obvious even if the conservation practices are different. In Mauritania, all the mangroves are located in protected areas. In

Guinea, there is a considerable conservation effort through the land development plan. On the contrary, in Sierra Leone, there are almost no conservation initiatives undertaken, the access to resources being essentially governed by the traditional land law.

II. VALIDATION WORKSHOPS BY COUNTRY

With the support of NFPs, the Project Coordination has organized national workshops which have been successful both in terms of diversity of the participants and quality of their contributions. These have been important in terms of reviewing the national level components of the synthesis reports and enhancing buy-in. A lot of technical and methodological information has been collected and data updated.

Country	Date	Number of participants
Mauritania	04 October 2007	22
Senegal	02 October 2007	23
Gambia	18 October 2007	20
Guinea Bissau	11 October 2007	24
Guinea	27 September 2007	15
Sierra Leone	16 October 2007	

NB : In Sierra Leone, it was not possible to organize a workshop, only information meetings and contacts with the authorities were feasible.

Table 7: Summary of participants attending National Workshops

Profile of the participants:

- Administration officials (Heads of Cabinets, Technical advisors and General Managers)
- Government Technicians
- Technicians of mangrove conservation projects
- Academics and research institutions
- Local NGOs
- Representatives of local populations

In addition to the contributions to the national level reports, the Project Coordinator has established contacts with all the actors who are likely to become involved later in the activities of the Project. Among them:

- The Banc d'Arguin National Park (PNBA) and Nature Mauritania,
- The National Observatory of the Republic of Guinea, the National Centre for Halieutic Sciences of Boussoura (CNSHB) which manages the Protected Marine Area of Tristao located in a mangrove zone,
- The NGO WAAME working for the conservation of the mangrove of the Saloum Delta in Senegal,
- The Warden of the National Park of Cacheu in Guinea Bissau.

At the end of the workshops, the reports were consolidated and put at the disposal of the Senior Consultants for the production of regional syntheses. This process will be repeated for

the research on forestry / policy in 2008 in Senegal, the Gambia and Guinea Bissau addressing the studies that have already been undertaken there.



Family picture, National workshop of Senegal



National workshop of Mauritania, opening ceremony



National workshop of Guinea Bissau, group works



National workshop of the Gambia, plenary session

III. REGIONAL WORKSHOP

The regional workshop is a key event in the project's implementation designed to create awareness, contribute to the Project's technical progress and provide an opportunity to check and refine the Project's aims and activities in consultation with stakeholders.

This regional workshop took place on the 27, 28 and 29 of November at the Hotel Savana, Saly Portudal, Senegal. The objectives were to:

1. Share experiences in the field of conservation and sustainable use of the mangrove;
2. Update the major issues related to the management of mangrove resources within the PRCM region;
3. Produce a database of stakeholders operating in the mangrove at a national and regional level;
4. Define with the actors a road map for the activities to be undertaken as part of the development of the regional Charter, of the strategy and action plan for the integrated management of the mangrove.

1. Structure

The workshop was divided into four main sessions (see Appendix 4 agenda of the workshop):

1. Introduction of the Project and of regional studies: Ecology, Socio Economy, Legal, Political, Institutional and Organizational aspects
2. Local initiatives in each country ;
3. Group work on the ecological, socio economic and political aspects (the terms of reference of the group works are attached in Appendix 5);
4. Synthesis of the sessions.

Aware of the key role of the actors in the implementation of the project, IUCN and Wetlands International decided to gather the largest possible panel of mangrove actors:

- Parliamentarians : Members of the Network of Green Parliamentarians of the relevant countries;
- Administrators: Policy-makers, State technicians;
- Researchers : CRODT, UNESCO chair of UCAD, project Bilan Prospectif/IRD, UNESCO/BREDA;
- NGO : WWF, FIBA, CSRP, WAAME, NACO;
- Users: Fishermen, Women processing sea products;
- Base community organizations : Farmers' Federation of Low Guinea;
- Communicators : TV, radio, newspapers;
- Industrialists: PETROSEN, Petrole Mauritania.

Institutions	Number
Parliamentarians	7
Administrators	2
NGOs partners of the PRCM	3
State Technicians	19
Researchers	9
National NGOs	6
Representatives of Users	5
Communicators	15
Industrialists	2
IUCN/WI	12
Civil Protection	1
TOTAL	81

Table 8: Breakdown of participants at the Regional Workshop

2. Achievements

Undoubtedly, the Saly Portudal meeting has promoted and raised awareness on all the issues related to mangrove conservation in the region. The workshop has highlighted the systemic approach, the need for multi-stakeholder engagement and a regional approach with regard to the emerging problems (climate change, transnational channels, polluting mining industries). The participants are aware of the fact that the balance of this area depends on the synergy of the different actions as well as the methods for the exploitation and conservation of the mangrove. The solemn commitment of parliaments during the closing session is proof of the will for engagement, at the highest level, of the participants (See Appendix 6 for the speech made by Mr. Djibo Leyti Kâ, State Minister, Minister of the Environment, Nature Protection, Retention Basins and Artificial Lakes)

In addition, the workshop has enabled a large panel of mangrove actors to be assembled and to exchange experiences, share information and explore areas of collaboration. For example:

- The NGO WAAME proposes to IMAO to participate in their evaluation of forestry activities in mangrove areas in Senegal and the Gambia;
- After an introduction of their current or future activities, projects and programmes, the CRSP was challenged about its potential participation in initiatives aimed at reducing the impact of fish smoking on mangrove wood.

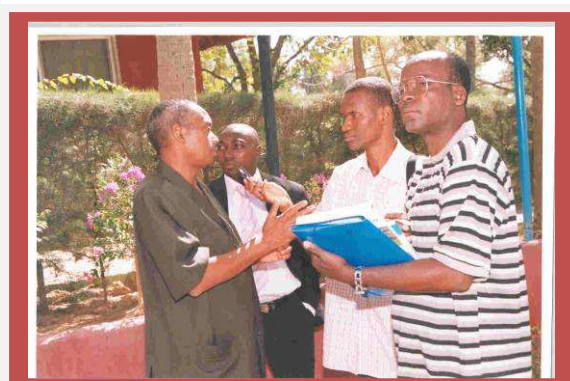
During the debates, notably the group work, exchanges defined a very broad spectrum of issues related to integrated management of the coastal and marine area. The debates encompassed the overall problems of conservation of the marine and coastal area illustrating that the mangroves are at the heart of these problematics. In addition many broader issues were addressed. For instance, with regard to climate change, the need for improved equipping and number of weather stations and the collection of meteorological data; likewise, it has been suggested to IMAO to update and produce detailed maps. This shows that despite emphasising the project's role, scope and budget participants have many and broad needs and hope this project can support these! The challenge for the project now is to manage these high expectations whilst assisting the stakeholders to take significant steps towards them. IUCN and Wetland International are now working on the revision and finalisation of work plans to the end of the project that will track this course.

3. Awareness and good media coverage

The workshop provided the occasion for the issue of mangrove conservation to be publicised. The meeting was closely followed by the media and a number of articles and broadcasts highlighted the event and its issues.



Final plenary session



IMAO Coordination with the Senegalese press

Below is a list of some of the headlines from the Senegalese press (See Appendix 7 for a full translation of one of these articles):

- Le Soleil: West Africa: "Towards a transboundary management of the mangrove";
- Matin: "Mangrove management in West Africa : towards an integrated regional agreement";
- Sud Quotidien: "Debate on the West African mangrove";
- Le Quotidien: "Mangrove management : Regional mobilization for a coordinated management ";

- Walfadjri: “To minimize the risks of mangrove degradation, six countries join together”;
- Agence de Presse Senegalaise: “The experts at the bedside of the mangrove”.

The radio and TV channels also thoroughly covered the event, notably Sud FM, Walf FM, Walf TV, RST1, RDV and Canal Info.

IV. FINANCIAL REPORT

Summary

Expenditure for 2007 was less than expected. Wetlands International received an advance of €227.269 and total expenditure until November reached €112.549. This was well within expectations for Year 1 as detailed in Attachment A to the Contract with MAVA.

Under spend was significant in many budget lines including staff positions, costs related to surveys and studies. This was related to the period of work that technical activities had been possible. Following the start-up period (which entailed contracting between Wetlands International Headquarters, Wetlands International West Africa Office and IUCN West Africa Regional Office together with recruitment of project staff) project technical activities got underway in the middle of 2007. Progress over this period has been in line with expectations according to the work-planning but it means that in Year 1 activities completed and related expenditure incurred were less than planned. Work-planning for 2008 and the remainder of the project will address the consequent compression of the workplan and a revised cash-flow related to this.

WETLANDS INTERNATIONAL (WI) / WORLD CONSERVATION UNION (IUCN)
Consolidated Financial report Mangrove Initiative Project
May to November 2007
Donor : MAVA Foundation

13-12-2007

Budget Line	Budget 2007 EUR	Expenditures 2007 EUR	Remaining Budget EUR
1. Workshops			
1.1 1st regional stocktating workshop	55,000	37,406	17,594
1.2 Three national workshops to review outcomes of studies on economics & policy @5000 each	0	0	
1.3 National action plan implementation Workshops in 3 countries @5000 per workshop	0	0	
2. Studies and Surveys			
2.1 Mangrove economy & livelihoods	15,000	3,583	11,417
2.2 Mangrove ecology, climate & biodiversity	20,000	6,326	13,674
2.3 Mangrove policy	15,000	9,147	5,853

3. Consultations & Negotiations			
3.1 Negotiating, training in rehabilitation	0	0	
3.2 local stakeholder travel & subsistence	8,333	4,991	3,342
4. Coordination & Operations			
4.1 Coordinator	48,333	20,277	28,056
4.2 Community liaison officer	17,280	4,305	12,975
4.3 Staff time	6,132	5,661	471
4.4 Vehicle hire + chauffeur cost	4,000	2,381	1,619
4.5 Payments for fields services (guides, translators, films and mentoring agreements)	8,000	380	7,620
4.6 Communication and awareness	5,000	2,575	2,425
4.7 Air travels & perdiems coordination & advocacy	5,000	4,516	484
4.8 Office equipment & software	1,667	2,720	-1,053
5. Monitoring, communication & evaluation			
5.1 Monitoring & evaluation of activities (year 2/ year 3)	0	0	0
5.2 Production of reports, translation, multiplication	2,667	429	2,238
Sub-totals	211,412	104,697	106,715
6. Overheads			
Overheads (7,5%)	15,856	7,852	8,004
Total Général en EUROS:	227,268	112,549	114,719

V. PRIORITIES FOR PROJECT IMPLEMENTATION IN 2008

Priorities for 2008

During the first quarter of 2008, the following are considered to be the priorities:

- Production of a document synthesizing the baseline studies of the regional workshop with the remainder of the budget line allocated to baseline studies;
- Organization of national workshops in Forestry and Policy in Mauritania, Guinea and Sierra Leone;
- Kick-off of field activities for the dissemination of good conservation practices
- Advocacy among the different actors for the start of studies on economic businesses (fish smoking, salt, shell-fish calcination) of which negative impact on mangrove forests is proven.

All these activities require support from Focal Points and the involvement of other resource persons in each country.

Network engagement and development

The implementation of all these activities has enabled evaluation of challenges that project management must overcome, most notably in the field. In particular, the mobilization of all the actors to be involved for a good running of the project in the different countries requires more human resources than a single National Focal Point. In this respect, the Project will be more effective if it can count on a panel of national experts covering all the themes linked to the conservation and sustainable use of mangrove resources. In each country, the Coordination has proposed to resort to formalized services in the fields of ecology, forestry, agronomy, halieutics, socio economy, without forgetting the political, legislative and legal aspects.

This initiative aims at promoting the emergence of a network of partners of the project in each country. Indeed, the priorities for the year to come are: on the one hand the dissemination of good management practices identified during the baseline studies and on the other hand, the start of negotiations for the regional charter. To be effective, these activities must take into account all the local specificities and build on the actors who understand and back the project.

Delay in implementation

Activities in 2007 did not begin as early as planned. Contracting between partners and recruitment of staff took longer than expected and introduced delays into the work plan. Technical implementation of the Project began effectively in mid-2007. Once started, activities have been implemented at the rate expected in the original proposal. However, coupled with the slow start, this means that progress at the end of year 1 is not as far as expected. This has been discussed with partners and work-planning for 2008 will take this into account.

Workplanning

In addition to these technical priorities, the project sees finalising a workplan for 2008 and a summary workplan for 2009 a high priority to ensure that the project is well implemented in the coming year and beyond. A meeting of the project team members (IUCN, Wetlands International) will be held in January 2008 to evaluate the workplan and necessary budget readjustments. As part of this the project coordination team will reviewing the results of the regional workshop and feeding these into planning. Currently this workplan is not yet available to be shared in full with MAVVA, However, a short summary is tabulated (Table 9) below of the activities to date and planned for 2008 against the activity and indicator descriptions contained in the annex to the contract with MAVVA. A full version of the workplan for 2008 can be shared with MAVVA once it is available, should this be required.

Table 9: SUMMARY STATUS OF THE PROJECT AND ACTIVITIES SCHEDULED IN 2008

Results	Indicators of success / outputs	Activities	Achievements	2007		2008			
				3	4	1	2	3	4
1. Map-based assessment of information on mangrove extent and values	<ul style="list-style-type: none"> GIS system populated with baseline mangrove ecosystem, values and community information Report providing a summary of baseline information for each country 	1.1 Compile a map-based assessment of all available information on mangrove locations and values	Compilation of documents						
			Elaboration of the booklet in progress						
2. A register at regional level compiled of community best practices and key stakeholder representatives	<ul style="list-style-type: none"> Knowledge base of practices, livelihood dependencies, impediments to conservation and wise use, mangrove communities Register of key communities and focal points for participation in further activities 	2.1 Collate all immediately available information on community locations in the PRCM region where best (and worst) practices are known	Available in country reports and regional syntheses						
		2.2 Create a register of contacts and potential mentors of best practices from these communities	Register of Contacts Done To be completed during the first quarter						
3. Gap analysis identifying national and regional supporting actions required	<ul style="list-style-type: none"> Report on mangrove economy Report on mangrove ecology and climate Report on mangrove policy, legal, regulatory and institutional frameworks Map based knowledge base describing current state of the art / knowledge on mangrove ecosystem, values and community information Priorities for action based on analysis of baseline information and stakeholder consultation / contribution. 	3.1 Undertake specific studies on mangrove economy and ecology, through stakeholders	OK Synthesis document to be produced. Complementary studies to be undertaken						
		3.2 Undertake a regional mangrove stock-taking and gap analysis workshop to identify national and regional priorities for technical, financial and policy support towards community-based action	Done						
		3.3 Select host communities for further development of experience transfer	Activity scheduled in the first quarter of 2008						
4. Actions for mangrove ecosystem restoration supported and linked with livelihood improvements at key sites in each target country	<ul style="list-style-type: none"> Key mangrove actions defined and agreed at community level Local community capacity to implement actions established Fundraising team and plan established 	4.1 Engage negotiations and demonstrative rehabilitation training with key mangrove communities							
		4.2 Develop small scale projects with mangrove communities demonstrating practical Action Plan implementation							

	<ul style="list-style-type: none"> Resource mobilisation undertaken with major bilateral, regional and international donors 	4.3 Develop fundraising for implementation of the mangrove Action Plan							
6. National policy is strengthened to provide support for community actions	<ul style="list-style-type: none"> Policy proposals for national governments 	6.1 Develop country-specific policy proposals to recommend to government, to enable relevant agencies to strengthen statutory support for the required actions							

APPENDICES

Appendix 1: Memorandum for the Implementation of the Project

1. Introduction

In March 2007, the World Conservation Union (West Africa Office –WARO) signed a contract with Wetlands International for the implementation of the project entitled, “Mangrove Initiative in West Africa” – IMAO. The contract was the result of the agreement of MAVA Foundation to finance the said project for a term of three years starting from 2007.

The project seeks to improve the livelihood and security conditions of mangrove dependent communities from Mauritania to Sierra Leone through a) raising awareness on the status and value of mangroves, b) facilitating efforts aimed at restoring mangroves and c) improving and harmonizing mangrove management policies through a negotiated process.

The main partners in charge of the implementation of this project are UICN WARO and Wetlands International (Africa Program) under the Regional Coastal and Marine Conservation Program (PRCM). The strategies and following activities will be performed by the project, notably:

Strategy 1 :

Development of a knowledge base on the values and ecological as well as management status of mangrove ecosystems

1. Map evaluation of the information on the mangrove as regards its extent and value,
2. A register maintained at a regional level containing the best community practices and the representatives of key partners,
3. An analysis identifying the required initiatives to support national and regional actions.

Strategy 2 :

Regional transfer of community-based knowledge and provision of incentives for the sound mangrove management

4. Actions for the restoration of the mangrove ecosystem are supported and associated with the improvement of the well-being of the populations in the key sites of target countries

Strategy 3 :

Strengthening of national and regional policies as well as action plans

5. The key partners of the mangrove are engaged in the formulation of a regional Action Plan to strengthen and extend community actions,
6. The national policy is strengthened to support community actions,
7. The political agreement at a regional level is formulated and approved through a mediation process of the PRCM.

The aim of this memorandum is to specify the roles and responsibilities of the partners (they include the main partners as well as national focal points of the project and the consultants) towards a common understanding and a harmonized implementation of the objectives of the project.

2. Overall coordination of the project

The project will be managed by the Project Coordinator (PC) in the UICN office in Dakar. He will be supported by a liaison officer based in Wetlands International. The PC will be in charge of the daily coordination of the activities of the project in the target countries, that is to say, Mauritania, Senegal, Gambia, Sierra Leone, Guinea Bissau and Guinea.

This coordination will be performed through the regular contact with focal points identified within national institutions, as follows :

Mauritania : Direction des Aires Protégées et du Littoral ;

Senegal : Direction des Eaux et Forêts ;
Gambia : Water and Forests Division ;
Guinea Bissau : Institut de la Biodiversité et des Aires Protégées ;
Guinea : Direction Nationale des Eaux et Forêts ;
Sierra Leone : Water and Forests Division.

The focal point (FP) is the contact person of the project in the target countries. S/he is in charge, among others, of the organization of meetings, to inform the authorities and actors about the activities of the project and report to the project coordination.

The FP will work closely with the technical Focal Points of UICN and Wetlands International in this project:

For IUCN :
Matar DIOUF
Matar.diouf@iucn.org

For Wetlands International:
Mame DAGOU DIOP
dagouwet@orange.sn

According to the importance and level of implication of the actors, the mails will be copied to the members of the project team who are:

- i. Mamadou Sow (Project Coordinator), mamadou.sow@iucn.org
- ii. El-Hadji Issa Sylla (Regional Rep Wetlands International. West Africa); issawet@sentoo.sn
- iii. Chris Baker, Focal Point, Wetlands International, email : Chris.baker@wetlands.org
- iv. Ahmed Senhoury, PRCM : Ahmed.Senhoury@iucn.org
- v. Martin Nganje, IUCN : martin.nganje@iucn.org
- vi. Richard Dacosta ; dacostawet@gmail.com
- vii. Emma Greatrix : emmagreatrix@yahoo.co.uk
- viii. Mathieu Ducrocq : mathieu.ducrocq@iucn.org

3. Sharing of information and knowledge management

Any information produced by the project will bear the logo of the PRCM as well as the logos of the two main partners of the project (UICN and Wetlands International) and the logo of the project donor that is to say MAVA Foundation. This information will be publicly available in a timely and transparent way. More particularly, all the partners of the project will try to optimize the information flow between them through the project coordinator (PC).

The PC will ensure a proper flow of information between UICN, Wetlands International, the Secretariat of the PRCM and other partners of the project.

The design of a web page for the project is planned. This will be the main site to keep the information about the project. All the outputs of the project (reports, pictures, etc.) will be uploaded in the server of the web page. The design and maintenance of the web page will be a joint and harmonious work between the communication officers of UICN and Wetlands International in West Africa with the PRCM.

The implementing partners of the project and the institutions identified as focal points are encouraged to provide information in the format indicated in the website (web page), according to the request of the Project Coordinator.

4. Coordination of field activities

The field activities should be done in a coordinated and harmonious way.

5. Performance agreements and payment program

The terms of reference (tor) of the consultants and focal point institutions will be negotiated through a transparent consultation process between UICN and Wetlands International. Although the main implementing partners (UICN and Wetlands International) have specific activities they supervise. It will be useful for them to approve mutually the tor as a sign of solidarity and harmony in the implementation of the project. Such an expression of solidarity prevailed during the recruitment of the PC.

The performance agreements specify, in the semester report, the performance/outcomes/outputs expected from the partner, the focal point, the consultant ... as well as completion or success indicators of the task. A sample of the performance agreement is attached in the Appendix 2 of this Memorandum.

The performance agreements will be used as a tool to conduct the internal evaluations of the project. They are directly linked to the payment program of the partners, consultants and focal points of the project.

A failure to complete the agreed tasks on a timely basis and comply with quality requirements indicated in the performance agreement may delay payments. So, all the partners are encouraged to inform the PC of factors which are likely to affect the timely performance of the agreed tasks so that corrective actions are taken. The persisting failure to deliver on agreed tasks because of the subcontractors may lead to the suspension of contracts.

6. Financial accountability

The contracts with partners (consultants) will explain clearly the details of each task. The donor expects a full justification with receipts of any expense incurred during the performance of the tasks specified in the contract. So, the implementing partners (consultants) are required to submit, if need be, financial reports.

7. Reporting

The implementing partners of the project will produce semester reports if need be according to the template proposed by Wetlands International. All the receipts for the expenses incurred should be provided with the financial report.

The PC is in charge of the production of consolidated reports on the basis of the reports submitted by the focal points/consultants/implementing partners :

1. Progress report on the project per semester (including financial details) ;
2. Technical semester reports (these are evaluations, especially scientific ones)
3. Annual operational plans
4. End of project report
5. Other ad hoc reports requested by UICN or Wetlands International.

The PC must be aware of the deadlines and format for the submission of the different reports.

7.1 Technical Reports

The technical status reports recorded by the project will be drafted according to a semester program. The first status report on the project is planned for November 20, 2007. A monitoring report will also be produced according to a quarterly program in line with the format in Appendix 5.

The technical reports (except the monitoring reports of the project) will be drafted in English with the following items ;

- A summary page wrapping up the main items of the report ;

- Precisions about the outcomes and outputs of the project with regard to the objectives, resources and methodologies engaged, this in relation with the logical framework of the project ;
- Precisions about the main achievements of the project, the obstacles faced and how the project plans to overcome them.
- Recommendations and conclusion.

All the outcomes of the project (of the consultants...) will be analyzed for their consistency and quality by the PC and finally by the Focal Points of UICN and Wetlands International in charge of this project.

7.2 Financial Reports

One part of the technical semester report will be dedicated to purely financial items. The financial report will mention the expenses engaged through contracts, pro forma invoices and receipts. An electronic version of the financial version will be forwarded to the PC by Wetlands International.

8. Staff time

The time invested by UICN and Wetlands International staff in the performance of the activities of this project must be justified pursuant to the procedures of each institution.

9. Workshops and trainings

The participants to workshops and training sessions should be selected in consultation with the main partners of this project (IUCN, Wetlands International and PRCM) as well as with the focal point institutions and the donor (if necessary). The partner/consultant in charge of the organization of the workshop/training will prepare a preliminary list of participants and submit it to the PC and the main partners of this project for review and remarks.

At the end of the training, the partner/consultant who has conducted the training will make an evaluation to check if the expectations of the trainees have been met. The outcomes of these evaluations will be included in the training report with suggestions/remarks for the improvement of future training sessions.

10. National consultants / experts

The following principles should be discussed and agreed by the main partners :

It is not generally recommended to hire consultants among the staff of the main implementing partners. However, this may happen as a last resort. In this case, the main partners of the project must agree on that.

All the consultants will deal with their own insurance. No consultant will be insured by undertaking a work related to this project or against the loss of personal belongings.

11. Per diem

The per diem rates should be discussed and harmonized between the main partners of this project taking into account the dominant practices in the target countries of the project, in accordance with the existing procedures in each institution.

12. Procurement of equipment

The purchases of material or equipment under this project will be subject to the existing procedures in each institution.

The pro forma invoices forwarded will be communicated to UICN and / or Wetlands International which will activate in return the required disbursement to make the purchases.

Before the end of the project, the partners will propose the arrangements to be made with regard to the continuous or future use of the material and equipment purchased with the funds of MAVVA.

13. Monitoring and evaluation

The main partners will agree on the way of undertaking the internal evaluation of the project.

Appendix 2 : Country by Country Summary of the Consolidated Mangrove Inventory

MAURITANIA

The mangroves cover the sites of the Banc d'Arguin in the north and the Low delta of the River Senegal in the south. The desert climate of the former and the Sahelian climate of the latter have a major impact on the survival of the ecosystem because of high temperatures and the lack of fresh water. Two sites are classified as protected areas. Consequently, the impact of human activities is low; it is limited to wood cutting and grazing of domestic animals. The map data are rough, obsolete and sometimes contradictory. For example, the estimates of land area by different sources are contradictory.

SENEGAL

The mangroves are mainly located in the Low delta of the River Senegal, in Saloum and in Casamance. The Sahelian climate of the first two sites is more restricting than in Casamance. In the delta of the River Senegal the mangrove is a relic, in the Saloum, it is relatively well maintained following the classification of the site as Biosphere Reserve. Nonetheless, fishing and wood cutting are real threats. In Casamance, thanks to more abundant rainfall, rice farming and fishing are well developed, which increases the pressure on the area. In the Saloum as well as in Casamance, a number of programs are attempting restoration with relatively acceptable levels of success. Senegal is the country which has the greatest number of map data, general (topographic maps...) as well as thematic information. Nevertheless, some of them are obsolete, are collected at an inappropriate scale for the purposes of the project and are scattered. The latter situation may be resolved with the implementation of the Geomatic Plan of Senegal.

GAMBIA

The Gambia covers the estuarine part of the river of the same name covering 56.900 ha. The climate is characterized by high temperatures and a pluviometry ranging between 800 and 1000 mm/ year. The low intake of fresh water which leads to the salinity of lands is often the cause of mangrove mortality. Besides, wood cutting, farming and fishing, have a negative impact on the ecosystem. Local initiatives for sustainable management are undertaken notably as regards the collection of oysters and reforestation. In terms of mapping, beside the basic maps, there are few thematic maps especially concerning the mangrove ecosystem. Those existing are often obsolete, inadequate and are scattered in the different technical services of the administration.

GUINEA BISSAU

The mangrove covers 3.560 square kilometres along the rivers Cacheu, Tombali, Mansoa, the Islands Gêba, Orango, Pecixe and Bijagos. There is a Guinean wet climate with temperatures ranging between 25 and 28°C and a pluviometry of 1500 to 2000 mm/year. Land salinity is a major factor of mangrove mortality. Rice farming, fishing, wood cutting, salt production are activities performed at a high level and they impact negatively on natural resources. Nonetheless, the rice fields of the *Balantes* are built so as to limit the sterilization of lands thanks to the readmission of salted water during the dry season. Besides, Guinea Bissau has implemented a good mangrove conservation policy with the classification of several regions as protected areas. In the field of mapping, the Coastal Planning Office has designed recent maps specific to the mangrove. But then, the data are scattered between the different technical services of the administration.

GUINEA CONAKRY

The mangrove covers 350.000 ha all along the coast. The climate is characterized by high temperatures throughout the year and above all a strong pluviometry (4m/year on average). The resources of the mangrove are important and are subject to intense exploitation. Wood cutting, farming, fishing, and salt production, have negative impacts on mangrove forests. Today, the annual loss is estimated at 4.2%. Besides this the development of mineral ports is a new threat. The conservation efforts are focused on the search for effective hydro agricultural developments, the production of solar salt, the use of improved ovens for the smoking of fish and reforestation. There is a Mangrove Development Plan and the establishment of protected marine areas has become a priority. A recent mapping of mangroves has been designed under the Mangrove Watch project.

SIERRA LEONE

The mangrove swamps cover between 200 and 300.000 ha along the Scarcies, Rokel, Yawri and Sherbroo estuaries. The climate is characterized by high temperatures (21 to 31°C) and a strong pluviometry (3 to 4m/year). Primary production is high and the impact of the climate is less sensitive than in the Sahel. The degradation of ecosystems is above all due to human activities in particular wood cutting, rice farming, fishing and saliculture. Mapping represents a significant weakness for research activities in mangrove areas. The data available are general and obsolete.

Appendix 3: Logframe of regional report in ecology and climate

Strategies	Activities	Indicators/verifications
1) Inventory of all relevant components of the mangrove ecosystem in each country	<ul style="list-style-type: none"> ⇒ Inventory of species, specie elements and ecosystem ⇒ Inventory of local knowledge and experiences for the management of mangroves ⇒ Harmonize the usage of terminologies in the zone ⇒ Cartographic presentation of the sites in the zone per country ⇒ Constitution of georeference data base for each country ⇒ Revitalize and reactualize data base and relevant information and information systems 	<ul style="list-style-type: none"> ⇒ Up-to-date data readily available ⇒ Study report ⇒ Handout of terminologies ⇒ Cartographic maps available ⇒ Availability of digital data ⇒ Report of reviews
2) To reserve sufficient areas of natural mangrove ecosystem, and more protected areas as with communities	<ul style="list-style-type: none"> ⇒ Survey and map out potential areas for protection ⇒ Dialogue for gazattement with the countries in the zone 	<ul style="list-style-type: none"> ⇒ Maps produced ⇒ Number of gazetted areas
3) To protect, rehabilitate and manage designated mangrove forest ecosystems and wildlife	<ul style="list-style-type: none"> ⇒ Identify factors responsible for the degradation of mangroves and suggest their mitigation ⇒ Elaborate management plans for the mangrove zone ⇒ Detail out zones for different purpose like protection, recreation and utilization ⇒ Establish potential trans-boundary management zones & elaborate proposal for their regional management 	<ul style="list-style-type: none"> ⇒ Study reports ⇒ Plans elaborated ⇒ Management plan ⇒ Zones identified ⇒ Marketable proposal
4) To manage accordingly areas required for eco-tourism and recreation	<ul style="list-style-type: none"> ⇒ Encourage private investment in eco-tourism in the mangrove zones ⇒ Re-enforce the community protection of mangrove through their involvement and commitment in eco-tourism activities 	<ul style="list-style-type: none"> ⇒ Number of investments ⇒ Country reports on number of communities benefiting
5) To identify means for promotion of social awareness and acceptance of forests and wildlife as important elements for socio-economic development	<ul style="list-style-type: none"> ⇒ Promote a regional charter for mangrove management ⇒ Promote involvement of communities through sensitizations, community management and decentralization 	<ul style="list-style-type: none"> ⇒ Adopted charter available ⇒ Number of agreements
6) To manage adjacent upland	<ul style="list-style-type: none"> ⇒ To avoid mass siltation of the mangrove 	<ul style="list-style-type: none"> ⇒ Activity country reports

areas as buffer zones	ecosystems, inco-operate the management of adjacent upland forest by simple protection and enrichment planting where necessary ⇒ Encourage community involvement	⇒ Agreements
7) To plan and promote other integrated utilization of mangrove ecosystems and protected areas for livelihood	⇒ Introduce community beekeeping in the mangrove forests ⇒ Promote private investment in the mangroves	⇒ Number communities benefiting ⇒ Number private/firms involved
8) To improve the capacity of the concerned local communities	⇒ Assist the communities in the relevant legislative review where necessary ⇒ Assist in the establishment of current and functional data base in each country ⇒ Establish possibility of electronic networking among and between the countries ⇒ Assist communities in the production of marketable project proposals for the sustainable management of mangroves ⇒ Provide logistic support to countries	⇒ Inventory of out-dated policies and policies updated ⇒ Availability of data base ⇒ Functional network ⇒ Available funded projects ⇒ Quarterly implementation report of countries

Appendix 4: Regional Stock-taking Meeting Agenda

DAY I : Tuesday, NOVEMBER 27th 2007		
SESSION 1 INTRODUCTION		
TIMETABLE	ACTIVITIES	BY WHOM?
08H00 - 09H00	Participants check in	WAMI Secretariat
09H00 - 09H10	Agenda review	Moderating
09H10 - 09H25	Welcome address	WI Programme Manager
09H25 - 09H40	Opening speech	IUCN Senegal Mission Head
09H40 – 10H00	Minister's speech	Minister
10H00 - 10H30 Coffee break		
SESSION 2 : MANGROVE OVERVIEW		
10H30-10H50	WAMI Project presentation	Dr Mamadou SOW Project Coordinator
10H50-11H20	Discussions	Participants
11H20-11H40	Mangrove Ecology and climate change	Souleymane BADIANE
11H40-12H30	Discussions	Participants
12H30-12H50	Mangrove economy and Livelihoods	Dr Mamadou DANSOKHO
12H50-13H30	Discussions	Participants
13H30 - 15H00 Lunch		
15H00-15H30	Mangrove policy, legal, regulatory and institutional aspects in PRCM framework	Laurent Granier
15H30-17H00	Discussions	Participants
17H00-17H30 Coffee-break and close		

Day 2 : Wednesday 28 November 2007		
Session 3 : Local initiatives in mangroves conservation in West Africa		
08H30 – 08H45	Senegal case study	M. Mame Mory DIAGNE Focal Point (DEFCCS)
08H45 – 09H15	Discussions	Participants
09H15 – 09H30	Guinea case study	Ibrahima BANGOURA Focal Point (Direction des Eaux et Forêts)
09H30 – 10H00	Discussions	Participants
10H00-10H15	Guinea Bissau case study	Cristina Schwarz SYLVA Focal Point (IBAP)
10H15-10H45	Discussions	Participants
10H45-11H15 Coffee-Break		
11H15 – 11H30	Gambia case study	Muhamed JAITEH Direction des Eaux et Forêts
11H30-12H00	Discussions	Participants
12H00-12H15	Mauritania case study	Mohamed Lémine O. A. C. Focal Point (DLAMP)
12H15-12H45	Discussions	Participants
12H45-13H30	Sierra Leone case study	Mohamed HASSAN R.S. Focal Point (Direction des Eaux et Forêts)
13H30-14H00	Discussions	Participants
14H00-15H00 Lunch		
15H-18H00	Working groups	Participants
18H00-18H30	Coffee Break	
Day 3 : Thursday 29 November 2007		
Session 4 : Reconstitution and Recommendation		
08H30 – 11H00	Working groups reconstitution	Participants
11H00 – 11H30 : Coffee-Break		
11H30 – 13H00	Summary and final recommendations	General reporter / Participants
13H00-13H15	Closing speech	Minister
13H15-14H30 Lunch and close		
15H00 : PARTICIPANTS RETURN		

Appendix 5: TOR working groups of the regional workshop

Objective: Define concrete priority actions

Key question:

What are the priority actions which should be undertaken by the IMAO project in the next two years to positively influence the tendency to degradation of the mangrove?

Expected outcomes: Five priority actions have been identified by the working groups

Number of Groups: 03

- Ecology and climate
- Socio-economy
- Political and legal aspects

Actions	Activities to be undertaken	Target groups for the implementation	Partners	Constraints and opportunities
1				
2				
3				
4				
5				

Methodology:

- Brainstorming (5 minutes)
- Collection of ideas and compilation of similar ideas
- Check if there are other complementary ideas
- Adoption of five key ideas (transboundary criterion)
- Reconstitution

Facilitators:

Ecology and climate: Mamadou SOW and Chris Baker

Socio-economy: Mame Dagou DIOP

Legal and political aspects: Matar DIOUF, Mathieu Ducroq.

Criteria: Technical, financial feasibility

Involvement of local populations

Appendix 6: Speech of Mr. Djibo Leyti Kâ, State Minister, Minister of the Environment, Nature Protection, Retention Basins and Artificial Lakes

Honorable MPs,

Dear Head of UICN mission,

Dear Regional coordinator of Wetlands International

Dear Regional coordinator of the IMAO program,

Dear participants,

Ladies and Gentlemen,

I would like, first of all, to wish a warm welcome to our brothers and friends coming from the different countries covered by the **Regional Coastal and Marine Conservation Program for West Africa (PRCM)**, tell them they are at home here and that we welcome them with pleasure.

I would like also to express all the pleasure and interest I feel in being with you during the opening ceremony of this meeting which is for me of paramount importance. It is, indeed, a major milestone in the dynamics for the establishment of a common sub regional approach of the mangrove problematics.

The purpose of this workshop is for you as experts to highlight the specificity of mangroves as a tropical estuarine forest, its vital role in the making of biodiversity (avifauna, fish, shrimps, manatees, etc.), the fight against coastal erosion and the importance of this ecosystem in the life of riparian populations (food, energy, security, tourism, etc.).

Ladies and Gentlemen,

You will also interact on the hazards weighted by these populations on this fragile biotope, one of the most endangered in the world and of which protection measures still remain insufficient with regard to the pressures it is facing in terms of extensive cuts, various pollutions, development of human settlements, over fishing, etc.

These anthropic aggressions combined with drought and other climactic factors make the situation of mangroves so critical, with tremendous consequences on fishing, agriculture and tourism activities etc.

That is why it has appeared as necessary and urgent to reflect on this problematics and work out coordinated solutions at all levels.

Ladies and Gentlemen,

The **Mangrove Initiative in West Africa (IMAO)** project, we are launching today, seems to be, in this respect, a relevant response to the problematics of mangrove management, and this for several reasons :

- At first this is a coordinated initiative gathering several countries facing the same problems and wishing to get the same legal instrument for action (a charter) ;
- This is also an initiative building on data and findings of scientific studies ;
- This is also an initiative advocating dialogue and interaction between all the classes of actors and encourages the involvement and participation of base communities ;

Finally this is an initiative implementing innovative solutions taking into account the required synergy between conservation and economic as well as social development.

Ladies and Gentlemen,

IMAO is, undoubtedly, one of the symbols of the commitment of the countries of our sub region, to assume, individually and collectively, their share of responsibility in the conservation of our coastal and marine ecosystems.

It illustrates also the dynamic character of the South South technical cooperation and the integration of environmental policies in our sub region, in line with the environmental initiative of the Environment Component of NEPAD coordinated by Senegal.

That is why, I would like, in the name of the Government of Senegal and also in the name of the governments of all the other brother member countries of the PRCM, express my heartfelt encouragements to this initiative. I would like also to express the hope that efficient solutions will be found for a sustainable management of the mangrove and those solutions could be subject to interactions, sharing and be applied everywhere.

I would like also to welcome the good collaboration existing between the founding institutions of the PRCM and, notably the one between UICN and Wetlands International. This collaboration will allow creating strong synergies between the different countries and involve the base communities in the development and implementation of conservation activities of natural resources of our area.

Ladies and Gentlemen,

Before signing off, I would like to welcome the strong mobilization of all the researchers who are attending the workshop and welcome, once again, the participation of honorable MPs who are committed to the environmental cause. I would like to thank them for their participation which will help them even more in their task which consists in translating in legislative acts, the conclusions and recommendations deriving from our sessions among the populations they represent.

I wish you a success in your proceedings and declare opened the kick-off workshop of the project Mangrove Initiative in West Africa.

Thank you for your attention.

Appendix 7 :Newspaper article

matin

29/11/2007 14:33

MANGROVE MANAGEMENT IN WEST AFRICA: Towards an integrated regional agreement

In front of the drastic degradation of the mangrove, it is urgent for countries depending on it from Mauritania to Sierra Leone to bring a relevant response for the management of the mangrove ecosystem. Such is the idea developed during the kick-off workshop of the project entitled Mangrove Initiative in West Africa (IMAO). The final aim of this meeting is to work out a regional approach incorporating the achievements and expertise of the different countries involved.

The World Conservation Union (UICN), Wetlands International (WI) and the Regional Coastal and Marine Conservation Program for West Africa (PRCM) have benefited from the support of the Swiss Foundation (MAVA) so as to implement the project mangrove initiative in West Africa. Indeed, this IMAO project seeks to improve the livelihoods and security of mangrove dependent populations from Mauritania to Sierra Leone. Thus, during the kick-off workshop, which took place the day before yesterday in Saly, the most striking fact was that the mangrove ecosystem has become, nowadays, one of the most threatened in the world and more particularly in West Africa with limited protection measures, because of the drastic degradation of the mangrove. This situation is explained by several phenomena due to man's intervention and climactic actions. Thus, among the main causes of mangrove degradation we may mention, among others, forest exploitation, building, the climactic deregulation and rain deficit. To address this problematic of mangrove management in West Africa, the specialists of environmental issues as well as the representatives of six countries of the sub region sharing the Imao project (Senegal, Mauritania, the Gambia, Guinea Conakry, Guinea Bissau and Sierra Leone) have, during the panels, outlined the required skills.

For that purpose, two key-words have especially been the subject of discussions. According to the experts, the response to the degradation of the mangrove ecosystem requires reforestation and land development. Indeed, the strategies for the conservation of the mangrove ecosystem must be built, among others, on the development of a knowledge base on the values and ecological as well as management status of mangrove ecosystems, the regional transfer of community-based knowledge and the provision of incentives for the sound mangrove management, and the strengthening of national as well as regional policies and actions plans.

In hearing the different actors during the exchanges on the topics developed, this last item remains crucial since the protection measures in favor of the mangrove remain insufficient. That is why the project coordinator Mr. Mamadou Sow said that the different recommendations which will be formulated by the actors (researchers, conservationists, users, parliamentarians, etc.) will revolve around an action plan and a regional agreement to strengthen and extend community actions. As a reminder, the mangrove has a great ecological and socio- economic function.

Boubacar Demba SADIO